African Traditional Herbal Research Clinic

Volume 7 Issue 11 NEWSLETTER October 2012

DIGESTION

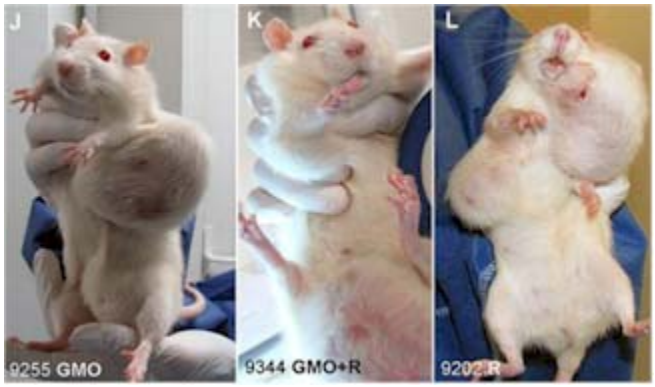
Cancer Row over GM Foods

By Sean Poulter

September 19, 2012

Rats fed a lifelong diet of one of the bestselling strains of genetically modified corn suffered tumours and multiple organ damage, according to a controversial French study published today.

Scientists said the results raised serious questions about the safety of GM foods and the assurances offered by biotech companies and governments.



The first lifetime trials involving rats fed on GM corn found a raised incidence of breast tumours, liver and

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What is the African Traditional Herbal Research Clinic?

We can make you healthy and wise

Nakato Lewis
Blackherbals at the Source of the Nile, UG Ltd.

The African Traditional Herbal Research Clinic located in Ntinda, Uganda is a modern clinic facility established to create a model space whereby indigenous herbal practitioners and healers can upgrade and update their skills through training and certification and respond to common diseases using African healing methods and traditions in a modern clinical environment.

Traditional healers are the major health labor resource in Africa as a whole. In Uganda, indigenous traditional healers are the only source of health services for the majority of the population. An estimated 80% of the population receives its health education and health care from practitioners of traditional medicine. They are knowledgeable of the culture, the local languages and local traditions. Our purpose is to raise public awareness and understanding on the value of African traditional herbal medicine and other healing practices in today's world.

The Clinic is open and operational. Some of the services we offer are African herbal medicine, reflexology, acupressure, hot and cold hydrotherapy, body massage, herbal tonics, patient counseling, blood pressure checks, urine testing (sugar), and nutritional profiles. We believe in spirit, mind and body. Spiritual counseling upon request.

Visit us also at ***www.Blackherbals.com***

Hours: 10:00 am to 6:00 pm Monday thru Friday
Saturday by Appointment, Sundays – Closed

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kidney damage.

Dr Michael Antoniou, a molecular biologist at King's College, London, and an expert on GM foods, said: 'It shows an extraordinary number of tumours developing earlier and more aggressively – particularly in female animals. I am shocked by the extreme negative health impacts.'

The research was carried out by Caen University in France, and has been peer reviewed by independent scientists to guarantee the experiments were properly conducted and the results are valid.

It is the first to look at the impact of eating a GM diet over a lifetime in rats, which is two years. To date, safety assessments of GM crops have been based on rat feeding trials lasting 90 days.

The corn was genetically modified to withstand spraying with glyphosate, the main chemical in the weedkiller Roundup, developed by Monsanto. The idea is that the corn can be sprayed without being damaged, while weeds are destroyed.

The tests looked at the impact of several scenarios including eating the GM corn (NK603), eating the GM corn sprayed with Roundup, and consuming Roundup at low doses in water.

The results were compared against those for a control group fed a 'clean' diet without GM or Roundup.

The researchers found:

- Between 50 to 80 per cent of female rats developed large tumours by the beginning of the 24th month, with up to three tumours per animal. Only 30 per cent of the control rats developed tumours
- Up to 70 per cent of females died prematurely compared with only 20 per cent in the control group
- Tumours in rats of both sexes fed the GM corn were two to three times larger than in the control group
- The large tumours appeared in females after seven months, compared to 14 months in the control group. The team said the tumours were 'deleterious to health due to a very large size', making it difficult for the rats to breathe and causing digestive problems.

Significantly, the majority of tumours were detectable only after 18 months – meaning they could be discovered only in long-term feeding trials.

The study – led by molecular biologist Professor Gilles-Eric Seralini, a critic of GM technology, and published yesterday in US journal Food and Chemical Toxicology said the GM corn and Roundup weedkiller 'may cause hormonal disturbances in the same biochemical and physiological pathway'.

The Daily Mail's Frankenstein Food Watch campaign has long highlighted problems with the lack of rigorous safety assessments for GM crops and food.

Although GM corn is widely used in the US, British consumers have turned their backs on the technology because of concerns about its impact on human health and the environment.

Although it is not available in British supermarkets, it is fed to farm animals including chickens, pigs and dairy cows.

Mustafa Djamgoz, professor of Cancer Biology at Imperial College, London, said the findings relating to eating GM corn were a surprise.

'We are what we eat,' he added. 'I work at the molecular level on cancer. There is evidence what we eat affects our genetic make-up and turns genes on and off. 'We are not scaremongering here. More research is warranted.'

Dr Julian Little, of the Agricultural Biotechnology Council, which speaks for the GM industry, insisted GM foods were safe, adding: 'The industry takes all health concerns regarding biotech food and feed very seriously.'

Anthony Trewavas, professor of cell biology at Edinburgh University, questioned the way the research had been conducted, saying the number of rats involved in the study – 200 – was too small to draw any meaningful conclusions. 'To be frank, it looks like random variation to me in a rodent line likely to develop tumours anyway,' he said.

He also claimed Professor Seralini was an anti-GM campaigner and that previous studies questioning the technology's safety had not withstood scrutiny.

http://www.dailymail.co.uk/sciencetech/article-2205509

Russia suspends Import and Use of American GM Corn after Study revealed Cancer Risk

By Sean Poulter

25 September 2012

Russia has suspended the import and use of an American GM corn following a study suggesting a link to breast cancer and organ damage.

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AFRIKAN SPIRITUALITY

Traditional African Perception of Illness

By Gordon Chavunduka

Many people regard the presence of mild ill health as a normal part of life. It is believed that people cannot always be in a very good health because of poor living conditions and the presence of spirits and witches in society. But if the symotoms persist and are severe the individual is likely to enter the second stage in which he adopts the sick role. At this stage some individuals seek professional help at once but others delay seeking medical care for as long as possible and employ known traditional drugs or patent medicines suggested by friends, neighbours, or relatives. There are many factors which may motivate patients to delay in seeking medical care such as fear of hospitalization, one's position in the family, fear of disturbing social relations, fear of leaving the familiar surroundings at home, past experience, financial cost of medical care, and social stigma.

Before many of the sick individuals seek professional help they make contact with others with whom they have close ties such as members of their family, friends, neighbours, workmates and employers. These people influence the slick individual in the choice of therapy and usually continue to take care of the sick person throughout his illness.

Many people take some of their illnesses to modern medical practitioners in hospitals, clinics and private doctors' surgeries, and others to traditional healers. In some cases the same illness is referred at different stages and sometimes simultaneously to several types of medical practitioners. There is a relationship between people's ideas concerning the cause of illness and the treatment sought.

Many people believe that illnesses may have either a normal or an abnormal cause. Illnesses such as coughs, slight fevers, stomachache and headaches are generally regarded as normal since they occur from time to time in the life of individuals and are usually of a fleeting nature and may disappear completely.

Normal illnesses are usually treated with modern or traditional medicines. Choice of treatment in this kind of situation largely depends upon the cost of each treatment, its accessibility and the patient's knowledge of the probable effects of each kind of treatment. Many people agree that normal illnesses are caused by such things as germs, bacteria, bad food, accidents, poisons and so on.

The traditional shrine as a symbol of our cultural history

But when an illness such as headache persists over a long period of time it ceases to be a normal illness because it is considered unusual for a headache or a stomachache to fail to respond to treatment. The illness is then regarded as abnormal. Many people believe that social agents such as ancestors' spirits, angered spirits, aliens' spirits and witches, send such illnesses. Once an illness has been defined as abnormal most patients consult traditional healers alone because they know that modern doctors are unable to attack the ultimate cause of abnormal illness.

An endangered spirit is the spirit of someone who dies with a grudge. It is believed that an angered spirit may return to punish the wrongdoer or his kinsmen. The guilty person or his his kinsmen become sick. An alien spirit is the spirit of a person from some other clan or tribal group who dies uncared or perhaps was not properly buried according to customs. It is believed that the spirit of such person may wander restlessly until it settles on someone.

The patient's kinsmen or relatives play an important role through the illness partly because in certain cases relatives are held responsible for an individual's illness and can therefore be considered as extended patients. A much clearer example is where a member of the family commits an anti-social act. The angry ancestors may choose not to punish the wrongdoer with illness, but his brother or children.

Many people who refer their illnesses to modern practitioners later take the same illness to traditional healers. This often happens when the illness that was initially regarded as normal is redefined as abnormal by the patient and members of his or her social group. This tendency to regard

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FEATURED ARTICLES

SECRET MONSANTO GM POTATO STUDY SUPPRESSED FOR 8 YEARS

By Association of Food Technologists
February 15, 2012

GM Potatoes are "unfit for human consumption" Press Notice from GM Free Cymru. 16th February 2007

A secret feeding study of Monsanto GM potatoes, conducted in 1998 by the Institute of Nutrition of the Russian Academy of Medical Sciences and suppressed for 8 years, showed that the potatoes did considerable damage to the organs of the rats in the study (1) (2). In comparison the rats in the "control groups" which were fed on normal potatoes or on a non-potato diet were healthier, and had much less organ and tissue damage. This research, fully supported by Monsanto through the provision of the GM potatoes, was conducted at approximately the same time as Arpad Pusztai's research in the Rowett Institute.

The potatoes used in the study were Monsanto GM NewLeaf potatoes bred in 1995 from the Russet Burbank variety to be resistant to the Colorado Beetle. The GM event was registered as 082, and the potatoes are included in the Bt group of GM crops. They also contain an antibiotic resistance marker gene (3). The potatoes were deregulated in the USA in 1998, without any feeding studies being required.

Another line was deregulated in 1999. Even earlier, in 1996, Monsanto started to introduce the potatoes into Russia and Georgia, and probably into many other countries with lax approval regimes as well (4). For some reason (probably to assist in the consent process) Monsanto co-operated in some feeding studies involving rats from the Institute of Nutrition of the Russian Academy of Medical Sciences. Something "inconvenient" showed up in these feeding studies, but the Institute refused to release all the information into the public domain and in 1999 the researchers presented a "doctored" version of their Report in support of Monsanto's application for Russian commercialization. The consent was duly given in 2000 by the Russian regulators on the basis of this corrupt piece of science.

However, Greenpeace and other consumer groups mounted a protracted and immensely frustrating campaign to obtain a sight of the feeding study Report.

In May 2004 the Nikulinski District Court in Russia ruled that information relating to the safety of GM food should be open to the public. On the basis of this ruling Greenpeace tried to obtain the GM potato report; but the Institute and Monsanto refused to release it. So Greenpeace and local activist groups again took the Institute to court, and in October 2005 won a ruling that the Report must be released. At last it was handed over, and examined by Dr Irina Ermakova at the request of Greenpeace. She produced a brief Russian paper on her findings, and we have now produced an English-language version with the kind agreement of Greenpeace (5).

Ironically, the NewLeaf GM potato was a failure, and it proved to give poor yields and to be susceptible to disease in European environments. While Monsanto was enthusiastically promoting its GM potatoes in Eastern Europe, it was having second thoughts in the United States and Western Europe, and pulled out of GM potato development in 2002 (6). The results of the 1998 GM potato rat feeding study may well have had a bearing on that decision.

Dr Irina Ermakova, the Greenpeace consultant, has herself conducted animal feeding experiments with GM materials. In her very restrained commentary on the Russian study (1) she criticized the small scale of the experiment and its design, and was especially critical of the complacent conclusions drawn by the authors from evidence which was actually profoundly worrying. The GM potato was nutritionally inferior to its conventional counterpart and to other Russian potato varieties.

The research results showed that both "normal" Russet Burbank potatoes and the GM variety caused "serious morphological changes in the internal organs" of the animals in the trials. They also showed that the group

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of animals fed on the GM potatoes suffered greater weight loss than the other animals, and statistically significantly greater damage to kidneys, liver and large gut. There was also greater damage to blood serum, testes and prostate. Dr Ermakova concluded:

"The GM potatoes were the most dangerous of the feeds used in the trials..... and on the basis of this evidence they CANNOT be used in the nourishment of people."

Given the small scale of the feeding trials (only ten animals in each feeding group) and doubts about the statistical significance of some of the Report's findings, Dr Ermakova stressed the importance of follow-up studies on a larger scale and with more careful experimental design. But no matter what the shortcomings of the work may be, the Institute of Nutrition research did nothing to show that the Monsanto GM potatoes are safe. That should not be a surprise to anybody, since Bt potatoes are classified as pesticides in the US and have never been tested for toxicity or allergenicity (7).

According to Dr Brian John of GM Free Cymru, it is incredible that Monsanto and the Institute of Nutrition have kept the research secret until now. "That obsessive secrecy has clearly been against the public interest," he says, "and it tells us a great deal about Monsanto's priorities. If the company had any regard at all for the health of consumers, it would have published these results world-wide in 1999, and at the very least it would have commissioned follow-up research which might have confirmed or discredited the study's findings.

Instead of that, it connived with the Russian researchers to keep the information away from public scrutiny, just as it did with the feeding study results for MON863 maize in 2005. On that occasion too, it took a court case and massive media coverage to obtain sight of the research team's raw data and to reveal evidence of damage to health." (8)

While Monsanto attempted to suppress the information from the 1998 Russian study, it connived in the vilification of Dr Arpad Pusztai, a respectable and careful scientist whose findings were very similar (9) (10). The company must have known that the release of its own feeding study information would have supported his findings and would have contributed to a general understanding on health concerns specific to GM potatoes. "The actions of Monsanto in this case have been utterly reprehensible," says Dr John. "The company has continued to promote its GM potatoes as perfectly harmless, while for eight years it has managed to keep out of the public domain clear evidence that they are harmful to animals and hence to human beings also. And it has got away with it because the science establishment and the GM regulators within the EU -- as in Russia -- cannot see scientific corruption when it is staring them in the face." (11)

NOTES

(1) *Medical-biological investigations of transgenic potatoes, resistant to the Colorado beetle (under agreement with Monsanto Co.) Russian Academy of Medical Sciences, Institute of Nutrition Moscow, 1998. Signed off by VA Tutelian, Deputy Director. Physiological, biochemical and morphological investigations in rats. Full Report 275 pp, including raw data.*

(2) *The commentary on the rat feeding study by Dr Irina Ermakova is here: http://www.gmfreecymru.org/*

(3) *http://www.agbios.com/dbase.php?action=ShowProd&data=RBMT21-129% 2C+RBMT21-350%2C+RBMT22-082&frmat=LONG> Full petition (240 pp) for the deregulation of New Leaf GM potatoes (event 082) in the US: <http://www.agbios.com/docroot/decdocs/05-242-028.pdf>*

(4) *GM potatoes in Georgia: http://www.foei.org/publications/link/gmo/16.html*

(5) *http://www.greenpeace.org/russia/en/news/evidence-of-food-%20products-safe/*

(6) *http://www.mindfully.org/GE/Monsanto-Dumps-Potatoe.htm; http://www.gmo-compass.org/eng/grocery_shopping/crops/23.genetically_modified_potato.html*

(7)
http://www.plant.uoguelph.ca/research/homepages/eclark/safety.htm
http://www.cathnews.com/news/409/doc/15colgm2.doc
http://www.natural-law.ca/genetic/geindex.html
http://www.epa.gov/oscpmont/sap/meetings/2000/october/brad3_enviroassessment.pdf
http://www.epa.gov/pesticides/biopesticides/pips/bt_brad.htm

(8)
http://www.organicconsumers.org/monsanto/rats060205.cfm
http://www.spinwatch.org/index2.php?option=com_content&do_pdf=1&id=1239

(9)
http://www.monsanto.co.uk/news/98/august98/81798world_in_action.html; http://www.voteyeson27.com/monsanto.htm
http://www.theecologist.co.uk/archive_detail.asp?content_id=753

(10) *Ewen SWB, Pusztai A (1999) Effect of diets containing genetically modified potatoes expressing Galanthus nivalis lectin on rat small intestine. Lancet 354:1353-1354*

(11) *See, for example: http://www.rowett.ac.uk/gmo/ajp.htm*
http://www.agbioworld.org/biotech-info/articles/biotech-art/pusztai- picnic.html
http://news.bbc.co.uk/1/hi/sci/tech/291105.stm
http://www.lobbywatch.org/profile1.asp?PrId=113

http://tech.dir.groups.yahoo.com/group/foodscientists/message/476

African Traditional Herbal Research Clinic

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FEATURED ARTICLES

The GMO Debate is Over

GM crops must be immediately outlawed; Monsanto halted from threatening humanity

By Mike Adams
September 21, 2012

(NaturalNews) The GMO debate is over. There is no longer any legitimate, scientific defense of growing GM crops for human consumption. The only people still clinging to the outmoded myth that "GMOs are safe" are scientific mercenaries with financial ties to Monsanto and the biotech industry.

GMOs are an *anti-human* technology. They threaten the continuation of life on our planet. They are a far worse threat than terrorism, or even the threat of nuclear war.

As a shocking new study has graphically shown, **GMOs are the new thalidomide**. When rats eat GM corn, they develop horrifying tumors. Seventy percent of females die prematurely, and virtually all of them suffer severe organ damage from consuming GMO. These are the scientific conclusions of the first truly "long-term" study ever conducted on GMO consumption in animals, and the findings are absolutely horrifying. (See pictures of rats with tumors, below.)

What this reveals is that **genetic engineering turns FOOD into POISON**.

Remember thalidomide? Babies being born with no arms and other heart-breaking deformities?

Thalidomide was pushed as "scientific" and "FDA approved." The same lies are now being told about GMO: they're safe. They're nutritious. They will feed the world!

But the real science now coming out tells a different picture: **GMOs may be creating an entire generation of cancer victims** who have a frighteningly heightened risk of growing massive mammary gland tumors caused by the consumption of GM foods. We are witnessing what may turn out to be **the worst and most costly blunder in the history of western science**: the mass poisoning of billions of people with a toxic food crop that was never properly tested in the first place.

Remember: GMOs are an *anti-human* technology. And those who promote them are, by definition, enemies of humankind.

GMOs are unfit for human consumption

The evidence keeps emerging, day after day, that GMOs are absolutely and without question **unfit for human consumption**. France has already launched an investigation that may result in the nation **banning GM corn imports**. It's already illegal to grow genetically modified crops in France, but the nation still allows GMO imports, meaning France still allows its citizens to be poisoned by imported GM corn grown in America.

The GMO industry, not surprisingly, doesn't want any independent research conducted on GMOs. They don't want long-term feeding trials, and they most certainly do not want studies conducted by scientists they can't control with financial ties.

What they want is to **hide GMOs in products** by making sure they're not listed on the labels. Hence the biotech industry's opposition to Proposition 37 (www.CArighttoknow.org).

The tactics of the biotech industry are:

- HIDE genetically modified ingredients in foods
- FALSIFY the research to claim GMOs are safe
- MANIPULATE the scientific debate by bribing scientists
- DENY DENY DENY just like Big Tobacco, DDT, thalidomide, Agent Orange and everything else that's been killing us over the last century

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Continued from page 6 – The GMO Debate is Over

Monsanto is now the No. 1 most hated corporation in America. The company's nickname is *MonSatan*. It is the destructive force behind the lobbying of the USDA, FDA, scientists and politicians that have all betrayed the American people and given in to genetically modified seeds.

These seeds, some of which grow their own toxic pesticides right inside the grain, are a form of **chemical brutality against children** and adults. This is "child abuse" at its worst. It's an abuse of all humans. It is the most serious crime ever committed against nature and all of humankind.

Science for sale

That's what you get with **payola science**... science "for sale" to wealthy corporations. Nearly all the studies that somehow conclude GMO are safe were paid for by the biotech industry. Every one of those studies is unreliable and most likely fraudulent. Every scientist that conducts "research" for Monsanto is almost certainly a sellout at minimum... and more likely a jackal operative working for an *industry of death*.

Corporate science is fraudulent science. When enough money is at stake, scientists can be bought off to even declare smoking cigarettes to be safe. And they did, throughout the 1950's, 60's and 70's. Some of those very same scientists are now working for the Monsantos of the world, peddling their scientific fraud to the highest bidder (which always happens to be a wealthy corporation).

There is no poison these scientists won't promote as safe -- even "good for you!" There is no limit to their evil. There are no ethics that guide their actions.

GMO-promoting scientists are the most despicable humanoid creatures to have ever walked the surface of this planet. To call them "human" is an insult to humanity. They are ANTI-human. They are demonic. They are forces of evil that walk among the rest of us, parading as authorities when in their hearts and souls they are actually corporate cowards and traitors to humankind. To pad their own pockets, they would put at risk the very future of sustainable life on our planet... and they do it consciously, insidiously. They feed on death, destruction, suffering and pain. They align with the biotech industry precisely because they know that no other industry is as steeped in pure evil as the biotech industry. GMO pushers will lie, cheat, steal, falsify and even mass-murder as many people as it takes to further their agenda of total global domination over the entire food supply... at ANY cost.

This is war at the genetic level. And this kind of war makes bullets, bombs and nukes look downright tame by comparison. Because the GMO war is based on **self-replicating genetic pollution** which has already been released into the environment; into the food supply; and into your body.

The hundreds of millions of consumers who eat GMO are being murdered right now, with every meal they consume... and they don't even know it. GMO-pimping scientists are laughing at all the death they're causing. They *enjoy* tricking people and watching them die because it makes their sick minds feel more powerful. These were the geeks in school who were bullied by the jocks. But now, with the power of genetic manipulation at their fingertips, they can invoke their **hatred against all humankind** and "bully" the entire world with hidden poisons in the food. That makes them smile. It's the ultimate revenge against a world that mistreated them in their youth. Death to everyone!

Society must respond in defense of life on Earth

The sheer brutality of what the GMO industry has committed against us humanity screams out for a decisive response. It is impossible to overreact to this. No collective response goes too far when dealing with an industry that quite literally threatens the very basis of life on our planet.

To march government SWAT teams into the corporate headquarters of all GMO seed companies and shut down all operations at gunpoint would be a *mild reaction* -- and fully justified. To indict all biotech CEOs, scientists, employees and P.R. flacks and charge them with conspiring to commit crimes against humanity would be a small but important step in protecting our collective futures. To disband all these corporations by government order have their assets seized and sold off to help fund reparations to the people they have harmed is but a tiny step needed in the defense of life.

The truth is that **humanity will never be safe until GMO seed pushers and manufacturers are behind bars**, locked away from society and denied the ability to ever threaten humanity again.

What the Nuremberg trials did to IG Farben and other Nazi war crimes corporations, our own government must now do to Monsanto and the biotech industry.

It is time for decisive intervention. Monsanto must be stopped by the will of the People. The mass poisoning of our families and children by an evil, destructive corporation that seeks to dominate the world food supply must be halted.

The GMO debate is over. The horrors are now being revealed. The truth can no longer be hidden, and the

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KILLER SEEDS: The Devastating Impacts of Monsanto's Genetically Modified Seeds in India

By Iqbal Ahmed

Global Research, 12 January 2012

Monsanto's operation in India illustrates monopolization and manipulation of the market economy, tradition, technology, and misgovernance. The world's largest producer of genetically engineered seeds has been selling genetically modified (GM) in India for the last decade to benefit the Indian farmers – or so the company claims.

In a country of more than 550 million farmers who are largely poor and uneducated and the agriculture market rife with inefficient business practices, the Indian government sought to reform the market by eliminating subsidies and loans to the farmers.

The government reform did not help the farmers. With pressure from the World Bank and International Monetary Fund (IMF), the Indian government has "forced market liberalization on India which means the elimination of government subsidies and government-backed loans to farmers."

Enter Monsanto with its "magic" GM seeds to transform the lives of the poor Indian farmers.

The U.S. agri-business giant took full advantage of its entry into the Indian market. It entered into an agreement with state governments including Rajasthan and Andhara Pradesh to introduce a Memorandum of Understanding (MOU) that dictated the terms of disseminating the GM technology in Indian market.

For Monsanto, it is one thing to convince farmers to use artificial seeds for the purposes of enriching their lives, it is quite another to manipulate nature and technology to profit from them.

Killer Seeds

The irony is GM seeds have not been effective in India and the consequences are not as rosy as what Monsanto had promised to deliver. Scathing reports of mass suicides of Indian farmers broke out as recently as three years ago when scores of farmers took their own lives in order to escape the burden of high prices and failure of Monsanto's GM seeds.

Monsanto offered its GM seeds to the farmers of India with hopes of reaping plentiful crops. Plain and mostly uneducated farmers thought Monsanto had come to provide a "magic" formula that would transform their lives. They had no idea what was coming.

Monsanto's seeds in India did not produce what the company had promised and farmers hoped. The expensive seeds piled up debts and destroyed farming fields. In many instances, the crops simply failed to materialize. The farmers were not aware that the GM seeds required more water than the traditional seeds. And lack of rain in many parts of India exacerbated the crop failure.

With no harvest, the farmers could not pay back the lenders. Burdened with debts and humiliation, the farmers simply took their own lives, some by swallowing poisonous pesticides in front of their families. To date, an estimated 200,000 farmers have committed suicide all over India.

To add to the misery, wives inherited the debts along with the fear of losing their homes and lands. With no money coming in, they also had to pull their kids from the schools. The mass suicide among the Indian farmers is known as the "GM genocide."

In its company website Monsanto declares that its pledge is "our commitment to how we do business." And then there are the business philosophies with virtuous words like "integrity" and "transparency."

Monsanto's business practices in India quite remarkably live up to the company's motto. It purposefully leverages its power and influence in government to penetrate farming markets with motive but without morale.

Market Power

Using its colossal market power, Monsanto craftily penetrated into the Indian markets. ***Continued on page 9***

Continued from page 8 – KILLER SEEDS: The Devastating Impacts of Monsanto's Genetically Modified Seeds in India

Monsanto convinced the Indian government that its GM seeds would produce better crops. According to a report by Farm Wars, one former Managing Director of Monsanto claimed that Monsanto manipulated research data "to get commercial approvals for its products in India."

Indian regulatory agencies, instead of verifying the data, simply remained compliant with the findings of what Monsanto presented. "They did not even have a test tube to validate the data and, at times, the data itself was faked," the Farm Wars report says.

Government regulations worked in favor of Monsanto to monopolize the Indian seed market. For example, "Prime Minister's Office" in India pressured various state governments to sign MOUs with Monsanto to privatize the seed market.

Through these "vested interests" with the Indian government, Monsanto eventually has monopolized the GM seed market for more than a decade.

Unable to purchase traditional seeds, the farmers had to pay a hefty price for the expensive GM seeds. Many farmers had to borrow money from the local lenders to buy Monsanto's seeds. To cite an example of how expensive the GM seeds are, 100 grams of GM cost $15 to the farmers compared with $15 for 1000 grams of traditional seeds.

Vandana Shiva, a renowned scientist and activist in India, wrote that Monsanto had also planned to control water in India. Its aim was to control water supply through privatization. In other words, Monsanto sought to profit from water, a lifeline of Indian livelihood. By seeking control of water, Monsanto also seized the opportunity to benefit from the scarce water supply that plagues communities throughout India.

Manipulation and Misinformation

The failure of Monsanto's GM seeds was palpable. The farmers held onto their hopes for better crops after they had planted the "magic" seeds. Their crops never came. Throughout the villages in India the harvest from the GM seeds failed. The parasites destroyed the so-called "pest-proof" GM seeds.

Monsanto uses methods of manipulation and misinformation to reap their own benefits and profits at the cost of the farmers who rely on organic methods to grow their crops and animals, a tradition that existed in India for centuries.

By a contractual clause, the farmers could not save Monsanto's GM seeds for reuse after the first season. Whether or not the farmers understood this legal binding would merit an examination to underscore the extent of Monsanto's market power and conniving business practices. Misleading and forcing farmers to buy the GM seeds through government policy and market monopoly must be purged as part of reforming the Indian agricultural market.

Action against GM seeds

Prince Charles does not like what Monsanto is doing or causing to the lives of farmers in India. He has expressed his contempt for the "bio-tech leaders" and "politicians" who have caused suicides among Indian farmers. His charity organization promotes "long-term benefits of sustainable agriculture" that would provide "decent returns" to the farmers.

Facing pressure from the anti-GM seed activists, NGOs, and local communities, the Indian government gave in. In 2010, Indian Environment Minister issued a temporary "moratorium" on Monsanto to introduce genetically engineered egg plant seeds in India. Only time will tell how long this policy effects will last.

In a country where money, politics, and business often go hand in hand, the farmers are at the mercy of their own fate.

***Iqbal Ahmed** is a public policy graduate student at George Mason University, Arlington, VA. He completed a study abroad program at Oxford University, UK in summer 2011 on European Union (EU) policies. He has written for Foreign Policy Journal, Journal of Foreign Relations, Foreign Policy in Focus, Global Politician, Eurasia Review, and NPR's "This I believe."*

http://www.globalresearch.ca/killer-seeds-the-devastating-impacts-of-monsanto-s-genetically-modified-seeds-in-india/

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Continued from page 7 – The GM Debate is Over

reaction from the public cannot be stopped.

Prediction: Activist attacks on GM seeds and the criminals who promote them The era of GMO deception is history. A food revolution is upon us. And if governments will not halt the mass poisoning of our world by evil corporations, I have no doubt that the People will, by themselves, eventually invoke other necessary methods of halting this great evil.

I predict a future where -- and for the record I DO NOT encourage this -- shipments of GM seeds to farmers are raided and destroyed by activists. I predict Monsanto employees being publicly named and shamed on websites. I predict -- but DO NOT CONDONE -- scientists who conduct research for Monsanto being threatened, intimidated and even physically attacked.

Again, for the record, I DO NOT IN ANY WAY condone

Continued on page 10

Continued from page 9 – The GM Debate is Over

such behavior, but I predict it will emerge as an inevitable reaction to the unfathomable evil being committed by the GMO industry and all its co-conspirators. The "Army of the 12 monkeys" may become reality. (See the sci-fi movie "12 monkeys" starring Brad Pitt and Bruce Willis.)

What we are fighting for here is the protection of our species. We are fighting for the sanctity of life on our planet. Those who threaten that life must be stopped from continuing to harm us. This evil must be put back in its box and prevented from ever threatening us again.

Even Congress is starting to state the obvious on how evil Monsanto really is. Just yesterday, Congressman Dennis Kucinich demanded GMO labeling in a powerful speech. Watch that at:
http://www.youtube.com/watch?v=4J_YvtbSSqg

http://www.naturalnews.com/037262_GMO_Monsanto_debate.html

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Continued from page 2 – Russia suspends Import and Use of American GM Corn

Separately, the European Food Safety Authority(EFSA), has ordered its own review in to the research, which was conducted at a French university.

The decision by Russia could be followed by other nations in what would be a severe blow to the take-up of the controversial technology.

Historically, biotech companies have proved the safety of GM crops based on trials involving feeding rats for a period of 90 days.

However, experts at the University of Caen conducted an experiment running for the full lives of rats - two years.

The findings, which were peer reviewed by independent experts before being published in a respected scientific journal found raised levels of breast cancer, liver and kidney damage.

The same trials also found evidence that consumption of minuscule amounts of a commonly used weedkiller, Roundup, was associated with a raised risk of cancer.

Both the GM corn, which carries the name NK603, and Roundup are the creation of US biotech company Monsanto.

The decision by the Russians to suspend authorisation for the American GM corn threatens to trigger a transatlantic commercial and diplomatic row.

Russia's consumer rights watchdog, Rospotrebnadzor, said today that it has suspended the import and use of the Monsanto GM corn.

Rospotrebnadzor said the country's Institute of Nutrition has been asked to assess the validity of the study.

It has also contacted the European Commission's Directorate General for Health & Consumers to ask for the EU's position on the corn's safety.

Consumer scepticism in the UK and Europe means GM corn is not on supermarket shelves here, however it is fed to farm animals, including hens, pigs and dairy cows.

Last week Monsanto said it did not think the French study would affect its license to export the NK603 to Europe but would wait to hear from EFSA.

The company said: 'Based on our initial review, we do not believe the study presents information that would justify any change in EFSA's views on the safety of genetically modified corn products or alter their approval status for genetically modified imports.'

The biotech industry and university researchers involved in GM research have mounted a major PR campaign over the last year to win over sceptical consumers.

In the past week, pro-GM scientists have been lining up to undermine the French experiments and criticise the way they were conducted.

However, a number of independent academics have praised the French team's work, describing it as the most thorough and extensive feeding trials involving GM to date.

Mustafa Djamgoz, the Professor of Cancer Biology, at Imperial College, London, said the findings relating to eating GM corn were a 'surprise'.

Prof Djamgoz, who describes himself as a neutral on GM, said: 'The results are significant. The experiments are, more or less, the best of their kind to date.'

However, he said that it is now important to ensure they are repeated with more animals by independent laboratories to confirm the outcome. 'We are not scaremongering here. More research, including a repetition of this particular study is warranted,' he said.

The professor said it will take two to three years to get a definitive answer.

http://www.dailymail.co.uk/news/article-2208452

Leaked: US to Start 'Trade Wars' with Nations Opposed to Monsanto, GMO Crops

By Anthony Gucciardi

January 2, 2012
Activist Post

The United States is threatening nations who oppose Monsanto's genetically modified (GM) crops with **military-style trade wars**, according to information obtained and released by the organization WikiLeaks.

Nations like France, which have moved to ban one of Monsanto's GM corn varieties, were requested to be 'penalized' by the United States for opposing Monsanto and genetically modified foods.

The information reveals just how deep Monsanto's roots have penetrated key positions within the United States government, with the cables **reporting that many U.S. diplomats work directly for Monsanto**.

The WikiLeaks cable reveals that in late 2007, the United States ambassador to France and business partner to George W. Bush, Craig Stapleton, requested that the European Union along with particular nations that did not support GMO crops be penalized. Stapleton, who co-owned the Dallas/Fort Worth-based Texas Rangers baseball bats team with Bush in the 1990s, stated:

Country team Paris recommends that we calibrate a target retaliation list that causes some pain across the EU since this is a collective responsibility, but that also focuses in part on the worst culprits. The list should be measured rather than vicious and must be sustainable over the long term, since we should not expect an early victory. Moving to retaliation will make clear that the current path has real costs to EU interests and could help strengthen European pro-biotech voices.

The Leaked Political Agenda Behind Monsanto's GMO Crops

The ambassador plainly calls for 'target retaliation' against nations who are against using Monsanto's genetically modified corn, admittedly linked to organ damage and environmental devastation. Amazingly, this is not an isolated case. In similar newly released cables, **United States diplomats are found to have pushed GMO crops as a strategic government and commercial imperative**.

Furthermore, the U.S. specifically targeted advisers to the Pope, due to the fact that many Catholic bishops and figureheads have openly denounced GMO crops. In fact, the Vatican has openly declared Monsanto's GMO crops as a 'new form of slavery'.

'A Martino deputy told us recently that the cardinal had co-operated with embassy Vatican on biotech over the past two years in part to compensate for his vocal disapproval of the Iraq war and its aftermath – to keep relations with the USG [US government] smooth. According to our source, Martino no longer feels the need to take this approach,' says the cable.

Perhaps the most shocking piece of information exposed by the cables is the fact that these U.S. diplomats are actually ***working directly for biotech corporations like Monsanto***. The cables also highlight the relationship between the U.S. and Spain in their conquest to persuade other nations to allow for the expansion of GMO crops. Not only did the Spanish government secretly correspond with the U.S. government on the subject, but the U.S. government actually knew beforehand how Spain would vote before the Spanish biotech commission reported their decision regarding GMO crops. The cable states:

'In response to recent urgent requests by [Spanish rural affairs ministry] state secretary Josep Puxeu and Monsanto, post requests renewed US government support of Spain's science-based agricultural biotechnology position through high-level US government intervention.'

Monsanto has undoubtedly infiltrated the United States government in order to push their health-endangering agenda, and this has been known long before the release of these WikiLeaks cables. The U.S. is the only place where Monsanto's synthetic hormone Posilac is still used in roughly 1/3 of all cows, with 27 nations banning the substance over legitimate health concerns. Despite Monsanto's best attempts at incognito political corruption, nothing can stop the grassroots anti-Monsanto movement that is taking over cities and nations alike.

http://www.activistpost.com/2012/01/leaked-us-to-start-trade-wars-with.html

USDA Steps Back and Gives Monsanto More Power over GMO Seeds

By Anthony Gucciardi

December 27, 2011

The United States Department of Agriculture (USDA) has decided to deregulate two of Monsanto's genetically

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Continued from page 11 – USDA Steps Back and Gives Monsanto More Power over GMO Seeds

modified seed varieties, giving the company a further grasp on the food supply of the nation. One of the modified corn seed varieties is engineered to resist drought conditions, and the other is an herbicide-resistant soybean that has been genetically engineered to produce more fatty acids. Of course research has found that Monsanto's GMO crops, despite claims to be resistant to herbicides and pesticides, actually require significantly more harsh chemicals. Apparently these studies do not concern the USDA, an organization that has always been adamant about genetically modifying the entire food supply.

The USDA continues to grant Monsanto further power over itself, despite evidence linking Monsanto's creations to health conditions and environmental devastation. This is also the same organization that has continually pushed for the approval of genetically modified salmon, which was rejected by Congress due to health concerns. The USDA is so dedicated, in fact, that they decided to help forward the approval of genetically modified salmon by generously funding the cause with **nearly $500,000**.

The news comes after experiments with the seeds were conducted in five African nations, funded by the Bill & Melinda Gates Foundation. Monsanto's drought-resistant corn seeds were given to African farmers facing drought conditions, replacing traditional and sustainable farming with Monsanto's GMO crops. Bill Gates himself has purchased 500,000 Monsanto stocks as of August 2010, and has heavy ties with Monsanto and even genetically modified mosquitoes which could be released in Florida **early next year**.

The USDA has allowed Monsanto to run rampant, modifying staple crops, food items, and even milk. Monsanto's rBGH is a synthetic hormone created using molecules and DNA sequences that are a result of **molecular cloning**, which has been linked to breast and gastrointestinal cancer. In the United States, this synthetic hormone is present in 1/3 of all milk.

Meanwhile, it is banned in 27 countries around the globe. Marketed under the name Posilac, Monsanto has since sold the brand to a division of **Eli Lilly and Company**, Elanco Animal Health. Eli Lilly and Company are the makers of suicide-linked Prozac, and were able to cover up the 1980s research which found antidepressants to breed even more depression and suicidal thoughts.

It seems rather clear that the USDA has zero regard for the research showing the negative effects of GMO crops on the environment and public health. Instead, they allow for Monsanto to steamroll through the approval process and make a fortune modifying the planet. Monsanto has ties within the deepest levels of government, and only through hardcore activism will they be forced to answer to public concern.

http://naturalsociety.com/usda-steps-back-and-gives-monsanto-more-power-over/

Monsanto Capitalizes on Drought and Enslaves Farmers

By Barbara H. Peterson

August 8, 2012
Farm Wars

Monsanto is by far one of the greatest disaster capitalists around. Not only does this paraiah of a company manufacture and sell genetically engineered crops (GMOs) that actually increase drought conditions, but it is now poised to capitalize on the very same conditions that it helps to cause.

In "Why in the World Are They Spraying?," we talk about how Monsanto has a patent on genetically engineering plants able to withstand abiotic stresses such as drought and how it stands to profit from the effects of "climate change." Therefore, with drought conditions worsening, like any good disaster capitalist, Monsanto is about to cash in. I expected it, others expected it, and here it is… just what we've been expecting…

Mon*sainto* to the rescue with programs for farmers hit by the drought. Oh, by the way, there is that very tiny matter of signing the 44 page indentured servant agreement, but don't worry about that little detail, we're here to help you… really we are…

Supporting Farmers' Ability to Invest in 2013 Planting

While crop insurance will help farmers recover from a portion of their losses as a result of the drought, the timing of their claim payments may make it more difficult for them to re-invest in their businesses and prepare for the 2013 planting season. Monsanto is helping their farmer customers in affected regions by offering additional prepay options and financing assistance for the purchase of their seed. Farmers in impacted areas can call 1-855-379-1212 to discuss their individual situation and explore options with a Monsanto representative.

Monsanto's Long-Term Research to Help Farmers Mitigate Risk

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Continued from page 12 - Monsanto Capitalizes on Drought and Enslaves Farmers

Beyond this year's devastating drought, Monsanto is committed to helping farmers mitigate their risk over the long term. The company's work in plant breeding and biotechnology is focused on developing innovative products that can help farmers manage challenging agronomic conditions and stressors to their cropping systems. These products can help mitigate crop losses and the broader impact those losses have on rural communities.

http://monsanto.mediaroom.com/monsanto-supports-drought-stricken-communities

GMOs are invasive. They take over other crops, horizontally transfer genes to other species, and land in our guts where they mutate, cause disease, and quite literally change our DNA. This is genetic cleansing for humans, animals, plants, and anything that breathes. And who gets to pick and choose just which genes are "okay?" Not you and me, that's for sure. At least not until our choices are so narrowed down that the only things available have a "Made by Monsanto" stamp on them.

http://farmwars.info/?p=9009

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Aspartame made with GM Bacteria

By Anthony Gucciardi

January 05, 2012

The manufacturers of the most prevalent sweetener in the world have a secret, and it's not a sweet one. Aspartame, an artificial sweetener found in thousands of products worldwide, has been found to be created using genetically modified (GM) bacteria. What`s even more shocking is how long this information has been known. A 1999 article by The Independent was the first to expose the abominable process in which aspartame was created. Ironically, the discovery was made around the same time as rich leaders around the globe met at the G8 Summit to discuss the safety of GM foods.

The 1999 investigation found that Monsanto, the largest biotech corporation in the world, often used GM bacteria to produce aspartame in their US production plants. The end result is a fusion between two of the largest health hazards to ever hit the food industry — artificial sweeteners and an array of genetically altered organisms. Both have led to large-scale debate, with aspartame being the subject of multiple congressional hearings and scientific criticism.

Scientists and health advocates are not the only ones to speak out against aspartame, however. The FDA received a flurry of complaints from consumers using NutraSweet, a product containing aspartame. Since 1992, the FDA has stopped documenting reports on the subject.

The process in which aspartame is created involves combining an amino acid known as phenylalanine with aspartic acid. First synthesized in 1965, aspartame requires bacteria for the sole purpose of producing phenylalanine. Monsanto discovered that through genetically altering this bacteria, phenylalanine could be created much more quickly. In the report by The Independent, Monsanto openly admitted that their mutated bacteria are a staple in the creation process of aspartame.

"We have two strains of bacteria – one is traditionally modified and one is genetically modified," said the source from Monsanto. "It's got a modified enzyme. It has one amino acid different."

Multiple studies have been conducted regarding genetic manipulation, with many grim conclusions. One study found that the more GM corn was fed to mice, the fewer babies they had. Another study, published in the International Journal of Biological Sciences, found that the organs that typically respond to chemical food poisoning were the first to encounter problems after subjects consumed GM foods. The same study also states that GM foods should not be commercialized.

"For the first time in the world, we've proven that GMO are neither sufficiently healthy nor proper to be commercialized. [...] Each time, for all three GMOs, the kidneys and liver, which are the main organs that react to a chemical food poisoning, had problems," indicated Gilles-Eric Seralini, an expert member of the Commission for Biotechnology Reevaluation.

Consumer groups are now curious as to whether or not other products secretly contain genetically modified ingredients. Due to the fact that the finished product`s DNA does not change when using genetically modified bacteria, it is hard to know for sure. With the FDA ruling against the labeling of GM salmon, it is becoming more of a challenge to determine whether or not a product contains GM ingredients. Consumers are voicing their opposition for GM ingredients going incognito, with the largest growing retail brand being GMO-free products.

"The public wants to know and the public has a right to know," said Marion Nestle, a professor in the Nutrition, Food Studies and Public Health Department at New York University.

Unveiling the secret process in which aspartame is created

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Continued from page 13 – Aspartame made with GM Bacteria

acts as yet another reminder to stay away from artificial sweeteners, and one should choose natural alternatives such as palm sugar, xylitol, or stevia.

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FDA Rules won't require Labeling of Genetically Modified Salmon

By Lyndsey Layton

September 18, 2010

As the Food and Drug Administration considers whether to approve genetically modified salmon, one thing seems certain: Shoppers staring at fillets in the seafood department will find it tough to pick out the conventional fish from the one created with genes from another species.

Despite a growing public demand for more information about how food is produced, that won't happen with the salmon because of idiosyncracies embedded in federal regulations.

The FDA says it cannot require a label on the genetically modified food once it determines that the altered fish is not "materially" different from other salmon - something agency scientists have said is true.

Perhaps more surprising, conventional food makers say the FDA has made it difficult for them to boast that their products do not contain genetically modified ingredients.

The labeling question has emerged as the FDA determines whether to approve the fish, an Atlantic salmon known as AquAdvantage that grows twice as fast as its natural counterpart. The decision carries great weight because, while genetically modified agriculture has been permitted for years and engineered crops are widely used in processed foods, this would be the first modified animal allowed for human consumption in the United States. The AquAdvantage salmon has been given a gene from the ocean pout, an eel-like fish, and a growth hormone from a Chinook salmon.

'The public wants to know'

Consumer advocates say they worry about labeling for genetically engineered beef, pork and other fish, which are lining up behind the salmon for federal approval.

"The public wants to know and the public has a right to know," said Marion Nestle, a professor in the Nutrition, Food Studies and Public Health Department at New York University. "I think the agency has discretion, but it's under enormous political pressure to approve [the salmon] without labeling."

The debate will be taken up this week, with an advisory committee meeting Sunday and Monday on whether to allow the modified fish, and a separate panel meeting Tuesday on whether the fish should be labeled. The panels will offer recommendations to the FDA commissioner, who will decide both matters.

The biotechnology industry is opposed to mandatory labeling, saying it will only bewilder a public that is not well informed about genetic engineering.

"Extra labeling only confuses the consumer," said David Edwards, director of animal biotechnology at the Biotechnology Industry Organization. "It differentiates products that are not different. As we stick more labels on products that don't really tell us anything more, it makes it harder for consumers to make their choices."

The FDA defends its approach, saying it is simply following the law, which prohibits misleading labels on food. And the fact that a food, in this case salmon, is produced through a different process is not sufficient to require a label.

The controversy comes at a time when Americans seem to want to know more about their food - where it is grown, how it is produced and what it contains. Books criticizing industrial agriculture have become bestsellers, farmers markets are expanding and organic food is among the fastest-growing segments of the food industry.

The FDA itself is part of a new effort to improve nutrition information on processed foods.

In the European Union and Japan, it is nearly impossible to find genetically modified foods, largely because laws require labeling, said William K. Hallman, director of the Food Policy Institute at Rutgers University. "No one wants to carry products with such a label," he said. "The food companies figure that consumers won't buy it."

There is nothing to stop salmon producers or food makers in the United States from voluntarily labeling their products

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Continued from page 14 – FDA Rules won't require Labeling of Genetically Modified Salmon

as genetically engineered - except a fear of rejection in the marketplace, Hallman said. "I don't know of a single company that does that," he said.

The FDA maintains it can only require labeling if a genetically engineered food is somehow different from the conventional version - if it has an unusual texture, taste, nutritional component or allergen, for example.

Although some consumer advocates maintain there are important differences, the agency's scientists have already said they see no "biologically relevant" variations between the AquAdvantage salmon and traditional salmon.

Consumers could be certain of getting the non-modified version if they bought salmon labeled as "wild," but most salmon consumed in this country is farmed.

Ever since the FDA approved the first genetically altered material for use in food in 1992, when Monsanto developed a synthetic hormone injected into cows to increase milk production, the agency has held that it cannot require food producers to label products as genetically engineered.

In the intervening years, the use of genetically engineered crops has skyrocketed; 93 percent of this year's soybean crop is genetically engineered, according to the U.S. Agriculture Department.

Byproducts of those crops - soy lecithin, for example - are found in thousands of processed foods from chocolate bars to breakfast cereal; none is labeled as containing genetically modified ingredients.

No 'Hormone Free' either

The labeling matter is further complicated because the FDA has maintained a tough stance for food makers who don't use genetically engineered ingredients and want to promote their products as an alternative. The agency allows manufacturers to label their products as not genetically engineered as long as those labels are accurate and do not imply that the products are therefore more healthful.

The agency warned the dairy industry in 1994 that it could not use "Hormone Free" labeling on milk from cows that are not given engineered hormones, because all milk contains some hormones.

It has sent a flurry of enforcement letters to food makers, including B&G Foods, which was told it could not use the phrase "GMO-free" on its Polaner All Fruit strawberry spread label because GMO refers to the phrase "GMO-free" on its Polaner All Fruit strawberry spread label because GMO refers to genetically modified organisms and strawberries are produce, not organisms.

It told the maker of Spectrum Canola Oil that it could not use a label that included a red circle with a line through it and the words "GMO," saying the symbol suggested that there was something wrong with genetically engineered food.

"This to me raises questions about whose interest the FDA is protecting," said Rep. Dennis J. Kucinich (D-Ohio), who has introduced legislation that would require labeling for genetically engineered food. "They are clearly protecting industry and not the public."

One state with a sizable salmon fishing industry - Alaska - passed a law in 2005 that requires labeling of any genetically engineered fish sold there.

"One side of the argument says let's give consumers sovereignty over their food choices," Hallman said. "The other says we've done the science on this and it's no different, so if we put a label on it, we're implying it's somehow risky and that's like government imposed false advertising."

http://www.washingtonpost.com/wp-dyn/content/article/2010/09/18/AR2010091803520.html

Top 10 GM Foods to Avoid

By Elizabeth Renter

29 July 2012
NaturalSociety/News Analysis

Genetically modified foods have been shown to cause harm to humans, animals, and the environmental, and despite growing opposition, more and more foods continue to be genetically altered. It's important to note that steering clear from these foods completely may be difficult, and you should merely try finding other sources than your big chain grocer. If produce is certified USDA-organic, its non-GMO (or supposed to be!) Also, seek out local farmers and booths at farmer's markets where you can be assured the crops aren't GMO. Even better, if you are so inclined: Start organic gardening and **grow them yourself.** Until then, here are the top 10 worst GMO foods for your "do not eat" GMO foods list.

Top 10 Worst GMO Foods for Your GMO Foods List

1. Corn: This is a no-brainer. If you've watched any food documentary, you know corn is highly modified. "As many as half of all U.S. farms growing corn for Monsanto are using genetically modified corn," and much of it is intended for human consumption.

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Continued from page 15 Top10 GM Foods to Avoid

Monsanto's GMO corn has been tied to numerous health issues, including weight gain and organ disruption.

2. Soy: Found in tofu, vegetarian products, soybean oil, soy flour, and numerous other products, soy is also modified to resist herbicides. As of now, biotech giant Monsanto still has a tight grasp on the soybean market, with approximately 90 percent of soy being genetically engineered to resist Monsanto's herbicide Roundup. In one single year, 2006, 96.7 million pounds of glyphosate was sprayed on soybeans alone.

3. Sugar: According to NaturalNews, genetically-modified sugar beets were introduced to the U.S. market in 2009. Like others, they've been modified by Monsanto to resist herbicides. Monsanto has even had USDA and court-related issues with the planting of its sugar beets, being ordered to remove seeds from the soil due to illegal approval.

4. Aspartame: Aspartame is a toxic additive used in numerous food products, and should be avoided for numerous reasons, including the fact that it is created with genetically modified bacteria.

5. Papayas: This one may come as a surprise to all of you tropical-fruit lovers. GMO papayas have been grown in Hawaii for consumption since 1999. Though they can't be sold to countries in the European Union, they are welcome with open arms in the U.S. and Canada.

6. Canola: One of the most chemically altered foods in the U.S. diet, canola oil is obtained from rapeseed through a series of chemical actions.

7. Cotton: Found in cotton oil, cotton originating in India and China in particular has serious risks.

8. Dairy: Your dairy products contain growth hormones, with as many as one-fifth of all dairy cows in America are pumped with these hormones. In fact, Monsanto's health-hazardous rBGH has been banned in 27 countries, but is still in most US cows. If you must drink milk, buy organic.

9. and 10. Zucchini and Yellow Squash: Closely related, these two squash varieties are modified to resist viruses.

The dangers of some of these foods are well-known. The Bt toxin being used in GMO corn, for example, was recently detected in the blood of pregnant women and their babies.

But perhaps more frightening are the risks that are still unknown.

With little regulation and safety tests performed by the companies doing the genetic modifications themselves, we have no way of knowing for certain *what* risks these lab-created foods pose to us outside of what we already know.

The best advice: steer clear of them altogether.

http://www.nationofchange.org/top-10-gmo-foods-avoid-1343568178

Briefing: Food Safety for Whom?

GRAIN media release | 5 May 2011

A new briefing by GRAIN looks at how "food safety" is being used as a tool to increase corporate control over food and agriculture and what people are doing about it.

School children in the US were served 200,000 kilos of meat contaminated with a deadly antibiotic-resistant bacteria before the nation's second largest meat packer issued a recall in 2009. A year earlier, six babies died and 300,000 others got horribly sick with kidney problems in China when one of the country's top dairy producers knowingly allowed an industrial chemical into its milk supply. Across the world, people are getting sick and dying from food like never before.

Governments and corporations are responding with all kinds of rules and regulations, but few have anything to do with public health. The trade agreements, laws and private standards used to impose their version of "food safety" only entrench corporate food systems that make us sick and devastate those that truly feed and care for people, those based on biodiversity, traditional knowledge, and local markets.

"Corporations are increasingly in the driver's seat because they set the standards and implement them while governments merely frame the rules and clean up the mess," says GRAIN Director Henk Hobbelink. "These food and agriculture standards are spreading everywhere and are being used by Walmart and other corporations to organise markets according to their interests."

"Small-scale food producers, processors and vendors are getting shut out of markets or criminalised for their traditional practices, even though the corporate food system is the central problem," says Hobbelink.

People are resisting, however, whether its movements against GMOs in Benin and "mad cow" beef in Korea or campaigns to defend street hawkers in India and raw milk

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African Traditional Herbal Research Clinic

Volume 7, Issue 11 NEWSLETTER October 2012

FEATURED ARTICLES

Myths about Industrial Agriculture

Organic farming is the "only way to produce food" without harming the planet and people's health

By Vandana Shiva

"The food revolution is the biggest revolution of our times, and the industry is panicking," says Vandana Shiva [AFP]

Reports trying to create doubts about organic agriculture are suddenly flooding the media. There are two reasons for this. Firstly, people are fed up of the corporate assault of toxics and GMOs. Secondly, people are turning to organic agriculture and organic food as a way to end the toxic war against the earth and our bodies.

At a time when industry has set its eyes on the super profits to be harvested from seed monopolies through patented seeds and seeds engineered with toxic genes and genes for making crops resistant to herbicides, people are seeking food freedom through organic, non-industrial food.

The food revolution is the biggest revolution of our times, and the industry is panicking. So it spins propaganda, hoping that in the footsteps of Goebbels, a lie told a hundred times will become the truth. But food is different.

We are what we eat. We are our own barometers. Our farms and our bodies are our labs, and every farmer and every citizen is a scientist who knows best how bad farming and bad food hurts the land and our health, and how good farming and good food heals the planet and people.

One example of an industrial agriculture myth is found in "The Great Organic Myths" by Rob Johnston, published in the August 8 issue of *The Tribune*. It tries to argue:

"Organic foods are not healthier or better for the environment - and they're packed with pesticides. In an age of climate change and shortages, these foods are an indulgence the world can't afford."

This article had been published in the *Independent* and rebutted, but was used by the *Tribune* without the rebuttal.

Every argument in the article is fraudulent.

The dominant myth of industrial agriculture is that it produces more food and is land-saving. However, the more industrial agriculture spreads, the more hungry people we have. And the more industrial agriculture spreads, the more land is grabbed.

The dominant myth of industrial agriculture is that it produces more food and is land-saving. However, the more industrial agriculture spreads, the more hungry people we have. And the more industrial agriculture spreads, the more land is grabbed.

The case against industrial agriculture

Productivity in industrial agriculture is measured in terms of "yield" per acre, not overall output. And the only input taken into account is labor, which is abundant, not natural resources which are scarce.

A resource hungry and resource destructive system of agriculture is not land saving, it is land demanding. That is why industrial agriculture is driving a massive planetary land grab. It is leading to the deforestation of the rainforests in the Amazon for soya and in Indonesia for palm oil. And it is fueling a land grab in Africa, displacing pastoralists and peasants.

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According to the FAO International Technical Conference on Plant Genetic Resources in Leipzig (1995), industrial agriculture is responsible for 75 per cent biodiversity erosion, 75 per cent water destruction, 75 per cent land degradation and 40 per cent greenhouse gases. It is too heavy a burden on the planet. And as the 270,000 farmers' suicides since 1997 in India show, it is too heavy a burden on our farmers.

The toxics and poisons used in chemical farming are creating a health burden for our society. Remember Bhopal. Remember the Endosulfan victims in Kerala. And remember Punjab's Cancer train.

Navdanya's forthcoming report "Poisons in our Food" is a synthesis of all studies on the health burden of pesticides which are used in industrial agriculture but not in organic farming.

Industrial agriculture is an inefficient and wasteful system which is chemical intensive, fossil fuel intensive and capital intensive. It destroys nature's capital on the one hand and society's capital on the other, by displacing small farms and destroying health. According to David Pimentel, professor of ecology and agricultural sciences at Cornell University, it uses 10 units of energy as input to produce one unit of energy as food.

This waste is amplified by another factor of 10 when animals are put in factory farms and fed grain, instead of grass in free range ecological systems. Rob Johnston celebrates these animal prisons as efficient, ignoring the fact that it takes 7kg of grain to produce one kg of beef, 4kg of grain to produce 1kg of pork and 2.4kg of grain to produce 1kg of chicken.

The diversion of food grains to feed is a major contributor to world hunger. And the shadow acres to produce this grain are never counted. Europe uses 7 times the area outside Europe to produce feed for its factory farms.

Small farms of the world provide 70 per cent of the food, yet are being destroyed in the name of low "yields". Eighty eight per cent of the food is consumed within the same eco-region or country where it is grown.

Industrialization and globalization is the exception, not the norm. And where industrialization has not destroyed small farms and local food economies, biodiversity and food are bringing sustenance to people. The biodiversity of agriculture is being maintained by small farmers.

As the ETC report states in "Who Will Feed Us", "Peasants breed and nurture 40 livestock species and almost 8,000 breeds. Peasants also breed 5,000 domesticated crops and have donated more than 1.9 million plant varieties to the world's gene banks."

"Peasant fishers harvest and protect more than 15,000 freshwater species. The work of peasants and pastoralists maintaining soil fertility is 18 times more valuable than the synthetic fertilizers provided by the seven largest corporations."

When this biodiversity rich food system is replaced by industrial monocultures, when food is commoditized, the result is hunger and malnutrition. Of the world's 6.6bn, 1bn are not getting enough food; another billion might get enough calories but not enough nutrition, especially micro nutrients.

Another 1.3bn who are obese suffer malnutrition of being condemned to artificially cheap, calorie-rich, nutrient-poor processed food.

Half of the world's population is a victim of structural hunger and food injustice in today's dominant design for food. We have had hunger in the past, but it was caused by external factors - wars and natural disasters. It was localized in space and time.

Today's hunger is permanent and global. It is hunger by design. This does not mean that those who design the contemporary food systems intend to create hunger. It does mean that creation of hunger is built into the corporate design of industrial production and globalized distribution of food.

A series of media reports have covered another study by a team led by Bravata, a senior affiliate with Stanford's Center for Health Policy, and Crystal Smith-Spangler, MD, MS, an instructor in the school's Division of General Medical Disciplines and a physician-investigator at VA Palo Alto Health Care System, who did the most comprehensive meta-analysis to date of existing studies comparing organic and conventional foods.

They did not find strong evidence that organic foods are more nutritious or carry fewer health risks than conventional alternatives, though consumption of organic foods can reduce the risk of pesticide exposure.

This study can hardly be called the "most comprehensive meta - analysis"; the researchers sifted through thousands of papers and identified 237 of the most relevant to analyze. This already exposes the bias. The biggest meta-analysis on food and agriculture has been done by the United Nations as the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD).

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Continued from page 18 – Myths about Industrial Agriculture

Four hundred scientists from across the world worked for four years to analyze all publications on different approaches to agriculture, and concluded that chemical industrial agriculture is no longer an option, only ecological farming is.

Yet the Stanford team presents itself as the most comprehensive study, and claims there are no health benefits from organic agriculture, even though there were no long-term studies of health outcomes of people consuming organic versus conventionally produced food; the duration of the studies involving human subjects ranged from two days to two years.

Two days does not make a scientific study. No impact can be measured in a two-day study. This is junk science parading as science.

One principle about food and health is that our food is as healthy as the soil on which it grows is. And it is as deficient as the soils become with chemical farming.

Industrial chemical agriculture creates hunger and malnutrition by robbing crops of nutrients. Industrially produced food is nutritionally empty mass, loaded with chemicals and toxins. Nutrition in food comes from the nutrients in the soil.

Industrial agriculture, based on the NPK mentality of synthetic nitrogen, phosphorous and potassium-based fertilizers leads to depletion of vital micronutrients and trace elements such as magnesium, zinc, calcium and iron.

David Thomas, a geologist-turned-nutritionist, discovered that between 1940 and 1991, vegetables had lost - on an average - 24 per cent of their magnesium, 46 per cent of their calcium, 27 per cent of their iron and no less than 76 per cent of their copper (Ref: David Thomas "A study on the mineral depletion of the foods available to us as a nation over the period 1940 to 1991", *Nutrition and Health,* 2003; 17(2): 85-115).

Carrots had lost 75 per cent of their calcium, 46 per cent of their iron, and 75 per cent of their copper. Potatoes had lost 30 per cent of their magnesium, 35 per cent calcium, 45 per cent iron and 47 per cent copper.

To get the same amount of nutrition, people will need to eat much more food. The increase in "yields" of empty mass does not translate into more nutrition. In fact it is leading to malnutrition.

The IAASTD recognizes that through an agro-ecological approach "agro-ecosystems of even the poorest societies have the potential through ecological agriculture and IPM to meet or significantly exceed yields produced by conventional methods, reduce the demand for land conversion for agriculture, restore ecosystem services (particularly water) reduce the use of and need for synthetic fertilizers derived from fossil fuels, and the use of harsh insecticides and herbicides".

Our 25 years of experience in Navdanya shows that ecological, organic farming is the only way to produce food without harming the planet and people's health. This is a trend that will grow, no matter how many pseudo-scientific stories are planted in the media by the industry.

 Dr. Vandana Shiva is a philosopher, environmental activist and eco feminist. She is the founder/director of Navdanya Research Foundation for Science, Technology, and Ecology. She is author of numerous books including, Soil Not Oil: Environmental Justice in an Age of Climate Crisis; Stolen Harvest: The Hijacking of the Global Food Supply; Earth Democracy: Justice, Sustainability, and Peace; and Staying Alive: Women, Ecology, and Development.

http://www.commondreams.org/view/2012/09/23-4

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***Continued on page 16* – Briefing: Food Safety for Whom?**

in Colombia. The question of who defines "food safety" is increasingly central to the struggle over the future of food and agriculture.

"Real food safety and food quality comes from balances, not extreme hygiene through industrial technologies," says Hobbelink.

For a copy of the synopsis or the full briefing, *Food safety for whom? Corporate wealth versus people's health*, please visit: http://www.grain.org/briefings/?id=222

http://www.globalresearch.ca/corporate-wealth-versus-people-s-health-food-safety-used-to-increase-corporate-control-over-food-and-agriculture/

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Ugandan Scientists grow GM Banana as Disease threatens Country's Staple Food

Ban on GM crops waived after bacterial disease causes annual banana crop losses of $500m

By Xan Rice in Galamba

9 March 2011
The Guardian

Most countries would resent being called a banana republic. Uganda prides itself on it. A typical adult here eats at least three times his or her body weight in bananas

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Continued from page 19 – Ugandan Scientists grow GM Banana as Disease threatens Country's Staple Food

each year, more than anywhere else on Earth. Different varieties are steamed, boiled, roasted, turned into gin and beer, or simply peeled and eaten raw, such as the tiny *sukali ndizi*, considered by some experts to be finest banana in the world.

"Breakfast, lunch and dinner, 365 days a year," said Arthur Kamenya, whose taste for the fruit is so strong he quit his job as a graphic designer to grow it commercially. "And people still crave more."

But it is a craving under threat. In recent years a devastating bacterial disease has swept across Uganda and, to a lesser extent, neighbouring countries, causing annual banana crop losses to the region of more than $500m (£310m). The rapid spread of banana Xanthomonas wilt, or BXW, which destroys the entire plant and contaminates the soil, "has endangered the livelihoods of millions of farmers who rely on banana for staple food and income", according to an article in the journal Molecular Plant Pathology last year.

With no resistant varieties or chemical cures available, growers such as Kamenya have been forced to destroy large sections of their plantations. For smaller farmers the damage has been so severe many have given up on the fruit.

But local scientists have not. On a sprawling campus outside Kampala, Wilberforce Tushemereirwe and his colleagues at the National Banana Research Programme have been on a quest to defeat the disease by building a better banana. This has involved adding to the fruit a sweet pepper gene that has already improved disease resistance in several vegetables.

Laboratory tests on the genetically modified bananas have been highly promising, with six out of eight strains proving 100% resistant to BXW. Field tests have now started in a fenced-off, guarded plot on the edge of the campus.

Results from the trials, expected later this year, could have a strong bearing on the country's future food security – and indeed its entire policy on agriculture. GM crops are still banned in Uganda, and the scientists had to get special permission just to conduct their tests. While acknowledging that it is a highly controversial topic, Tushemereirwe says the risk of doing nothing is too great.

"If we just leave this, bananas will slowly disappear from Uganda," he said.

BXW was first reported in Ethiopia in the 1960s, but was only identified further south in 2001, initially in Uganda and then Rwanda, the Democratic Republic of Congo, Kenya, Burundi and Tanzania. Uganda was particularly vulnerable because of the scale of its banana production, second only to India which has a population 35 times larger.

With a single plant lasting for many years and providing a large bunch of fruit every few months, bananas are a key crop for small farmers. They are also a crucial source of sustenance, accounting for more than 30% of Ugandans' daily calorie intake. According to Tushemereirwe, the average adult eats 200-250kg (440lb-550lb) of bananas a year – and twice that in some areas.

Most of that is matooke, a long green banana, which is usually steamed and mashed and eaten with beans, peanut sauce or meat. That's what Kamenya planted six years ago on his farm in Galamba, about an hour's drive from the Ugandan capital. But soon he realised some of the plants were sick, with yellowing leaves and the fruit ripening prematurely.

Kamenya, a powerfully built 37-year-old, was forced to dig up 1,500 of his 4,500 plants, destroy them, and allow the soil to lie fallow for at least six months. He also had to sterilise his farm tools. This eventually helped control the disease, though he still has problems. "Look how this plant has rotted," he said, slicing through the trunk of a banana plant with a knife to reveal yellow ooze.

Few areas of Uganda have escaped the disease, which is transported by insects such as bees and wasps. But traditional farming practices also ensured its rapid spread. Infected "suckers" – young shoots of banana plants – are shared with neighbours, while the use of banana leaves to cover bunches of fruit headed to market quickly transferred the disease to new areas.

In central Uganda, one of the main banana-growing regions, BXW hit up to 80% of farms, sometimes wiping out entire fields. Small-scale farmers, who could not afford to let their gardens lie empty for months before replanting, switched to other crops.

Tushemereirwe, with the International Institute for Tropical Agriculture (IITA) and African Agricultural Technology Foundation (AATF), decided a GM solution was the best way forward. Academia Sinica, the Taiwanese research institute that pioneered the sweet pepper gene technology, agreed to issue them with a royalty-free licence. The sweet pepper gene – successfully transplanted into the other vegetables, but never before a banana – produces a protein that kills cells infected by disease-spreading bacteria.

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Continued from page 20 – Ugandan Scientists grow GM Banana as Disease threatens Country's Staple Food

Leena Tripathi, a plant biotechnologist at IITA who helped steer the project, said introducing the gene did not affect the quality of the banana and presented no health risks. "The beauty of the genetic engineering is that you can be very precise," she said.

Other GM banana experiments are under way in Uganda, including one to fortify the fruit with iron and vitamin A. But concern about GM foods in Uganda means they could face a long battle before any of the transgenic bananas find their way on to the market.

A study by Enoch Kikulwe, assistant professor of international food economics at the University of Göttingen, Germany, revealed more opposition to GM crops among the elite than those in poorer villages. Most studies show that better education led to more acceptance of GM foods, he said.

But for Kamenya the farmer, – who falls into the elite category – the anti-GM stance was hypocritical. "Most of the people against this have choices," he said, a pot of matooke steaming nearby. "Somebody who is hungry does not have a choice. GM, organic or whatever – you have to feed the people."

How to eat them, Uganda style

The super-sweet dessert bananas are the easy option. The home-brewed banana gin is a choice for only the highly adventurous. For authenticity, however, matooke, the national staple that looks like buttery mashed potato on the plate, is the only way to go.

Also known as east African highland bananas, the green matooke fruits are for cooking only – ideally steamed on an open fire. To start, water is poured into a large pot and covered with banana stalks. The peeled bananas are wrapped in the plant leaves, with the bundle lowered into the pot, resting on the stalks, above the water.

The fruit is then steamed for a few hours, going from hard to soft, white to yellow. Still wrapped in the leaves, the bananas are then mashed.

The dish can then be served on a new leaf, together with beans, other vegetables or peanut sauce.

It is an acquired taste, and to the uninitiated it can seem heavy and bland. But once you've got it, Ugandans say, there's no going back to rice and potatoes.

http://www.guardian.co.uk/world/2011/mar/09/gm-banana-crop-disease-uganda?INTCMP=ILCNETTXT3487

First GM Camels to be engineered for Drug Production

BY REHAB ABD ALMOHSEN

3 September 2012

[CAIRO] Researchers in Dubai hope to create the first genetically modified (GM) camels capable of producing pharmaceutical proteins in their milk,which can then be processed to manufacture cheaper drugs for the region.

The project aims to slash the prices of life-saving drugs — including insulin, and clotting factors for treating haemophilia — in the Middle East and North Africa, according to Nisar Wani, head of the Reproductive Biology Laboratory at Dubai's Camel Reproduction Center, in the United Arab Emirates.

The cost of camel milk in the region is comparable to that of cow's milk, but the former is more suited to local climates, said Wani. Camels are highly resistant to disease, easier to maintain in the region's arid climate, and are more efficient in converting food [into body mass] than cows.

"We are establishing camel cells modified with exogenous [foreign] DNA, for use in producing transgenic cloned animals, or GM camels," Wani told *SciDev.Net*. "Hopefully we will transfer camel transgenic embryos to surrogate mothers for the first time later this year."

Wani said he was unable to pinpoint when the first transgenic animal would be born, as the calving rate for cloned embryos was only five per cent, and "this rate gets even smaller when transgenic cells are used".

"We have crossed some critical barriers but still need to do a lot of work to reach the final destination," he added.

"Producing a transgenic animal will bring the Emirates to the top of the international research field," Serge Muyldermans, head of the Laboratory of Cellular and Molecular Immunology at Vrije University Brussel, in Belgium, told *SciDev.Net*.* "However, so far they have just been repeating what others are doing with goats and cattle."

"Cows would be better producers of transgenic protein as they produce more milk," Muyldermans said. "But as camels can be kept in arid areas and are used to living under harsh conditions, they might be better suited to the Middle East."

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Continued from page 21 – First GM Camels to be engineered for Drug Production

The Reproductive Biology Laboratory was established in Dubai in 2003, to study the reproductive techniques in species from the region, particularly camels.

"[Previously] there was little or no literature available on assisted reproductive techniques in camels, so we had to standardise all the basic techniques one by one," explained Wani. "Finally, in 2009, we produced the first cloned camel calf — named Injaz — and thereafter produced many more."

The lab's researchers have established a cell bank from 'elite' camels, which excel in milk production and adapting to drought and hot weather, and now plan to clone these animals.

The researchers are also setting up a cell bank for the region's other critically endangered species.

**This article was updated on 26 September 2012 to say that Vrije University Brussel is in Belgium, not the Netherlands as previously stated.*

http://www.scidev.net/en/health/genomics/news/first-gm-camels-to-be-engineered-for-drug-production.html

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Tanzania: Cow's Milk Not Suitable to Babies

By Dr Ali Mzige

27 May 2012
Tanzania Daily News
Opinion

Milk is the perfect food for babies. Make no mistake: breast is best for each of the 4,300 species of mammals on earth, because each mammal's milk is precisely designed and balanced for its own young.

That is why cow's milk is best for baby calves. Ideally cow's milk shouldn't be given to human babies. In the USA, the American College of Pediatrics strongly urges that cow's milk should not be given to children until they are at least 1 year old.

There are many good reasons for this. A few examples, applicable to the US but it could be the same in many parts of the world including developing countries. Allergies and asthma have reached epidemic proportions in the United States; it is also coming to us in the developing world, including Tanzania, as we notice happy wheezers (asthmatic children who are doing well). Infants not exposed to cow's milk develop far fewer allergies. They also experience much less colic, eczema, nasal and bronchial congestion. Babies need the antibodies (immunities) found in breast milk to protect them from infectious diseases. Scientists have discovered more than 90 elements in mother's milk, with concentrations changing to accommodate the needs of the developing child. Mother's milk cannot be manufactured in any laboratory on earth even if that work will be done in the Mars.

Breast milk is sterile, unlike cow's milk, which is regularly contaminated. The protein in cow's milk is suspected of being able to trigger Type 1 (juvenile) diabetes. This condition is not easy to treat, and the treatment of choice is life long insulin given by injection. We are seeing cases of juvenile diabetes in our set up now than in the past, may be because of better diagnostic and medical health facilities that can cope and the parents support and understanding.

Despite antibiotics, infants fed on formula or cow's milk are 70 per cent more likely to develop diarrhea and ear infections when compared to babies exclusively breast-fed. Even after the age of one, as parents we need to know how much milk should we feed our babies? On the average it is the excessive milk that is offered to children and adults that bring in obesity in the very early age in life.

Whole milk, when calculated in percent in calories, is 50 per cent fat (much of it saturated) and 20 percent protein. It contains cholesterol and has no dietary fibre. Drinking milk puts added burdens on already overloaded metabolic system. Nonfat milk (skim milk) is the best choice for those who wish to drink milk. It has no fat, and is virtually cholesterol-free, yet retains its other nutrients.

It is true that milk is high in calcium, but that is not the whole story. The dairy industry capitalizes on the concern about osteoporosis (loss of calcium from the bones) and pushes its products beyond all reason. International studies have showed that a high calcium intake does not necessarily insure or protect against osteoporosis. Eskimos have eaten in excess of 2,000 milligrams of calcium per day, yet osteoporosis is rampant in that population.

Generally speaking, cultures with the highest milk consumption (we need to investigate on the Maasais) have the highest rates of osteoporosis, a disease rarely found in non-milk-drinking countries. While milk carries plenty of calcium; its relatively high protein content, when added to the large amounts of protein consumed in the form of meat, chicken, and fish, actually sucks out calcium from the bones as it is being metabolized.

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In order to save calcium loss people are advised, not to take more calcium, but eat less protein, salt and caffeine. This allows the body to conserve the calcium already stored in the bones. Only 25 to 30 percent of the calcium in milk is absorbed by the human body. The incidence of coronary heart disease in North America is much higher than in non-milk drinking cultures. Whole milk, with its saturated fat and cholesterol, contributes to heart disease.

Certain proteins raise blood cholesterol levels, and casein, a common milk protein, is one of the worst. Each animal's milk is designed to fit the growth rates of its own young. Human babies develop very slowly, and the composition of human milk reflects the difference. Animal milks may contribute to the earlier maturation noted in many of today's children. After weaning humans have a high percentage of lactose intolerance (inability to digest milk sugar properly).

This is evidenced by excessive gas, cramps and diarrhea. Roughly 75 percent of the world's population has this problem.

Milk is the most common cause of food allergies. Those who suffer from asthma, rheumatoid arthritis, hay fever and digestive disorders do better when they stop drinking milk. Several studies have implicated milk and other dairy products as probable contributors to breast cancer.

In men who regularly drink more than two glasses of milk per day, prostate cancer risk jumped 400 percent. Just as some bacteria can survive the pasteurization process, so do many viruses, including certain leukemia and sarcoma viruses (causing cancer). Another worry which has not occurred so far in Africa (as far as I know) is that prions, which come from cattle with mad cow disease, could contaminate the milk.

Not even boiling will inactivate these disease causing prions. Infectious agents can be effectively transmitted through milk, ice cream, and cheese. Hormones, antibiotic residues, viruses, pesticides like DDT (which many Tanzanians would like to use for killing mosquitoes-but note if our milk and cows meat are contaminated with DDT it will be unfit for human consumption locally and internationally).

Aflatoxin contamination with animal feeds should be avoided by feeding cows with properly hygienically feeds. Aflatoxin (type of toxic fungus) in milk causes cancer of the liver and kwashiorkor in children fed with such milk. Point to note, many people live their whole lives in good health without drinking milk or using other dairy products. If used, milk should be consumed in nonfat form-in small quantities such as in cooking or on breakfast in porridge.

http://allafrica.com/stories/201205270214.html

Monsanto's Cloned Growth Hormone rBST still Contaminates US Milk

By Elizabeth Renter

NaturalSociety
July 2, 2012

Breast-feeding mothers are often cautioned against eating and drinking certain things; it's because some of these things can find their way into their breast milk and then their baby. Wouldn't it make sense, then, that some of the hormones and antibiotics given to dairy cattle would make their way into your milk carton? One hormone, recombinant bovine somatotropin, or **rBST**, is given to about 20% of dairy cattle in the United States, having unknown effects on individuals who consume their milk.

Is rBST safe?

IS rBST safe? That depends on who you ask. Companies like Monsanto, the original producer of Posilac (an rBST) product had to reluctantly put safety warnings on the sides of their packages—admitting that it has about 20 "toxic effects" on the cows.

It's a hormone that forces cows to produce more milk. More milk = more money, but the hormone makes the cows sick. Among other things, it causes **mastitis** which is an infection of the udder. This infection causes **pus** to be released into the milk. Yes, pus is in your milk.

In turn, large scale dairy operations that use rBST must use **more antibiotics** in the cows to counter the infection causing effects of the hormones.

According to the Organic Consumers Association, Dr. Samuel S. Epstein of the Cancer Prevention Coalition warns:

- rBST milk is chemically and nutritionally different than natural milk.
- Milk from cows injected with rBST is contaminated with the hormone, traces of which are absorbed through the gut into the blood of people who consume this milk or products made from it.

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- with high levels of the natural growth factor (IGF-1), which is readily absorbed through the gut.
- Excess levels of IGF-1 have been incriminated in well-documented scientific publications as causes of breast, colon, and prostate cancers. Additionally, IGF-1 blocks natural defense mechanisms against early submicroscopic cancers.

Interestingly, numerous large and wealthy countries have banned the use of hormones in milk including all countries of the European Union, Norway, Switzerland, Japan, Canada, and New Zealand. The United States, obviously has not.

What does this mean for you?
It simply gives you another reason to buy organic, hormone-free dairy products (if you must consume dairy). And if you think you can do without dairy—it's just another reason to go vegan or simply avoid dairy.

http://naturalsociety.com/monsantos-growth-hormone-rbst-us-milk

rBGH Milk Production: Animal Cruelty, Genetically Modified Hormones and E. Coli

By Brandon Turbeville

May 14, 2011
Activist Post

With the current controversy surrounding the govern-ment crackdown on wholesome, organic, and locally produced milk, it is important to understand the products we are being pushed toward, as well as those we are being pushed away from. While the benefits of organic and raw milk is largely undeniable when compared to the industrially produced substitute, the dangers of the latter are not discussed quite as frequently. Of these dangers, rBGH is a central figure.

Recombinant Bovine Growth Hormone (also known as Recombinant Bovine Somatotropin) is a genetically engineered hormone that is injected into cows for the purpose of increasing milk production.[1] It is derived from bovine somatotropin (bST) which is a hormone that is produced naturally in the cattle by the pituitary gland. This hormone is very important for growth and development, as well as other functions of the animal's body.

Sometime in the 1930s it was discovered that injecting cattle with bST increased milk production. However, because bST is produced in the animal itself, the only source available was in the pituitary glands of the slaughtered cattle. Genetic engineering thus came into play.

By removing the bovine gene which controls the production of bST and inserting it into a bacterium called Escherichia Coli (E. Coli), scientists and manufacturers are able to reproduce large amounts of bST. This is due to the fact that E. Coli replicates in the human intestinal tract where it is originally found. Essentially, it acts as an industrial unit for the production of bST.

This Genetically Modified Organism (GMO) is then injected into the cattle where it replicates causing an increase in milk production.[2] This concept of genetic combination is the foundation for the name "Recombinant" Growth Hormone or Bovine Somatotropin.

As with any GM food, there are very serious health problems associated with the use of rBGH that affect both humans and the animals that are injected with it. Cows who receive the hormone, in addition to the deplorable conditions in which they already find themselves[3], often develop a condition called mastitis, an extremely painful inflammation of the mammary glands.

Of the two forms of mastitis (infectious and non-infectious) non-infectious mastitis accounts for only 1% of the cases in existence and is mainly a result of some kind of injury. The other 99% are a result of infections largely due to bacteria produced by the animals' living conditions and the rBGH they receive.

There are subsequently four categories of mastitis: peracute, acute, subacute, and subclinical. Of the four, subclinical is the most difficult to diagnose due to the lack of visible physical symptoms.[4] For the most part, it is detected by somatic cell counts.[5]

However, the three other forms of mastitis do render physical symptoms with the peracute form the most pronounced. In this instance the cow's bag become swollen, red, hot, and/or sensitive to the touch. This is extremely painful to the affected animal since she is being continuously milked by automatic machines and dragging her bag across the floor as she moves in what little space there is. The animal may also suffer from a fever, depression, shivering, rapid weight loss, lack of appetite and even death.

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Continued from page 24 - rBGH Milk Production: Animal Cruelty, Genetically Modified Hormones and E. Coli

Symptoms may be slightly less obvious or pronounced in the other forms of mastitis, yet they are all part of the same condition which is becoming more and more prevalent not just in dairy cows but in beef herds as well.[6] Due to lack of appetite and reduced nutrition as a result of constant milking (in the case of dairy cows)[7] the amount of milk produced from the animals affected in this way becomes significantly smaller. Likewise, beef herds injected with the chemical tend to be 7% to 12.5% smaller in terms of weight.

Ironically, a hormone injected into animals to make them more productive for dairy and beef often causes a condition which reduces their output in both categories.[8] Even in animals who manage to avoid chronic cases of infection, the milk yield as a result of rBGH only increases by 11.3% to 15.6%.[9]

Yet the increased rate of mastitis is not the only injury to the animals as a result of rBGH. The Canadian Veterinary Medical Association Expert Panel conducted a review of the use of rBGH in dairy cows and reported that incidents of lameness increased by as much as 50% in animals treated with the hormone. The report also noted that sterility (or non-pregnancy) as well as culling was significantly increased as well. Twinning, placenta retention, and abortion/fetal loss were also considered and acknowledged as potential side effects of hormone treatment. [10]

Yet the damage caused by rBGH does not stop with animals injected with it. The repercussions of adding rBGH to dairy cows extend all the way up the food chain to the humans that consume the milk they produce. More will be said about the effects of rBGH on humans in future articles. However, the effects produced in the animals and the cruelty issue alone should be enough to warrant a boycott of milk produced using rBGH.

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Would You Eat Lab-grown Meat?

By Tom Levitt

October 3, 2012

Lab-grown meat could help reduce the environmental footprint of intensive farming. But will it ever appeal to vegetarians or even more eco-conscious consumers?

Before the end of the year, Dutch scientists are promising a high-profile debut for a burger made from meat grown not on a farm but in their laboratory.

Synthetic or lab-grown meat involves taking a small amount of cells from a living animal and growing it into lumps of muscle tissue in the lab, which can then, in theory, be eaten as meat by people.

As well as saving an animal, lab-grown meat also reduces the negative environmental impact of modern-day intensive meat production, including land use, animal feed and greenhouse gas emissions. In contrast to vegetarian, non-animal based alternatives to meat like soya, tofu, Quorn or other vegetable proteins, artificial meat has a much higher protein content as well as tasting and having a more similar texture to slaughtered animal meat.

The technology behind lab-grown meat has been around since the late 1990s, but producing an

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affordable and tasty meat product has proved elusive….until now with two different researchers in the US and Europe maintaining they are both confident they are close to a breakthrough

Backed with US$400,000 (2.5 million yuan) of funding from an anonymous donor, Professor Mark Post of Maastricht University says he will be holding a public tasting session of his lab-grown burger in the next few months.

However, he admits that his is only a demonstration of the potential of lab-meat, and that he is still nowhere near producing a cost-effective version.

Another researcher, Hungarian-born Gabor Forgacs from the University of Missouri, appears closer after becoming the first scientist in the US to publicly eat lab-grown meat at a conference last year.

He was recently named by animal rights group PETA as the most likely winner of its US$1 million prize for the first mass-produced artificial chicken that is indistinguishable from real chicken meat.

Forgacs previously worked on creating tissue and organs for humans before realising the same technology could be used to engineer meat. He has now started a company, Modern Meadows, to develop his commercial lab-grown meat, with the help of funding from the US Department of Agriculture. “What we’re going to make is sort of a consumerable biomaterial which is going to be made of animal cells and have the character and texture of a certain type of meat,” he explains.

“It may not end up being the hamburger we regularly eat but it can become an ingredient in many things. Take the analogy of flour. You don’t eat flour, it’s not very tasty but you eat a zillion products that contain flour and are delicious.”

Both Professor Post and Dr Forgacs say they are motivated by the need to reduce the environmental impact of meat production. The UN Food and Agricultural Organization has estimated that 18% of global greenhouse-gas emissions are accounted for by the livestock sector.

In contrast, research published last year from the University of Oxford estimated that lab-grown meat produces 78-96% lower greenhouse gas emissions than conventionally produced meat within the EU. It also uses 99% less land and 82-96% less water.

"The rules of the game of meat production are not the same as they were a hundred years ago," says Forgacs. "It's not sustainable. We are destroying this planet with intensive meat production. Seventy percent of arable land today is one way or another connected to animals through grazing animals or growing food for them. We're running out of it."

Forgacs admits that initially at least, his lab-grown meat is likely to be an expensive niche product, costing something similar to Kobe beef (US$125 to US$395 a kilo).

"This product isn't going to be for the masses at the beginning, it's going to be for eco-conscious people and people who don't eat meat for ethical reasons," he says.

However, social scientists say it is still far from certain whether or not consumers will accept and eat it. A consumer worried about meat’s environmental cost might also be wary of lab-manipulated food. Forgacs and Post are both conscious of the bad publicity and scepticism that has surrounded genetically modified food.

“The people making in-vitro meat, particularly those working in the EU, are very aware of the risks of an association with genetic modification,” explains Neil Stephens, a sociologist from Cardiff University who has been studying the emergence of lab-grown meat. “It would be possible to use GM in making in-vitro meat but scientists do not want to do that or associate their product with GM.”

Beyond the GM-type food safety fears, there is still widespread disagreement among scientists about how to classify lab-grown meat. Forgacs, for one, says the term lab-grown meat “turns people off right away.”

“Some want it to be meat, and recognised like any other meat,” says Stephens. “Others think it is better to be seen as a new type of meat and as such OK to taste or look different. Then there is a minority who feel it is a meat substitute, very meat-like but not meat.”

“I would argue that we are still at a point at which the definition or categorisation of in vitro [lab-grown] meat – what it is - remains unclear. The best description of it is an ‘as-yet undefined ontological object’.”

Stephens says this and many other unanswered questions about consumer acceptance will need to be resolved before lab-grown meat ever reaches our supermarket shopping trolleys.

“If it ever is a marketable product it will still be a small one. It is not going to be plumped on our supermarket shelves. It will initially have limited availability so will have time to gain acceptability,” says Stephens.

http://www.theecologist.org/News/news_analysis/1616918/would_you_eat_labgrown_meat.html

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Banned in 27 Countries, Monsanto's rBGH Inhabits Many U.S. Dairy Products

By Anthony Gucciardi

NaturalSociety
December 19, 2011

Are you consuming Monsanto's genetically engineered growth hormone known as rBGH? The synthetic hormone is created using molecules and DNA sequences that are a result of **molecular cloning**, which has been linked to breast and gastrointestinal cancer. Unfortunately, it is estimated that around 1/3 of cows in the United States are injected with this synthetic hormone, which means that you have most likely been highly exposed to rBGH if you live in the U.S. or have eaten U.S. dairy products.

RBGH is actually a synthetic version of natural bovine somatotropin (BST), a hormone produced in cows' pituitary glands. Monsanto was the first to create the recombinant version from genetically eningeered E. coli bacteria, releasing the result under the brand name "Posilac." Since then, a division of **Eli Lilly and Company**, Elanco Animal Health, have acquired the Posilac brand. It is important to remember that Eli Lilly and Company are the makers of suicide-linked Prozac, who were able to cover up the 1980s research which found antidepressants to **breed even more depression and suicidal thoughts**.

Despite public outcry and the warnings of international health professionals, rBGH is the largest selling dairy animal drug in America. In fact, the U.S. is the **only developed nation to allow for humans to consume milk from cows given artificial growth hormone**. Are U.S. government officials truly convinced that rBGH is safe for human consumption, or does it have more to do with the fact that key political figures who were instrumental in the approval of rBGH were actually affiliated with Monsanto?

Margaret Miller was in charge of *preparing* the report on rBGH following its approval at Monsanto, she was later the official in charge of *reviewing her own report* as Deputy Director of Human Safety and Consultative Services.

Michael R Taylor was a partner at the law firm that represented Monsanto on a variety of issues. Afterwards, Taylor became the FDA's deputy commissioner for policy, where he wrote the FDA's rBGH labelling guidelines. In these guidelines, it was claimed that there is no difference between rBGH and regular milk. This stance is part of the reason why rBGH is still legal in the United States. Taylor then spent a few years working directly for Monsanto, and has been brought back by Barack Obama as the Food Safety Czar.

If the process in which rBGH was approved is not suspect enough, peer-reviewed research has identified rBGH as a risk factor for both breast and gastro-intestinal cancer. It is evident that Monsanto and Eli Lilly and Company are two companies that put profits before public health.

http://naturalsociety.com/banned-in-27-countries-monsanto-rbgh-dairy-milk-products/

COME BACK TO YOUR ROOTS

UC Davis partners in $8.3 Million Effort to fight Childhood Malnutrition

May 14, 2012

The new research builds on ongoing clinical studies in Africa, South Asia and South America of malnourished and healthy infants and children and their mothers. (Steve Vost/photo)

Researchers at the University of California, Davis, will join in an international research effort to develop new ways to diagnose, treat and prevent malnutrition in infants and children around the world.

The Breast Milk, Gut Microbiome and Immunity Project is funded by $8.3 million from the Bill & Melinda Gates Foundation and will be led by the Washington University School of Medicine in St. Louis. UC Davis will receive $1.1 million of the total.

The UC Davis researchers who will participate in the

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project are nutritionist Kathryn Dewey and microbiologist David Mills.

Severe malnutrition has long been thought to stem simply from a lack of adequate food. But now scientists understand the condition is far more complex and may involve a breakdown in the way gut microbial communities process various components of the diet.

The community of intestinal microbes and its vast collection of genes, known as the gut microbiome, is assembled right from birth and influenced by babies' early environments and the first foods they consume, such as breast milk.

Through the Breast Milk, Gut Microbiome and Immunity Project, scientists will evaluate the relationship among first foods, the developing community of microbes in the intestine, and the developing immune system.

The new research builds on ongoing clinical studies in Africa, South Asia and South America of malnourished and healthy infants and children and their mothers; the Gates Foundation also funds those studies.

"This multidisciplinary project will allow us to expand our understanding of how to prevent infant malnutrition, which is a major focus of the UC Davis Program in International and Community Nutrition," Dewey said.

"The results of these experiments will provide critical information about whether the lipid-based nutrient supplements that we are evaluating in ongoing research have an influence on the collection of microorganisms in the human gut, which will help us understand the impact of our interventions on child growth."

As director of the International Lipid-Based Nutrient Supplements Project, Dewey is involved with two projects in Malawi that are providing biological samples for the newly funded research consortium. More information about the lipid-based nutrient supplement project is available at: http://ilins.org.

As part of the new project, Mills and his colleagues at the UC Davis Foods for Health Institute will examine the complex, protective sugars in breast milk and characterize specific bacteria in the guts of these infants. The researchers also will look for similar protective sugars in existing dairy products.

"This project will identify specific milk components from commercial dairy streams, which -- in combination with milk-responsive bacteria -- may extend the natural protection of mother's milk past weaning to a fragile population of children who desperately need that protection," Mills said. "The opportunity to deliver diet-based solutions in the near term – sourcing from commercial milk operations – is truly exciting," he said.

More information about the UC Davis Foods for Health Institute is available at http://ffhi.ucdavis.edu/. The overall project will be led by Jeffrey I. Gordon at the Washington University School of Medicine in St. Louis.

http://www.news.ucdavis.edu/search/news_detail.lasso?id=10250

Nigeria: Nutritional Programming Starts from the Womb

29 May 2012
Vanguard

THE bigger your belt, the shorter your lifespan. Grow fat today, die young tomorrow. These statements, in the view of Professor Philip Abiodun, a professor of Paediatrics and Consultant in Child Health, University of Benin, Benin City, Edo State, Nigeria, supports the essence of nutrition programming.

Abiodun, who points out that research has shown that giving too much protein at the beginning of life tends to make a child grow faster than that child would have grown if fed breast milk, argues that such children who grow too fast, are likely to become overweight and obese as adolescents and later as adults.

"Obese children are likely to witness changes in their body fat content leading to diabetes, hypertension,heart disease and stroke. A child could be programmed from the womb to become an obese adult.

When in the womb, an infant learns to store food, because the food was not coming when they were not being well fed by their mother, so they have low birth weight. When they are born and are overfed with protein, since they have been used to storing the food, they continue storing and get fatter and fatter. So it is like programming them to die young. "

Supporting the argument for breast milk, Abiodun notes: "The protein content of cow milk from which infant milk formulais made, is not just different in quantity, but quality. There are more of whey proteins in human (breast) milk while there is casein in cow milk that causes fat cells to be built up and stored. The

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whey proteins contain essential amino acids that are easily digested and absorbed by the body.

"In order to match the protein content of human milk, infant formula makers started increasing the protein content in the cow milk and they now became so much the children are getting too fat. The future consequences of such early nutrition practices is what is known as programming, that is, the way you feed your child while in the womb and immediately after birth up till about two years of life.

Increasing the protein in the cow milk causes increases the amino acids, but now to some extent there have been moves to decrease the proteins while increasing the quantity of essential amino acids. It is all in the bid to mimic breast milk.

The incidence of obesity is decreased with formulae enriched with essential amino acids, better than the old formula; however, breast milk is still the best. It is natural, creates bonding betweem mother and child, contains more immune factors, and we continue to recommend it exclusively for the first six months. "Infant formula is not supposed to compete with breast milk, but if you must, pick those enriched with essential amino acids."

http://allafrica.com/stories/201205290574.html

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Monsanto Investor Bill Gates Says GMO Crops Needed to Fight Starvation

By Anthony Gucciardi

Infowars.com
January 28, 2012

Bill Gates, the heavy Monsanto investor who **purchased 500,000 shares of the biotech giant in 2010**, has been touting Monsanto's genetically modified creations as a tool that is necessary to prevent starvation in poor nations. The same poor nations where **thousands of farmers routinely commit suicide** after being completely bankrupt by Monsanto's overpriced and ineffective GM seeds.

The same company that we recently exposed to be running 'slave-like' working conditions, forcing poor workers to operate the corn fields for 14 hours per day while withholding pay.

According to Gates, this is the company whose GMO crops are going to save the world from starvation. Of course, along with 'saving the world from starvation', GMO crops also bring along a large number of unwanted health and environmental effects.

A prominent review of 19 studies examining the safety of these crops found that consumption of GMO corn or soybeans can lead to significant **organ disruptions** in rats and mice – particularly in the liver and kidneys.

Are Monsanto's Devastating Creations Really the Answer to World Hunger?

What's more is that Monsanto's best-selling herbicide, Roundup, has been completely devastating farmlands for years through the creation of resistant superweeds. Experts estimate Roundup usage to result in the destruction of over **at least 120 million hectares of farmland** thanks to these superweeds.

Is it any wonder that in 2008 a startling report uncovered Monsanto's blatant abuse of poor farmers in the very poor countries that will supposedly benefit from GMO crops?

Thanks to an article in the Daily Mail, it was revealed that thousands of farmers were committing suicide after using Monsanto's GM seeds. Due to failing harvests and drastically inflated prices, the bankrupt poor farmers began taking their lives — oftentimes drinking the very same chemical concoctions provided by Monsanto as a method of suicide.

'We are ruined now,' said the dead man's 38-year-old wife. 'We bought 100 grams of BT Cotton. Our crop failed twice. My husband had become depressed. He went out to his field, lay down in the cotton and swallowed insecticide.'

Monsanto actually conned the farmers into buying their GM seeds, majorly overpriced and performing far worse than even traditional seeds. Monsanto went as far as to charge these poor farmers £10 for 100 grams of GM seed, while they could have purchased 1,000 times more traditional seeds for the same amount. The result? A career-ending harvest that led to mass farmer suicide.

It is quite clear that **Monsanto really has no intention of helping these farmers fight starvation in their communities, as Monsanto investor Bill Gates would have you think**. You can view Bill Gates' speech about how GMO crops are the answer to starvation and see for yourself how he puts such strong emphasis on that selling point.

http://www.infowars.com/monsanto-investor-bill-gates-says-gmo-crops-needed-to-fight-starvation/

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Tanzania: Paleo Diet - an Answer to a GMO Contaminated Food Chain?

By Anne Outwater

9 September 2012
Tanzania Daily News

I just returned from a visit to the United States. It seemed that most of the people I saw or spent time with were not feeling healthy.

This perception might be a result of my imagination, or the increasing age of my family and friends, or the downturned economy. These perceptions may also be a result of comparing them with people living in Tanzania, eating local food, whom, all else being equal are in fact quite strong.

A lot of people in the US were complaining of chronic stomach and digestive ailments, vague types of immune-deficiency diseases not HIV, weak bones and cartilage, mental disorders of their children at an early age, and lack of reproductive success. As much as corporations and even much of the US government want to deny it, these chronic weird unusual-tilnow ailments have a strong probability of being related to the poor quality diet and the gazillion pounds of pesticides that get sprayed over everything.

It is not easy right now in the United States if you want to be a polite guest, go to a restaurant, or travel, to find a completely GMO free diet. It is no wonder that people's concern about the quality of the food is increasing. This concern was evidenced in at least three ways: 1/The first thing people seemed to want to talk about was the Paleolithic Diet - many were practicing it, 2/ the increasing numbers of Farmer's Markets, 3/ more products in the supermarkets labeled "Organic" or GMO-free. Let me first describe the Paleolithic Diet.

The Paleo Diet is based on the presumed diet that human beings and our ancestors ate during the Paleolithic era-- the Stone Age, a period of about 2.5 million years that ended around 10,000 years ago with the development of agriculture. The "Paleolithic diet" refers to the actual ancestral human diet of wild plants and animals.

Modern human beings are genetically adapted to the diet of our Paleolithic ancestors; human genetics have scarcely changed since agriculture began. According to S. Boyd Eaton, a proponent of the diet, "we are the heirs of inherited characteristics accrued over millions of years; the vast majority of our biochemistry and physiology are tuned to life conditions that existed before the advent of agriculture some 10,000 years ago. Genetically our bodies are virtually the same as they were at the end of the Paleolithic era some 20,000 years ago." It follows therefore that an ideal diet for human health and well-being is one that resembles this ancestral diet. The Paleolithic diet consists of foods that can be hunted and fished, such as meat and seafood, and can be gathered, such as eggs, insects, fruit, nuts, seeds, vegetables, mushrooms, honey, herbs and spices.

The diet was high in lean protein, polyunsaturated fats, monounsaturated fats, fiber, vitamins, minerals, antioxidants, and other beneficial phytochemicals. Historical and anthropological studies show hunter gatherers were generally healthy, fit, and free of the degenerative diseases common in modern societies.

Archaelogical evidence shows in many parts of the world that a decline in human health occurred with the adoption of agriculture. Associated with the introduction of domesticated and processed plant foods in the human diet, are a general decrease in body size and an increase in dental caries. Although some supporters of the Paleo Diet accept butter, cheese, yogurt, oils such as olive, macadamia, and sunflower, and a bit of natural alcohol, most supporters exclude grains, legumes, dairy products, salt, refined sugar, and processed oils.

More than 70% of the total daily energy consumed by all people in the United States comes from foods such as dairy products, grains, refined sugars, processed vegetable oils and alcohol. Accumulating evidence suggests that this mismatch between the modern diet and lifestyle and our Paleolithic genome is playing a substantial role in the current epidemic levels of obesity, cardiovascular disease, high blood pressure, type 2 diabetes, osteoporosis and cancer found in North America.

People are thinking that adopting the diet and lifestyle that mimic the beneficial characteristics of the preagricultural environment may be an effective strategy to reduce the risk of chronic degenerative diseases. The Paleo Diet is a delicious way to eat, as my friends and relatives showed me.

The Paleo Diet is becoming so popular in reaction to the fear that food has come to induce in North America - when you put something in your mouth, instead of feeling comforted you become anxious about the high probability you are feeding yourself poisons in the forms of residual pesticides, GMOs, and cancer causing additives. It didn't used to be like this but now it is.

http://allafrica.com/stories/201209090027.html

Addicted to Cheese and Ice Cream? The Opiate Qualities of Dairy

May 14, 2012

Much has been written in the last several years about the addictive qualities of dairy products due to a certain protein found in great abundance in cow's milk: **casein**. Perhaps it was Dr. T. Colin Campbell's seminal work, The China Study, that was the catalyst for this new understanding of dairy addiction.

In her new book, Main Street Vegan, 28-year vegan author Victoria Moran, includes a chapter called *Hooked on Dairy*, where she describes how we become chemically and emotionally addicted to dairy, followed by a chapter called *The Vegan Dairy* where she lays out a concrete plan to ease into a dairy free existence while still satisfying the cravings we once thought were the exclusive domain of things like cheese and ice cream. Moran writes:

"Casein, one of the proteins in milk, crosses the blood-brain barrier and becomes something called casomorphins. Yes'm, that sounds a lot like morphine—because casomorphin is also an opiod. Nature designed it that way so young mammals would enjoy nursing, come back for more, and live to reproduce themselves." "Human milk has only 2.7 grams of casein per liter. Cow's milk has 26. And because it takes, on average, ten pounds of milk to make one pound of cheese or ice cream, you're looking at a lot of casein and resultant casomorphin." The result can be a major opiate addiction that can cause people to have serious withdrawal symptoms.

Writer Jennifer Valentine of onegreenplanet.org recently discussed yet another basis for craving dairy that could be attributed to **Umami**: "Umami, or "savory" is an often-overlooked but extremely important taste experience. In fact, some scientists and dietitians have even linked umami cravings to difficulty adhering to a plant-based diet! Umami is often associated with animal foods, especially grilled meat and aged cheeses, likely due to their high levels of the amino acid glutamate. However, there are plenty of plant-based sources of umami! Fermented foods are high in umami flavor, and roasting, caramelizing and browning foods (including soy-based foods and vegetables) boosts that "savory" factor."

http://freefromharm.org/health-nutrition/addicted-to-cheese-and-ice-cream-the-opiate-qualities-of-dairy/

Scientists create GM Cow to cut Milk allergies in Children

Calf was cloned with extra genetic material that 'switches off' the protein allergen

02 October 2012

Scientists have created a genetically modified (GM) cow that produces milk with low levels of a protein known to cause allergic reactions in a significant proportion of children. The researchers believe it could one day lead to the sale of "hypoallergenic" milk from herds of GM cows.

The calf had been cloned and genetically engineered with an extra piece of genetic material that switched off its natural gene for producing a milk protein called beta-lactoglobulin, which is not present in human milk and causes allergies in some young children.

Tests on the cow's milk showed that it contained less than 2 per cent of normal levels of beta-lactoglobulin and was far richer than usual in other kinds of milk proteins, such as the caseins used in cheese-making. The researchers also believe the GM cow's milk will also contain higher concentrations of calcium than ordinary milk.

The cow, however, was born without a tail which is a rare congenital abnormality. The scientists believe this was a result of the cloning process, similar to that used to create Dolly the cloned sheep, rather than the GM technique used to eliminate the milk protein.

The dairy industry produces hypoallergenic milk formulas by removing certain bovine proteins with the help of digestive enzymes but the industrial-scale processing is expensive, causes the milk to taste bitter and does not always remove the offending allergens, the scientists said.

In developed countries, between 2 per cent and 3 per cent of infants are allergic to the proteins found in cows' milk so there is a demand to find ways of making milk that is safer for them, the researchers said.

A person who is allergic to milk proteins can suffer a range of symptoms, which can occur within minutes of drinking milk or some hours later. They include vomiting and gastrointestinal upsets, skin rashes and breathing difficulties.

A team, led by Goetz Laible from the University of Waikato in Hamilton, New Zealand, used a revolutionary technique called RNA interference

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African Traditional Herbal Research Clinic

Volume 7, Issue 11 NEWSLETTER October 2012

FEATURED ARTICLES

Aspartame -- History of Fraud and Deception

By www.mercola.com

Today we have "Nutra-Sweet", which is widely used in a plethora of consumables, despite a demonstrated neurological reaction in some people. In February 1996, it was decided to also use the product name "Benevia". It is estimated that as many as 20,000,000 people cannot metabolize phenylanine, and this inability is genetically inherited by children. The inability to metabolize phenylanine can lead to mental retardation in children. This means a risk of retardation for millions of children. A multi-billion dollar enterprise, this substance is said to be "refined" from "natural" substances. Like other "refined" substances, it represents a health threat to the general public. No long term studies have been performed to evaluate the physiological effects of this substance, yet the public is lead to believe it is absolutely safe.

Technically, the chemical is called aspartame, and it was once on a Pentagon list of biowarfare chemicals submitted to Congress. [1] Aspartame is in over 4,000 products worldwide and is consumed by over 200 million people in the United States alone. What follows is a skeletal examination of the chronology related to aspartame. A more detailed chronology is given later in this chapter based on information provided to us by the Aspartame Consumer Safety Network.

Aspartame is produced by G.D. Searle Company, founded in 1888 and located in Skokie, Illinois. Searle is now owned by others. It is about 200 times sweeter than the refined sugar that it is meant to replace, and it is known to erode intelligence and affect short-term memory. It is essentially a chemical weapon designed to impact populations en masse. It is an rDNA derivative made from two amino acids, L-phenylalanine, L-aspartic acid and methanol. Originally discovered during a search for an ulcer drug in 1966, it was "approved" by the FDA in 1974 as a "food additive".

Approval was followed by a retraction based on demonstrated public concern over the fact that the substance produced brain tumors in rats. According to the 1974 FDA task force set up to examine aspartame and G.D.Searle, "we have uncovered serious deficiencies in Searles operations and practices, which undermine the basis for reliance on Searle's integrity in conducting high quality animal research to accurately determine the toxic potential of its products." The task force report concluded with the recommendation that G.D. Searle should face a Grand Jury "to identify more particularly the nature of the violations, and to identify all those responsible." [2]

In 1976, an FDA "task force" brought into question all of G.D. Searle's aspartame testing procedures conducted between 1967 and 1975. The final FDA report noted faulty and fraudulent product testing, knowingly misrepresented product testing, knowingly misrepresented findings, and instances of irrelevant animal research. In other word, illegal criminal activity. Understandably scared, Searle officials sought to suppress the FDA findings and obstruct justice. They turned to Nixon and Ford administration operative Donald Rumsfeld and elected him "chairman of the Searle organization." In 1977, the Wall Street Journal detailed the fact that Rumsfeld made efforts to "mend fences" by asking "what Searle could do" in the face of the changes. Also in 1977, Dr. Adrian Gross, a pathologist working for the FDA, uncovered evidence that G.D.Searle might have committed criminal fraud in withholding adverse data on aspartame. [3]

The FDA requested that U.S. Attorney Samuel Skinner be hired to investigate Searle's aspartame testing procedures in January 1977. Samuel Skinner was the federal prosecutor responsible for convincing the Grand Jury to investigate whether Searle willfully and criminally withheld data that cast doubt on the safety of aspartame. In February 1977, Skinner met with Searle attorneys at the Chicago law firm of Sidney & Austin.

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Suddenly, newly elected President Carter announced that Skinner would not remain in office, and Skinner thereafter announced that he would be hired by Sidney & Austin. Obviously, Skinner then had to recuse himself from the Searle prosecution. The case was taken over by US Attorney William Conlon, who essentially sat on the case, despite complaints from the Justice Department, which was urging that a grand jury be convened to prosecute Searle Company for falsifying Nutra-Sweet test data. Failing to perform his duty, Conlon also joined Searle's law firm in January 1979.

Skinner's defection from the FDA might have been prompted by the results of the review of the Searle studies. David Hattan, deputy director of the FDA Division of Toxicological Review and Evaluation, concedes that anyone reading the original FDA investigation reports is likely to be "shocked" by what they reveal. He says that the ensuing review of the Searle studies, in which he was involved from the time of his arrival in 1978, was one of the most thorough in the agency's history. It included an unprecedented hearing before a public board of inquiry composed of experts from outside the agency. Arthur Hayes, Jr., then Commissioner of the FDA appointed by Reagan, agreed with Searle and the FDA's Bureau of Foods (now the Center for Food Safety and Applied Nutrition) that "an appropriate analysis of the data showed no significant increases in tumor incidence in rats exposed to aspartame or DKP, one of the breakdown products of aspartame. The board of inquiry rejected concerns that aspartame's components could cause neurological damage.[4]

In 1981, under pressure from the soft drink lobby, FDA Commissioner Hayes approved the initial use of aspartame in dry foods and as a tabletop sweetener, discounting public complaints as anecdotal and ignoring three FDA scientists.[5] who voiced the fact that there were serious questions concerning brain tumor tests after having done an in-house study. Hayes was widely profiled as a man who believed that approval for new drugs and additives was "too slow" because "the FDA demanded too much information." Hayes also ignored the fact that the biased scientific studies paid for by Searle were faulty.[6] After leaving the FDA, Hayes took the post of senior medical consultant for the public relations firm retained by Searle..[7] A subsequent inquiry "found no impropriety".

In July 1983 it was approved for use in soft drinks in the United States, followed three months later by approval in Britain by the Ministry of Agriculture. All this was done despite the fact that the Department of Defense knew that aspartame was neurotoxic and harmful to human health.

These facts were deliberately suppressed by the government. It is also interesting that in 1981 FDA scientist Dr. Robert Condon, in an internal government document, said "I do not concur that aspartame has been shown to be safe with respect to the induction of brain tumors." All safety was thrown aside because of pressure from Searle. Considering the connections the drug companies have to the medical and intelligence community, it would not be surprising that there were other factors involved in the pressure to adopt aspartame into the diet of the population.

In 1984, the Arizona Department of Health began testing soft drinks to ascertain the level of toxic deterioration by-products in soft drinks. It was determined that soft drinks stored in elevated temperatures promoted more rapid deterioration of aspartame into poisonous methyl alcohol (methanol). The FDA decided to ignore these results. Public complaints about the effects of aspartame began to come in. People complained of headaches, dizziness, vomiting, nausea, blurred vision, seizures, convulsions and a host of other reactions to aspartame.

Also in 1984, the Centers for Disease Control made the fraudulent announcement that "no serious, widespread" side effects of aspartame had been found. It was an outright lie, and this announcement was quickly followed by another from PepsiCo that it was dropping saccharin and adopting aspartame as the sweetener of all its diet drinks. Others followed suit, despite the January 1984 broadcast on CBS Nightly News where the chief scientist for the FDA task force investigating Searle publicly stated that Searle company officials made "deliberate decisions" to cloak aspartame's toxic effects.

When a human consumes "Nutra-Sweet", it breaks down above 85° not only into its constituent amino acids, but into methanol, which further breaks down into formaldehyde, which is carcinogenic[8] and very toxic, as well as formic acid and a brain tumor agent called diketopiperazine (DKP). In a meek attempt to ward off further public inquiry, the FDA in 1984 announced that "no evidence has been found to establish that aspartame's methanol by-product reaches toxic levels".

This was a direct lie, since Medical World News reported in 1978, six years earlier, than the methanol content of aspartame is 1,000 times greater than most foods under FDA control. Furthermore, the methanol in aspartame is "free methanol", which is never found in nature. Methanol in nature is always accompanied by ethanol and other compounds which mitigate the methanol when introduced into the body.

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Continued from page 33 – Aspartame: History of Fraud and Deception

In 1985, Searle Company was bought by Monsanto, the maker of other insidious substances that manage to find their way into human food, including Bovine Growth Hormone (BGH). Senator Metzenbaum, commenting on the FDA relative to the aspartame issue in 1985 said, "the FDA is content to have Searle conduct all safety tests on aspartame. That's absurd."

Supreme Court Collusion in Aspartame Coverup Clarence Thomas Former Monsanto Lawyer

In 1986, the Washington Post reported that the Supreme Court refused to consider arguments that the FDA had not followed proper procedures in approving aspartame, despite arguments that the product "may cause brain damage." (Supreme Court obstructing Justice). Since Bush-nominated Supreme Court Justice Clarence Thomas is a former attorney for Monsanto [9],

it is unlikely that hundreds of millions of people will find redress. There are also indications of ties between Monsanto and elements in the CIA.

University of Illinois Fraudulent Study on Aspartame

In August of 1987, the University of Illinois, a recipient of funding from Monsanto, issued a study "exonerating aspartame of causing seizures in laboratory animals." The fact that they were paid by Monsanto automatically invalidates the results. US Senate hearings in 1987 showed that G.D.Searle used "psychological strategy" to get regulators at the FDA "into a yes-saying habit" to "bring them into a subconscious spirit of participation." .[10] More than half of 69 medical researchers polled by the FDA in 1987 said they were concerned about aspartame's safety.[11]

FDA Ignores Complaints of Neurological Symptoms

In 1989, the FDA received over 4,000 complaints from people who described adverse reactions. Because the FDA conveniently lists aspartame as a "food additive", it removes the legal requirement for adverse effect reporting to any Federal agency and the necessity for safety monitoring processes. Research also indicates that aspartame, when combined with glutamine products (such as MSG, widely used in foods) increase the likelihood of brain damage occurring in children.[12]

Aspartame Affecting Airline Pilots

Some of the more interesting developments in 1989 surfaced in the Palm Beach Post on October 14th, where an article by Dr. H.J. Robert described several recent aircraft accidents involving confusion and aberrant pilot behavior caused by ingestion of products containing aspartame.[13] Soft drink makers were notified of this problem in 1991. It is interesting to note that after Samuel Skinner left Sidney & Austin, Searle's law firm, he was appointed Secretary of Transportation. Hence, he was in charge of the FAA, just in time to head off complaints from pilots affected by aspartame. His wife was employed by Sidney & Austin. Later as George Bush's Chief of Staff in 1991, during the Gulf War, he was in a position to head off all inquiries relative to aspartame, no matter where they were directed - to the FDA, FAA or Department of Defense. This constitutes criminal negligence and racketeering. George Bush, of course, was an ex-director of the Central Intelligence Agency.

British News: "Nutrasweet Tests Faked"

On July 20, 1990, an article in the national British newspaper The Guardian, entitled "NutraSweet test results 'faked'", revealed that the British government had finally been persuaded to review the safety of aspartame after "receiving a dossier of evidence highlighting its potential dangers." According to The Guardian, the dossier alleged that laboratory tests were falsified, tumors were removed from laboratory animals and animals were 'restored to life' in laboratory records.[14] The dossier against NutraSweet was compiled by Erik Millstone, a lecturer at the Science Policy Research Unit at Sussex University and author of two books on food additives. It was based on thousands of pages of evidence, much of which was obtained under the Freedom of Information Act. The COT, Committee on Toxicity, was at the time looking into consumption of artificial sweeteners and did not possess the key documents covering alleged mishandling of the safety tests which Millstone was asked to provide.

The British Ministry of Agriculture and Department of Health have never revealed the evidence upon which approval was given in England for the distribution of aspartame, maintaining that "these are matters of commercial confidence." The British government does not testing of its own but relies on safety tests provided by the manufacturer, which of course constitutes a conflict of interest. The 1990 article quoted the British Department of Health as saying "NutraSweet is not a health hazard on the available evidence, but people do suffer 'ideosyncratic reactions' to food additives." Interestingly, it was pointed out that three out of 14 members of the Committee on Toxicity have direct or indirect links with the artificial sweetener industry, according to David Clark, the Labour Party Agriculture spokeman, who requested a Parliamentary Answer to address questions of conflict of interest. Aspartame is also sold in England under the product name "Canderel." In 1990, the market for aspartame in England was estimated at £800 million.

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Dosing of the Military in the Gulf War

During the 1991 Gulf War, all military personnel were provided free supplies of aspartame-laced soft drinks together with experimental vaccines, nerve gas antidotes and personal insecticides. They were also treated to direct biochemical warfare compounds. The result is Gulf War Syndrome, which is communicable and deadly, and 50,000 military personnel and their dependents are wasting away before our eyes. Criminal negligence? Of course. Criminal conspiracy? Yes. Genocide? Probably - we're waiting to see.

Aspartame Alters Brain Chemicals That Affect Behavior

Independent tests on animals have shown that aspartame alters brain chemicals that also affect behavior. The chemical nature of aspartame was also shown to defeat its own alleged "purpose" as a "diet aid", since high doses instill a craving for calorie-laden carbohydrates. Then, the aspartame-carbohydrate combination further increases the effect of aspartame on the brain.[15]

Fraudulent Claims of Aspartame as a "Diet Aid"

Interestingly, even the American Cancer Society confirmed that users of artificial sweeteners gained more weight than those who didn't use the products, further undermining the supposed "purpose" for the existence of aspartame in the food.[16] Haven't we heard this kind of criminal fraud before?

The major selling point of aspartame is as a diet aid, and it has been demonstrated that the use of this product actually causes people to consume more food. Normally, when significant quantities of carbohydrate are consumed, serotonin levels rise in the brain. This is manifested as a relaxed feeling after a meal. When aspartame is ingested with carbohydrates, such as having a sandwich with a diet drink, aspartame causes the brain to cease production of serotonin, meaning that the feeling of having had enough never materializes. You then eat more foods, many containing aspartame, and the cycle continues. Monsanto's profit from its NutraSweet Division was $993 million in 1990.

Governments Continue Suppression and Coverup on Aspartame

In 1991, the National Institutes of Health.[17] listed 167 symptoms and reasons to avoid the use of aspartame , but today it is a multi-million dollar business that contributes to the degeneration of the human population, as well as the deliberate suppression of overall intelligence, short-term memory[18] and the added contribution as a carcinogenic environmental co-factor. The FDA and the Centers for Disease Control continue to receive a stream of complaints from the population about aspartame It is the only chemical warfare weapon available in mass quantities (should keep the cone-heads happy) on the grocery shelf and promoted in the media. It has also been indicated that women with an intolerance for phenylalinine, one of the components of aspartame, may give birth to infants with as much as a 15% drop in intelligence level if they habitually consume products containing this dangerous substance.[19]

FAA Collusion in Suppression of Facts on Aspartame

The March 1995 issue of The Pacific Flyer published a pro-aspartame article in which it stated, "the Federal Aviation Administration conducted its own cognitive research and, according to experts, found no contraindications that would prevent pilots, or anyone, from ingesting aspartame." This flies in the face of consistent reports from pilots who maintain they have suffered severe and dangerous repercussions in the air after drinking soft drinks containing aspartame. Virtually every time, symptoms disappeared when aspartame-laced drinks were discontinued.[20] Over 600 pilots have reported this problem.

FDA "Findings" on Aspartame Remain Based on Faked Tests

So, the faked Searle tests remain. The FDA bases its findings on the faked Searle tests, and the Journal of the American Medical Association, examining the FDA findings, based on the faked Searle tests, announced "the consumption of aspartame poses no health risk for most people." Searle officials argue that the use of aspartame as an artificial sweetener "has been officially approved not only by the FDA, but by foreign regulatory agencies and the World Health Organization" - based on Searle-sponsored aspartame research, not independently conducted tests.

Symptoms of Aspartame Intoxication: Minimal to Severe

The symptoms of aspartame intoxication include severe headaches, nausea, vertigo, insomina, loss of control of limbs, blurred vision, blindness, memory loss, slurred speech, mild to severe depression often reaching suicidal levels, hyperactivity, gastrointestinal disorders, seizures, skin lesions, rashes, anxiety attacks, muscle and joint pain, numbness, mood changes, loss of energy, menstrual cramps out of cycle, hearing loss or ringing in the ears, loss or change of taste, and symptoms similar to those in a heart attack. In addition, aspartic acid chelates (combines) with chromium - which is a necessary element for proper operation of the thyroid gland. People who consume large quantities of aspartame may end up

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with a false diagnosis of Graves disease and suffer allopathic irradiation of their thyroid gland for no reason. Complaints about aspartame represent 80-85% of all food complaints registered with the FDA. More than 6,000 complaints have been made concerning the effects of aspartame. Thirty independent doctors and scientists have conducted research on the adverse effects of aspartame or have compiled supporting data against its use.The use of NutraSweet® or Equal® should be seriously curtailed or stopped.

Aspartame Use Part of Planetary Biomedical Genocide

The fact that tons of aspartame is pumped into the world population each year, knowingly and deliberately, especially with the historical and documented record of fraud and misrepresentation, constitutes a conspiracy of the highest order, as well as criminal negligence. The rewards of continued use are increased profits for the medical and pharmaceutical industries and chemical companies who produce aspartame and treat people suffering from the effect of it. Aspartame is the only biochemical warfare product on grocery shelves. And, the band plays on ....

http://www.mercola.com/article/aspartame/fraud.htm

Splenda Essentials revealed as Chemical Sweetener containing Chlorine Atoms

By S. D. Wells

October 19, 2011

(NaturalNews) Splenda Essentials, the latest marketing venture from the makers of Splenda, includes vitamins, amino acids, and sometimes even fiber. **In an attempt to win over uneducated consumers**, the half real, half synthetic sweetener now sounds like it might actually be a healthy choice, but if a company sprinkled vitamin C on toothpaste, or added some vitamin K to mint flavored mouthwash, would you swallow it when you were done cleansing your teeth and gums?

The new Splenda Essentials cleverly adds vitamin B and antioxidants to its core ingredient sucralose, a nonnutritive sweetener that does not grow in sugar fields, **nor does it appear naturally anywhere else on Earth**. Instead, sucralose is manufactured in laboratories as a synthetic compound. In other words, although Splenda is derived from sugar, at some point during the manufacturing process, the sugar disappears, and what remains are chlorinated atoms that are bulked up with dextrose and maltodextrin.

In a courtroom in 2007, in a *bitter battle* over "sweetness," the manufacturer of Equal contended that the maker of Splenda, McNeil, was misleading millions of consumers by fostering the notion, through advertising, that Splenda is a natural product.

But McNeil made the argument that, "The sweetening ingredient in Splenda is made by a process that starts with cane sugar." It then added that, "Splenda is an artificial sweetener that does not contain sugar," acknowledging that the sugar disappears during the manufacturing process.

In fact, McNeil initially marketed Splenda with the tagline, "Made from sugar, so it tastes like sugar. But it's not sugar." Then, after disappointing sales figures posted, they dropped the last sentence, and sales went through the roof.

In court, if you tell the judge half of the truth, and purposely omit facts, **you can be convicted of perjury and deception**, but when it comes to advertising and marketing products in the United States, there is an enormous gray area that companies can traverse and get away with murder, or in this case, mixing a complex chemical compound with vitamins and selling it as a "healthy" sugar substitute.

What Splenda is really made from

Another deceiving aspect of the massively popular synthetic sweetener is that the core ingredient's name is sucralose, which is two letters fatter than sucrose, the organic compound commonly known as table sugar. On top of everything else confusing, the FDA has no real standard set for the terms "all natural," so there are no defined parameters in place in order for a manufacturer to claim any product is truly all natural.

Despite its use of sugar as the starting point for making sucralose, in no place do the words "sugar" or "sucrose" appear on Splenda's ingredients list. That is because under Food and Drug Administration regulations, it cannot list a substance that has vaporized during the manufacturing process.

Sucralose is produced by substituting three chlorine atoms for three hydroxyl groups. Sucralose is not approved for use in most European countries, where national healthcare programs are prominent. Go figure.

So then what is the big deal with ingesting synthetic food agents? The mother company of McNeil, Johnson &

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Johnson, contends that sucralose passes through the body unabsorbed, yet according to the FDA's "Final Rule" report, 11% to 27% of sucralose is absorbed in humans, and the rest is excreted. The Japanese Food Sanitation Council reports that up to 40% of ingested sucralose is absorbed and **can concentrate in the liver, kidney, and gastrointestinal tract**, having a negative impact on overall health.

Dr. James Bowen, a biochemist and survivor of aspartame poisoning, warns the general public about Splenda, saying, "Sucralose is simply chlorinated sugar." Bowen's research also reveals that sucralose can shrink thymus glands (the biological seat of immunity) and produce liver inflammation in rats and mice.

A study conducted on rats by researchers at Duke University, one of the world's foremost patient care and research institutions, determined that Splenda actually contributes to obesity, destroys "good" intestinal bacteria, and can prevent prescription drugs from being absorbed.

Since **real sugar is only 15 calories per teaspoon**, maybe everyone trying to manage their weight should just use the real thing in their coffee or tea. Then it would also be healthier to take the stairs instead of the elevator, park further away from their destination and walk it off, and buy vitamins from a local health food store.

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Continued from page 31 - Scientists create GM Cow to cut Milk allergies in Children

(RNAi) for "knocking out" the cow's gene for beta-lactoglobulin. The RNAi technique uses a natural method for switching off genes without the need to generate DNA mutations within the genes.

The study, published in the journal Proceedings of the National Academy of Sciences, is one of the first examples of the RNAi technique being used to create farm livestock with novel traits. Other scientists are working on ways of using RNAi to create new strains of domestic animals that have a natural immunity to viruses and infections.

Bruce Whitelaw, Professor of animal biotechnology at the University of Edinburgh, who was not involved in the research, said the study demonstrates the power of the RNAi technique. But he added: "Whether this is commercially viable depends on how it would compare against other methods. RNAi has a long history of successful application in diverse species from plants to worms. This is the first report for livestock… Time will tell how widely applicable RNAi will be in GM livestock.

"This reduction in the level of one milk protein was accompanied by an increase in others, namely the caseins. This is notable since it represents one of the few RNAi success stories in mammals and offers a good example of how these technologies can be used," he added.

http://www.independent.co.uk/news/science/scientists-create-gm-cow-to-cut-milk-allergies-in-children-8193172.html

Mad Cow Disease May Infect Through Milk despite USDA Claims

By Anthony Gucciardi

NaturalSociety
April 27, 2012

Following the latest confirmed case of mad cow disease in California, the USDA and the dairy industry alike are struggling to assure consumers that drinking affected milk poses no serious risk to your health.

Despite these warnings, some scientists have found research that points to the contrary. In fact, two large studies found that prions — pathogenic agents associated with **mad cow disease** and other life-threatening conditions — can actually transfer from animal to animal via milk consumption. ***Continued on page 38***

Continued from page 37– Mad Cow Disease May Infect Through Milk despite USDA Claims

Mad Cow Disease May Infect Through

One such study, performed by a conglomerate of French, Norwegian, and British researchers, actually observed the **presence of prions in sheep milk – t**he very prions that the **USDA says cannot inhabit US dairy**. Shockingly, this peer-reviewed study was published back in 2008 in the journal *PLoS Pathogens*. Why has the USDA not spoken of this study, or even the second study that reached similar conclusions? In case you're unsure, let's examine an excerpt from the study authors:

This finding indicates that milk from small ruminants could contribute to the transmission of prion disease between animals. **It also raises some concern with regard to the risk to humans associated with milk products from ovine and other dairy species.**

While it may not be a study correlating prions to cow dairy milk, it is certainly cause for the USDA to launch a full investigation and warn consumers of the potential risks. Instead, the agency continues to insist that the milk is completely safe. You may be wondering if this still applies to the recent outbreak due to the fact that it has been described as 'rare' and 'atypical' by the USDA in official statements. Interestingly, there have not been any studies regarding the transmission between this 'atypical' mad cow disease and milk. Therefore, the USDA 'experts' are completely in the dark and ultimately bringing public health along with them.

According to Mother Jones, Consumers Union chief scientist Michael Hansen confirmed the lack of research, stating that he is unaware of any study regarding the link between this rare form of the disease:

In a phone interview, Hansen stressed that previous studies have suggested that "classic" BSE—not the "atypical" one found in the California cow—does not transmit through milk.

There is also another study that brings up the question as to whether or not milk could transmit the disease. Scientists in the UK revealed startling findings back in 2008 as well, demonstrating that the"transmission of scrapie from ewe to lamb via milk (or colostrum)" was entirely possible. Their work was published in *BMC Veterinary Research*, another prominent journal.

The USDA is an organization that admittedly 'doesn't know' if you are eating cloned meat, and has repeatedly chosen major corporations over public interest. Is it any wonder why the organization is also failing to research this issue to the full extent that it should?

http://naturalsociety.com/mad-cow-disease-may-infect-through-milk-despite-usda-claims

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The Harmful Effects of Monosodium Glutamate

By Rachel Morgan

June 8, 2011

Typically associated with Chinese food, monosodium glutamate (MSG) is a common food additive used in some restaurants and processed foods. MSG is used to improve flavor as well as tenderize meat. MSG first came under criticism in the 1960s following reports that intake of MSG caused a number of negative physical reactions. Both the FDA and the American Medical Association consider MSG safe, but you may experience unpleasant symptoms if you have an intolerance for it.

Understanding MSG

MSG is the sodium salts created from the amino acid glutamate. The FDA approves the use of MSG for flavor enhancement; however, food producers must list the additive in a product's ingredients list if it is used. MSG may develop on its own in food due to use of hydrolyzed proteins, which are also flavor enhancers. These broken down proteins provide the opportunity for free sodium and glutamate to join, thereby producing MSG. The FDA does not require producers to list MSG on nutrition labels if the substance is formed in this way.

Weight Gain

Consuming MSG may put you at risk for putting on weight. A study published in June 2011 in the "American Journal of Clinical Nutrition" examined data from 10,095 healthy Chinese adults. Researchers found that MSG intake was associated with increased body mass index among the adults; in fact, those that consumed the most MSG were about 30 percent more likely to end up overweight in comparison to the adults who ate the least of the additive. More research is needed to understand the MSG-weight link, but its possible effect on the hormone leptin, which regulates appetite, may play a role.

MSG Symptom Complex

Perhaps the most well-known effects of MSG comprise what is known as the MSG symptom complex, also called Chinese restaurant syndrome, as it is a commonly used ingredient in Chinese and other Asian cuisines. Most cases are not serious and do not require treatment. The symptoms, however, can be frightening. They include headache, nausea, heart palpitations, chest pain, sweating,

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Continued from page 38 – Harmful Effects of Monosodium Glutamate

facial pressure and weakness. Numbness and tingling in various body parts, often in the neck or above, are also possible effects.

Migraines

Another potential consequence of having MSG intolerance is the risk for migraines. These severe headaches can affect the whole body, causing vision problems, noise sensitivity and even vomiting. Many factors come into play when it comes to your likelihood of having migraines, with food intolerances being a significant trigger. If you discover that MSG-containing foods contribute to your headaches, it's best to eliminate them from your diet or find ways to prepare food without the additive. Although the exact cause is unknown, MSG can trigger a migraine soon after you consume it.

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Harmful effects of MSG on Function of Hypothalamus-Pituitary-target Gland System

Gong SL, Xia FQ, Wei J, Li XY, Sun TH, Lu Z, Liu SZ

Source

Institute of Radiation Medicine, Norman Bethune University of Medical Sciences, Changchun, China.

Abstract

It has been demonstrated that neonatal administration of monosodium glutamate (MSG) results in a clearly defined lesion of the arcuate nucleus (AN) of the hypothalamus. The present study shows that fat was accumulated in the abdomen of male rats treated with MSG; weights of the body, pituitary and testis were lower; beta-EP content in hypothalamus decreased while L.EnK content increased; serum LH, FSH, TSH, GH and TS levels all decreased in varying degrees while serum PRL level significantly increased. The cAMP content lowered in pituitary, but nor in testes; clear histological changes occurred in testicular tissue; Se-GSH-Px activity in both testis and adrenal gland lowered while LPO level significantly increased. Both Se-GSH-Px activity and LPO level in liver increased. These results indicate that MSG is harmful to the function of the hypothalamus-pituitary-target system of neonatal rats.

Biomed Environ Sci. 1995 Dec;8(4):310-7. PMID:8719172

http://www.ncbi.nlm.nih.gov/pubmed/8719172

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Continued from page 3 – Traditional African Perception of Illness

An illness first considered normal as abnormal exists:

a) when modern medicines fail to achieve the expected results;

b) when there is a worsening or failure of the illness to respond to treatment;

c) when there is an appearance of symptoms believed to be peculiar to Africans;

d) when there is an appearance of additional symptoms that in the light of traditional knowledge are regarded as unusual.

Many patients who choose traditional medical aid initially or witch to it eventually also seek modern medicine again.The change of therapy is more likely to occur in the following circumstances.

a) when traditional medicines fail to cure the illness;

b) when the suspicions held by the patient and his social group regarding the cause of the illness are not confirmed by traditional practitioners;

c) when the patient and his or her social group are unable to accept the traditional healers's diagnosis;

d) when the patient and his or her social group are uncertain about the diagnosis or prognosis of the illness and are willing to try both approaches to healing;

e) when the symptoms that were initially regarded as strange or supernatural disappear.

In certain cases the same illness is refereed at different stages or simultaneously to both modern and traditional practitioners. ***Continued on page 77***

African Traditional Herbal Research Clinic

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FEATURED ARTICLES

Human Digestive System

By Marlene Alphonse
July 26, 2012

The human digestive system is a vital organ system in the body. This system is made up of different organs, which function in a synchronized manner to assimilate food and expel waste...

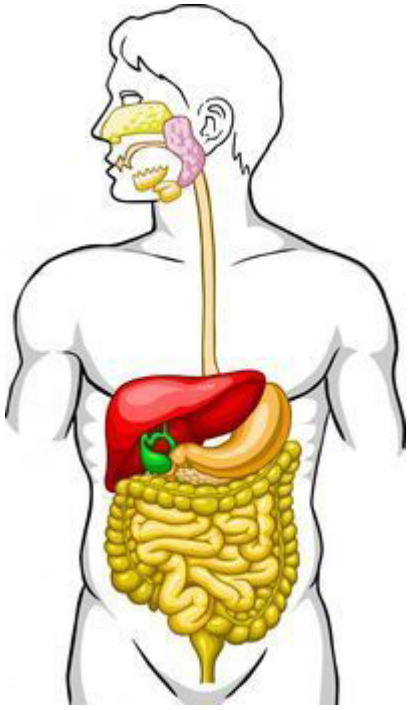
The human body is a complex system that consists of a number of organ systems working in sync together for the sustenance of life. Even if one of the organ systems is absent or is malfunctioning, then it can affect the entire body system. The human digestive system, also called the gastrointestinal tract or GI tract, is one such system whose main function is digestion. Food and drink, when consumed, need to be broken down into small parts so that the body is able to use them for nourishment and energy. Digestion begins in the mouth and ends in the small intestine. The food in the mouth is mixed with digestive juices, and is broken down into smaller molecules. It is then pushed into the stomach, where further digestion takes place. The digested food is assimilated in the blood and transported to the entire body.

Digestive System of the Human Body

If you observe the diagram of the digestive system, you will notice that it is made up of different organs that function together. With the help of the explanation provided, you can understand the working mechanism of this organ system.

The Mouth or Buccal Cavity

The mouth or the oral cavity is the starting point of the digestive system. The buccal cavity has a set of 32 teeth, a tongue, and salivary glands. All these parts help in the chewing and breakdown of food. There are three types of salivary glands, categorized according to their placement in the mouth - parotid, submandibular and sublingual. The salivary glands release enzymes that partially digest the food in the mouth before it is passed to the stomach through the esophagus. There is also another part in the oral cavity in the throat, known as the pharynx. The pharynx is the common pipe for the esophagus and the trachea (also known as wind pipe). The main function of the pharynx is the passage of food and air to the respective organs.



The Esophagus

The esophagus, which is also known as the gullet or food pipe, is a long narrow pipe that connects the mouth to the stomach. The primary function of this pipe is transportation of food and liquid from the mouth to the stomach. The chewed food is passed through the food pipe by the process of peristalsis.

Peristalsis is a process which consists of rhythmic contractions of the muscles in the inner wall of the esophagus to push the food through the pipe into the stomach. ***Continued on page 41***

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The Stomach and Pancreas

The next important organ of the human digestive system is the stomach, where the actual digestion takes place. The stomach is located on the left side of the body below the diaphragm and has a cardiac sphincter muscle at the opening. This muscle further pushes the bolus (chewed food) into the stomach from the gullet. Once all the bolus is transported, the muscle closes and the stomach begins its process of churning the food.

Gastric juices and enzymes are released in the stomach which aid in the further digestion of the bolus. Hydrochloric acid is also released during the process of digestion which helps break the protein molecules into peptides. The stomach wall has an inner lining that secretes peritoneal fluid and mucus to protect the stomach cavity from erosion due to the presence of gastric juices and acid.

The pancreas is a small leaf-like gland located below the stomach. This exocrine gland secretes digestive enzymes (in the pancreatic fluid), through the duct into the small intestine to assist in the digestion of chyme (partly digested food). The primary purpose of this organ is the metabolism of carbohydrates, protein and lipids (or fats). The pancreas consists of tiny structures called the islets of Langerhans which secrete insulin for the additional function of maintaining the blood glucose levels.

The Liver and Gallbladder

The liver and gallbladder secrete enzymes for the complete assimilation of food. The liver, which is the largest gland in the body, also acts as a storehouse for glycogen, vitamins and minerals. The liver produces an enzyme called bile which metabolizes the fat and protein molecules into smaller molecules for easy digestion. The gallbladder is a tiny organ near the liver and is a part of the biliary system. The gallbladder acts as a storehouse for bile and also to increase its concentration. Together, the liver and the gallbladder help to expel urea and other toxic wastes from the body, through urine.

The Small and Large Intestine

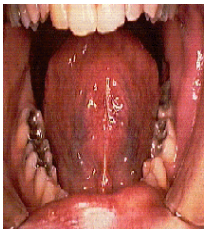
While taking a look at the anatomy of the small intestine, it can be seen that the organ is a thin wire-like structure intertwined and connected to the large intestine. The last stage of digestion takes place in the small intestine where all the nutrients from the food are absorbed. The main function of the small intestine is the absorption of digested food. The digested food is then assimilated in the small intestine and the waste is passed on to the large intestine. A finger-like structure called appendix, which is a vestigial organ, is connected to the beginning of the large intestine (also referred to as cecum). The large intestine then expels the waste out of the body to the rectum. The rectum stores the undigested food or fecal matter to be dispelled from the body through the anus, which is the final part of the digestive system.

The digestive system carries out the vital function of providing nutrition to the body. It is hard to imagine what it would be like if this important system was missing. For proper digestive health it is essential to quit harmful vices like alcohol, smoking etc. Hence you must also be aware of the common diseases of the digestive system, so that you can prevent them from occurring and also seek medical attention if you are affected. Eat nutritious and stay healthy!

http://www.buzzle.com/articles/human-digestive-system.html

THE PHYSIOLOGY OF TASTE

By Michael Berry



Sweet, sour, bitter and salty. That's it, pal, unless you want to count umami, the weird, nearly-indescribable sensation associated with monosodium glutamate. Which you probably don't, unless you're a chemical senses researcher or about to chow down on cheap Chinese take-out.

Every time you stick something in your maw, one or a combination of those four primary tastes alerts you to vital information about that mouthful of matter. If it's sweet, maybe it's got the nutrients your body needs to keep running for another few hours. If it's salty, perhaps you can replace some of those vital minerals you just excreted through sweat or urine. If it's sour, there's a chance it's not ripe and will give you a bad bellyache. If it's bitter, watch out -- it could be poison and your next swallow will be your last.

Of course, these are not the things you think about when sitting down to an elegant, five-course French meal or even while scarfing down a chili dog, fries and a Bud at a baseball game. Mostly, you're hungry, and you want something that tastes good. Simple as that.

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Continued from page 41 – The Physiology of Taste

But deciding what tastes "good" is anything but simple. A food's flavor doesn't usually depend on data from a single sense. Rather, smell, touch, sight and even hearing often come into play, and the best methods of pleasurably exciting those senses during a meal or snack occupies the days of thousands of chefs, brewers, marketing flaks, and scientists around the world.

Open your mouth and say, "Aaahh!" There's your tongue, that pink, flexible muscle marinating in saliva.

You might call the little knobs dotting the surface of your tongue taste buds, but you'd be wrong. Those are papillae, and there are four kinds of them: fungiform and filiform on the front half, foliate and vallate on the back. The actual taste buds, described variously as resembling either tiny navel oranges or onions, cluster together in packs of two to 250 within the papillae. The buds in turn consist of up to 100 cells, either receptor or basal.

When something tasty enters the mouth, its chemicals are dissolved by the saliva, and the free-floating molecules enter the taste bud through a pore in its center. If the molecule binds to the tip of a receptor cell, it will excite that cell into issuing a series of chemical and electrical signals. It used to be thought that these electrical signals would then be fired directly into the brain, but the process turns out to be more complicated than that.

For example, sweet and some bitter taste stimuli activate a chemical messenger known as gustducin, member of the old and venerable G-family of proteins and cousin to transducin, the protein in the eye which helps to translate light into vision. In ways not completely understood, the activation of gustducin inititates an electrochemical dialogue among the receptor cells, which then transmit their messages to the basal cells at the bottom of the bud. The basal cells can also "talk" back to the receptor cells and among themselves. Once everybody has their stories straight, the data are relayed to the brain, to the gustatory cortex to be specific. "Geez, that's sweet," you think.

Salty and sour molecules don't seem to need to mess around with the receptor tips, permeating the taste cells directly through special channels in their walls. For example, the channels allow electrically charged sodium ions in and potassium ions out. As the interior of the cell grows progressively more positively charged, it sets up a small electric current that triggers more intercellular messages and, once again, word is passed to the brain that something salty, perhaps a pretzel, is about to plummet down the esophagus.

If you were paying attention in high school biology, you may remember a map of the tongue that grouped the buds detecting sweetness on the tip of the tongue. Those were flanked by the salt-detecting buds, with the sour ones running farther along the sides. The bitter buds, last defense against gag-inducing toxins, lurked across the back of the tongue.

Nice, neat, orderly. And not very accurate. There are taste buds throughout the oral cavity, even on the upper palate. Any bud is capable of detecting all the basic tastes. It's just that some are more sensitive to a particular taste than to the others.

The tongue map also neglects to take into account the impact the other senses have on taste. In a lot of cases, you pick up clues about the food you're about to eat long before any of it gets into your mouth. Like that left-over beef stoganoff that's been sitting at the back of your refrigerator for a month. Chances are, you won't even bother to dirty a fork before chucking that rank mess into the Dispos-All. Your nose knows what's up, that the last thing your body needs is a stomacheful of virulent bacteria in cream sauce.

Smell, of course, doesn't simply warn against spoiled food. It also increases your enjoyment of practically everything you eat. Much of what we commonly refer to as "flavor" is actually a combination of smell and taste, with taste most often assuming the secondary position.

As a child, I read a book of scientific riddles which included the question "When does an onion taste like a strawberry?". The answer was "When you hold your nose," and the text urged me to go to Mom's larder and try the experiment myself. Loath to bite into a raw Bermuda even with my nostrils clamped shut, I gave it a pass, but the theory is still sound. With your eyes closed and your nose pinched tight, you wouldn't be able to tell the difference between, say, a chunk of apple and a chunk of turnip. Anyone who's ever suffered with hay fever or even just a bad head cold can verify that most foods taste pretty much the same when your nasal passages are clogged with excess mucus.

On the way into your mouth, foods are already giving off vapors that waft up into your nose. Once you start chewing, more vapors travel the retronasal route, up the pharynx and into the nasal cavities. At the back of each cavity, the molecules hit the olfactory membrane, a postage stamp-sized patch of yellowish gray tissue.

Each membrane contains an estimated 100 million receptor cells, which sounds impressive until you realize that a German shepherd reportedly has a billion of the little suckers.

The olfactory receptor cells are actually neurons, or

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nerve cells, outfitted at their knobby ends with six to twelve hair-like cilia. The cilia dangle into the thin layer of mucus that coats the membrane and snag passing particles for smell analysis.

Each receptor cell is connected by a single primary olfactory neuron to one of the brain's two olfactory bulbs. The primary olfactory neurons pass through holes in the cribriform plate, a penny-thin bone at the front of the cranial cavity upon which the olfactory bulb rests. The primary neurons come together in structures known as glomeruli and there meet secondary neurons.

Messages shoot across the synapses, the gaps separating the primary and secondary neurons.Smell nerves fibers then wind their way in complex paths throughout the rest of the brain, particularly into the most primitive portions, evolutionarily speaking. Some fibers reach the hypothalamus, the center controlling appetite, anger, fear and pleasure, while others continue into the hippocampus, which regulates memories, or descend into the depths of the brain stem, where such basic functions as remembering to breathe are regulated.

That's why odors can generate extremely powerful emotional responses. In Proust's masterwork, it probably wasn't the sweet taste of that madelaine that unleashed the remembrance of things past. Rather, it was likely to have been the buttery odor that stimulated the narrator's hippocampus and hypothalamus. See how an understanding of neuroscience adds to the enjoyment of interminable classics of French literature?

As for how you identify one particular scent from another, the answers are far from clear-cut. In the 1930s, researchers discovered that different areas of the olfactory bulbs are sensitive to different types of smells, that some receptors are stimulated by a particular odorant while others aren't. A popular theory developed by in the 1960s by Dr. John Amoore of the U.S. Department of Agriculture emphasized the shape of a molecule as a key component of its perceived smell. He proposed five primary classes of odors with specific molecular shapes: camphor-like (spherical), musky (disk-shaped), floral (kite-shaped), pepperminty (wedge-shaped) and ether-like (rod-shaped). He also suggested two other classes, pungent and putrid, whose distinguishing characteristics were not their shape, but the electric charge of their particles. All in all, Amoore believed that there at least thirty primary odors.

Like the tongue map of yore, Amoore's classifications work as gross generalizations, but they don't come close to revealing the whole picture. In 1991, researchers at Columbia University, Drs. Richard Axel and Linda Buck identified a family of genes that carry blueprints for particular odor receptor proteins. It's pretty darn large family, with as many as one thousand members. Consequently, human noses contain roughly a thousand types of receptor cells, and, because each type may be capable of recognizing more than one smell, the number of distinct odors capable of being perceived by the human nose jumps up to an estimated 10,000.

Just as many folks start out with 20-20 vision in their youth and wind up wearing tri-focals come retirement, your senses of taste and smell changes over time. The average adult reportedly has approximately 10,000 taste buds, but children have more, including some dotted along the inside of their cheeks. Infants seem to arrive hard-wired to react to bitterness and sweetness, though the ability to detect saltiness takes six months or so to develop. The childish craving for sweets typically declines during adolescence, probably as a way of limiting caloric intake.

As you journey through adulthood, your sense of taste remains at roughly the same level, although abusing your taste buds, such as by smoking or repeatedly scalding the tongue with hot beverages, obviously has a dulling effect on them. Unlike all other brain cells, the olfactory receptor cells in the nose are continually dying off and regenerating themselves, but a gradual loss of smell sensitivity is not uncommon in the elderly.

Sometimes, though, things go seriously awry, permanently in some cases. It's estimated that between two and four million Americans suffer from smell and taste disorders. The complete loss of smell is called anosmia, while a significantly reduced ability to detect odors is referred to as hyposmia.

Viral infections and head trauma are among the leading culprits. Viruses can kill off olfactory cells, which usually grow back but sometimes don't. A blow to the back of the head can send the brain careening at high speed into the front of the skull, severing the delicate connections between olfactory neurons. Exposure to toxic chemicals can rob you of your sense of smell, and benzene, chlorine, mercury and various insecticides have all been implicated in various cases.

Loss of smell can also be one of the early symptoms of Alzheimer's and Parkinson's diseases, leading some researchers to theorize that the agents that cause those maladies enter the central nervous system through the olfactory nerve, damaging it in the process.

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If called to sacrifice one of your senses, you might think jettisoning smell would be the way to go. But according to Dr. April Mott, Medical Director of the Connecticut Chemosensory Clinical Research Center, patients with anosmia cope with formidable obstacles to their physical and mental well-being. First of all, remember that a food's smell accounts for about three-quarters of its flavor. Just imagine what it would be like if breakfast, lunch and dinner tasted pretty much the same every single day of your life. Also, because eating plays such a focal role in our social lives, anosmia patients sometimes feel isolated from their friends who enjoy the everyday pleasures of going out for pizza or having a cocktail after work.

Other dangers and inconveniences abound for the smell-impaired. They can't smell smoke, detect gas leaks, spot certain types of rotten food, or know immediately when Junior needs his diaper changed. Some become increasingly worried about their own body odor, taking multiple showers every day to forestall any unwitting olfactory offensiveness.

Unpleasant tastes and smells chronically plague a small percentage of patients with chemosensory disorders. Sjogren's Syndrome, a fairly common ailment among post-menopausal women, dries out the mouth and nose and can sometimes produce a foul, soapy taste. Cancer patients undergoing chemotherapy or radiation therapy occasionally report phantom tastes or odors.

There's even reason to suspect that Louis XI, a 15th Century king of France, suffered from an olfactory disorder. The perception that everything around him stank terribly no doubt contributed to his bad temper and helped earn him the sobriquet of "the terrible king."

Synesthesia, wherein one sensation involuntarily conjures up another, probably stands as the top nominee in the category of Weirdest Sensory Syndrome. The fusion of sound and color -- perceiving the musical note of high C as possessing a red hue, for example -- has been noted in the medical literature as far back as the seventeenth century. In "The Man Who Tasted Shapes," however, Richard E. Cytowic recounts the case of Michael Watson, an art teach in North Carolina, who had the singular ability to associate various tastes with a collection of three-dimensional geometric shapes.

Cytowic describes how might feel to a synesthete to grab a slice of chocolate mint pie from the 'fridge and eat it: "As you do, you feel a dozen columns before you, invisible to the eye but real to the touch. You set the fork down and run your hand up and down their cool, smooth surfaces. As you roll the minty taste in your mouth, your outstretched hand rubs the back curve of one of the columns. What a sumptuous sensation. The surface feels cool, refreshing, even sexual in a way."

Sounds kind of scary, but Cytowic asserts that synesthesia is a normal brain function in every person but that reaches conscious awareness in only a handful. In synesthetes, parts of the brain become disconnected from each other due to a rebalancing of local metabolism following a stimulus. Cytowic traces synesthesia's ultimate origin to our old friend the hippocampus, where the perception of subjective experience is monitored.

Even for those of us not prone to synesthia, the sense of touch provides another important facet to a food's flavor. Is it slick like an oyster? Cold like a milk shake? Full of carbonation like a Diet Coke? All of these sensations and many more are registered by the trigeminal system of nerve fibers.

The pungency of a wad of green mustard served with sushi doesn't correspond to any of the four basic tastes. Rather, the kick you get from it is a function of how much pain it inflicts on nerve fibers in your mouth. Also located in the tongue's papillae, these pain fibers are actually wrapped around the taste buds.

Chemical irritants that humans have learned to like in their food include capsaicin in chili peppers, the gingerols in ginger, piperin in black pepper and the various isothiocyanates in onions, mustard, radishes and horseradish. You consider them "hot" because they stimulate only a subset of the pain fibers in your mouth, not all of them. But that subset also includes sensors that monitor temperature, hence the burning sensation associated with even an ice-cold super-jalapeno.

Why do some folks prefer to eat foods that actually inflict pain? In a study done at the University of Pennsylvania in 1980, Dr. Paul Rozin hypothesized that eating chilis and the like releases endorphins, the euphoric, pain-killing neurochemicals responsible for the fabled "runner's high." Or maybe it's simply that, as they say, variety is the spice of life, and a bit of oral irritation now and then pleasurably broadens the spectrum of flavors.

As to the reason why some people can cheerfully withstand the ravages of irritant-packed food and others bolt for the water fountain at the first nibble on a wayward jalapeno, part of it is no doubt genetic, but there's also a phenomenon known as "transient desensitization." Keep eating chili after chili, and your

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mouth is going to get hotter and hotter. Take a break, though, maybe two or five minutes, and when you resume your meal, the burning sensation won't be quite so fierce.… Desensitization can last hours, and people who make a habit of eating spicey food may be partly desensitized virtually all the time.

Wouldn't you know it, but one fine example of these different sensory sensations working in concert occurs when you drink a glass of beer?

According to Dr. Gary K. Beauchamp, Director of the Monell Chemical Senses Center in Philadelphia, one of beer's primary components, namely the alcohol, stimulates all three sensory systems. "It stimulates taste, being a little bit bitter itself. It stimulates olfaction, having a sort of sweet odor. And it stimulates the trigeminal system, giving the drink some bite. That's probably one of the reasons why it's be difficult to make an alcohol-free beer that has the same characteristics as a normal brand."

Just as beer manufacturers are continually monkeying around with their product's basic recipe to fill new marketing niches, chemosensory researchers are always on the alert for new methods of boosting flavor while removing a food's less healthy ingredients (sugar, salt, fat, etc.). So far, the search for an artifical sweetener, for example, has relied purely on serendipity, but, according to Dr. Beauchamp of Monell, that may change as scientists develop a better understanding of molecular chemistry. He says, "Once we have identified what the sweet receptor is, we'll be able design sweet molecules. Even though there are clues suggesting there will never be a salt substitute, we may be able to make a salt enhancer."

There's no telling exactly what the Brave New World of Flavor might hold. Perhaps no-fat, low-sodium, low-calorie kibble that packs the appetite-fulfilling power of a sixteen-inch deep-dish pizza with a dozen different toppings.

In the meantime, as you think about what gives your brain's gustatory cortex the biggest jolt for the money, you might do well to contemplate the words of nineteenth-century art critic John Ruskin: "Taste in the only morality. . .Tell me what you like, and I'll tell you what you are."

http://www.sff.net/people/mberry/taste.htm

COME BACK TO YOUR ROOTS

Digestion and Absorption of Food

The gastrointestinal (GI) system includes the gastrointestinal tract (mouth, pharynx, esophagus, stomach, small intestine, large intestine) and accessory organs (salivary gland, liver, gallbladder, pancreas) that secrete substances into the tract via connecting ducts.

GI system breaks down particles of ingested food into molecular forms by enzymes (digestion) that are then transferred to the internal environment (absorption).

Functions of GI organs

The GI tract begins at the mouth, where digestion begins with chewing. Saliva containing mucus and the enzyme amylase is secreted from 3 pairs of salivary glands, located in the head. Mucus moistens the food and amylase partially digests polysaccharides (starches). Food then reaches the stomach through the pharynx and esophagus.

The stomach is the sac that stores and digests food macromolecules into a solution called chyme. Glands lining the stomach secrete hydrochloric acid that dissolves food particles and protein-digesting enzymes, called pepsin.

Final stages of digestion and most of the nutrient absorption occurs in next portion of the tract: the small intestine. The small intestine is divided into 3 segments - duodenum, jejunum, and ileum.

The pancreas is a gland located behind the stomach. From its exocrine portion it secretes (1) digestive enzymes and (2) a fluid rich in HCO_3- ions to neutralize the acid from stomach. The liver secretes bile. Bile contains HCO_3- ions and bile salts to solubilize fats. Bile reaches the gall bladder through hepatic ducts and is stored in the gall bladder between meals. During a meal, bile is secreted from the gland by smooth muscle contraction and reaches the duodenum portion of the small intestine by the common bile duct.

Monosaccharides, amino acids and mineral salts are absorbed by transporter-mediated processes while fatty acid water diffuses passively.

Undigested material is passed to large intestine, where it is temporarily stored and concentrated by reabsorption of salts and water. Finally, contractions of rectum, the last part of large intestine, expel the feces through the anus.

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Structure of GI Tract Wall

The luminar surface is covered by a single layer of epithelium containing exocrine and endocrine cells. The exocrine cells disintegrate and discharge into the lumen, releasing their enzymes. The epithelia with an underlying layer of connective tissue (lamnia propia) and muscle (muscularis mucosa) are called mucosa. Below the mucosa is a layer of inner circular and outer longitudinal smooth muscle called muscularis externa, which provides the forces for moving and mixing the GI contents. The outermost layer of the tube is made up of connective tissue called serosa. The luminar surface of the tube is highly convoluted into projections called villi and microvilli; both of which increase total surface area for absorption. The center of each villus has a single blunt-ended lymphatic vessel called lacteal. Venous drainage from the intestine transports absorbed materials to the liver for processing via the hepatic portal vein.

Digestion and Absorption

Carbohydrate

Digestion begins in the mouth by salivary amylase and completed in the small intestine by pancreatic amylase. Monosaccharides, such as glucose, galactose and fructose, are produced by the breakdown of polysaccharides and are transported to the intestinal epithelium by facilitated diffusion or active transport. Facilitated diffusion moves the sugars to the bloodstream.

Protein

Proteins are broken down to peptide fragments by pepsin in the stomach, and by pancreatic trypsin and chemotrypsin in the small intestine. The fragments are then digested to free amino acids by carboxypeptidase from the pancreas and aminopeptidase from the intestinal epithelium. Free amino acids enter the epithelium by secondary active transport and leave it by facilitated diffusion. Small amounts of intact proteins can enter interstitial fluid by endo- and exocytosis.

Fat

Fat digestion occurs by pancreatic lipase in small intestine. A monoglyceride and two fatty acids are produced in the digestive process. Large lipid droplets are first broken down into smaller droplets, by a process called emulsification. Emulsification is driven by mechanical disruption (by contractile activity of GI tract) and emulsifying agents (amphipathic bile salts). Pancreatic colipase binds the water-soluble lipase to the lipid substrate.

Digested products and bile salts form amphipathic micelles. These micelles keep the insoluble products in soluble aggregates from which small amounts are released and absorbed by epithelial cells via diffusion.

Free fatty acids and monoglycerides then recombine into triacylglycerols at the smooth ER, are processed further in the Golgi and enter the interstitial fluid as droplets called chylomicrons, which are then taken up by the lacteals in the intestine.

Vitamins

Fat-soluble vitamins are absorbed and stored along with fats. Most water-soluble vitamins are absorbed by diffusion or mediated transport. Vitamin B_{12}, because of its large size and charged nature, first binds to a protein, called intrinsic factor, which is secreted by the stomach epithelium, and is then absorbed by endocytosis.

Water

The stomach absorbs some water but most is absorbed at small intestine by diffusion.

Regulation of GI Processes

Control mechanisms of the GI system regulate conditions in the lumen of the tract. Reflexes are initiated by:

(1) Distension of wall by volume of luminal contents

(2) Chyme osmolarity

(3) Chyme pH

(4) Chyme concentrations of specific products.

Neural Regulation of the GI tract

Impulses to the GI muscles and exocrine glands are supplied by enteric nervous system, the local nervous system of GI tract, which allows local, short reflexes, independent of CNS. Long reflexes through the CNS are possible via sympathetic and parasympathetic nerves, which also innervate the GI tract.

Hormonal Regulation

Endocrine cells are scattered throughout GI epithelia and surface of these cells is exposed to the lumen. Chemical substances in the chyme stimulate them to release hormones into blood.

Phases of GI control

Each phase is named according to where the receptor for a reflex is located. These phases do not occur in temporal sequence.

1. The cephalic phase is initiated when sight, smell, taste, chewing, and emotional states stimulate receptors in the head. Reflexes mediated by sympathetic and parasympathetic fibers activate secretory and contractile activity.

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2. The gastric phase is initiated by distension, acidity, and the presence of amino acids and peptides in the stomach. This phase is mediated by short and long reflexes and activates the secretion of gastrin.

3. The intestinal phase is initiated by distension, acidity, osmolarity of digestive products in intestine and is mediated by GI hormones and short and long neural reflexes.

Mouth, Pharynx, and Esophagus

Chewing is controlled by somatic nerves to the skeletal muscles and the reflex activation of mechanoreceptors on the palate, gums and tongue.

Autonomic nerves in response to chemoreceptors and pressure receptors in mouth stimulate saliva secretion.

Swallowing is mediated by pressure receptors on walls of pharynx, which send impulses to the swallowing center in the medulla oblongata. The center activates muscles in the pharynx and esophagus. Multiple responses occur in a temporal sequence. The palate is elevated to prevent food from entering the nasal cavity, respiration is inhibited and the epiglottis covers the glottis to prevent food from entering trachea (windpipe). The upper esophageal sphincter opens and food enters the esophagus and moves toward the stomach by muscle contractions called peristaltic waves. Food then moves to the stomach when the lower esophageal sphincter opens. A less efficient, or faulty, lower esophageal sphincter results in the reflux of gastric contents into the esophagus (gastro-esophageal reflux), this reversal results in heartburn and over time contributes to ulceration of esophagus.

Epithelium lining the stomach invaginates into the mucosa, forming tubular glands. Parietal (oxyntic) cells secrete acid and intrinsic factor and chief cells secrete pepsinogen. Also scattered throughout are enterochromaffin-like (ECL) cells, which secrete histamine, and other cells that secrete somatostatin. The antrum, a lower portion of the stomach, secretes gastrin.

Increased protein content in a meal stimulates release of gastrin and histamine, which in turn stimulates HCl secretion. Somatostatin inhibits acid secretion by inhibiting the release of gastrin and histamine. Enterogastones in the duodenum also inhibit gastric acid secretion.

The precursor pepsinogen, which is produced by chief cells, is converted to pepsin by the acid in the stomach.

The stomach produces peristaltic waves in response to the arrival of food. The pyloric sphincter between the stomach and duodenum opens to release small amounts of chyme into the duodenum with each wave. These waves are generated by pacemaker cells in the longitudinal smooth muscle layer and are spread out by gap junctions. Gastrin, distension of stomach etc. stimulate gastric motility while distension of duodenum inhibits it.

Pancreatic Secretions

Inactive trypsinogen is secreted by pancreas and is later converted by the intestinal enzyme enterokinase to active trypsin, which digests proteins. Pancreatic amylase and lipase are secreted in active forms. The pancreas also secretes bicarbonate ions.

Secretion of pancreatic enzymes is stimulated by cholecystokinin (CCK), the secretion of which is triggered by the detected presence of fatty acids and amino acids in the small intestine. The secretion of bicarbonate ions is stimulated by secretin, which is triggered by acidity in small intestine.

Bile Secretion

Bile contains bile salts, which solubilize fats, and bicarbonate ions, which in turn are used to neutralize stomach acids. Bile salts, secreted by hepatocytes (liver cells) enter the GI tract and are reabsorbed by transporters in the intestine and are returned to the liver via the portal vein. This recycling pathway is called the entero-hepatic circulation.

The sphincter of Oddi controls the entry of the bile duct into the duodenum. When the sphincter is closed, secreted bile is shunted into the gallbladder. The presence of fat in the intestine releases CCK, which relaxes the sphincter to discharge bile salts into the duodenum.

Small Intestine

The most common motion of the small intestine is stationary contraction and relaxation, called segmentation. Segmentation results in little net movement. The chyme is mixed and brought into contact with the intestine wall and then moved slowly toward the large intestine. The movements are initiated by pacemaker cells in the smooth muscle layer.

After most of the materials are absorbed, segmentation is replaced by peristaltic activity called migrating motility complex, which moves any undigested material to the large intestine. The candidate intestinal hormone, motilin, initiates migrating motility.

Large Intestine

The large intestine consists of 3 parts: the cecum, colon and rectum. The primary function is to store and concentrate fecal material for elimination. Chyme

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enters the cecum through the ileocecal sphincter, which relaxes and opens as a result of the gastroileal reflex.

Na^+ is absorbed along with water. K^+ and HCO_3- ions are secreted into the lumen. Undigested polysaccharides (fiber) are metabolized to short-chain fatty acids by the residing bacteria and these are then absorbed by diffusion. A small amount of vitamin K is also produced and absorbed. Bacterial metabolism produces a mixture of gases, called flatus.

Motility and Defecation

Regular contractions of the circular smooth muscle produce a slow rhythmic segmentation movement. The undigested material moves slowly in order to provide resident bacteria time to grow and multiply. Following a meal, there is a wave of intense contraction, called mass movement. The internal anal sphincter is made of smooth muscle and closes the anus, while the external anal sphincter is made of skeletal muscle and is under voluntary control. Both sphincters regulate the anal opening and closing. Mass movement of fecal material into the anus initiates the defecation reflex, which is mediated by mechanoreceptors. The two sphincters open to expel the feces. If defecation is delayed, rectal contents are driven back into colon by reverse peristalsis until the next mass movement.

Pathophysiology of the GI Tract Ulcers

Ulcers are eroded areas of gastric surface and breaks in the mucosal barrier, which expose the underlying tissue to corrosive action of acid and pepsin. Damage to underlying blood vessels may cause bleeding.

Vomiting

The vomit reflex results in the forceful expulsion of toxic gastric contents. This reflex is coordinated by the vomiting center in the medulla oblongata. Various mechano- and chemo- receptors in the stomach and elsewhere can trigger this reflex. Increased salivation, sweating, heart rate, pallor etc. accompany the reflex. Abdominal muscles contract to raise abdominal pressure while the lower esophageal sphincter opens and gastric contents are forced into the esophagus (retching). If the upper esophageal sphincter opens, contents are then expelled from the mouth (vomiting). Excessive vomiting can lead to loss of water and salts, which will ultimately result in dehydration.

Gallstones

Excessive secretion of water insoluble cholesterol in bile results in formation of crystals, called gallstones, which can close the opening of gallbladder or the bile duct. If a stone prevents bile from entering the intestine fat digestion and absorption decreases. If a stone blocks the entry of the pancreatic duct, it prevents pancreatic enzymes from entering the intestine, thus preventing the digestion of other nutrients. A blocked bile duct inhibits further secretion of bile, resulting in accumulation of bilirubin in tissues, producing a yellowish coloration called jaundice. Jaundice is common in newborns and is rectified by sunlight exposure.

Lactose Intolerance

Lactose intolerance results from a lack of the enzyme lactase which digests lactose, the sugar in milk. The lack of lactase results in the incomplete digestion of lactose to glucose and galactose.

Constipation and Diarrhea

Constipation is the absence of defecation due to decreased motility of the large intestine. This results in excess absorption of water from feces, making it hard to expel.

Dietary fiber, which is not digested in small intestine, can produce distension and increase motility.

Diarrhea results from decreased fluid absorption, or increased fluid secretion resulting in increased luminal fluid, which in turn, causes distension and increased motility. Diarrhea results in decreased blood volume, loss of water and other nutrients.

http://www.biology-online.org/9/16_digestion_absorption_food.htm

Slow Digestive System

Slow digestive system is usually an indication of something wrong with the diet. However, it also suggests the presence of underlying digestive disorders like diarrhea and constipation.

The food that we consume is absorbed and its nutrients are subsequently sent to different organs through the blood. All this can happen only when the digestive system is working at its best. Digestive system for kids or adults is a complex structure and its proper functioning is very important for overall health.

However, a slow or sluggish digestive system isn't able to perform its assigned function effectively. That is why a person experiencing a bout of slow digestion is bound to feel extremely uncomfortable post lunch or dinner. Nausea, bloating and vomiting are the most common symptoms of sluggish digestive system that occur after having meals.

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Causes

Constipation or common digestive problems like diarrhea and irritable bowel syndrome can make the digestive system sluggish. However, if none of these digestive disorders are present, then a slow digestive system can be due to the following reasons:

Too Much Protein in the Diet

Although protein is good for health, excessively high amounts of protein in the diet can slow down the digestive health. This is because, the body has to really work to digest protein. Unlike simple carbohydrates, proteins are heavy, hence are not easy to digest and so when its presence is alarmingly high in everyday meals, the consequence is a slow digestive system.

Gastroparesis

Gastroparesis is a condition that is typically marked by poor functioning of the muscles. As we all know, the ingested food passes through the stomach and eventually enters the intestine, where digestion takes place. A point to note that although food is digested in the stomach, most of the digestion occurs inside the intestine. Experts say that the intestine is the place where nutrients are observed and eventually circulated in the bloodstream to various parts of the body.

However if the food stays for longer time in the stomach, this can affect the digestion process. This condition is known as gastroparesis, in which the stomach takes more time to transfer the ingested food to the intestine. This happens because the stomach muscles that are assigned the task of pushing the food to the intestine, lose their ability to work efficiently. Gastroparesis is the result of malfunctioning of the vagus nerve that regulates movement of muscles lining the stomach wall.

Deficient in Stomach Acids and Digestive Juice

The bile, a yellowish brown fluid manufactured by the liver promotes breakdown of fats, thereby playing a key role to keep digestive health in optimal condition. However, if the liver is damaged, it can decrease the bile production. Liver diseases like jaundice and hepatitis are likely to interfere with the normal digestive rate. This can slow down the digestion process substantially. The stomach cells also release certain acids for better digestion. However, insufficient production of stomach acids can have a negative impact on the digestion rate.

Medication

Patients taking certain medication like antibiotics and painkillers on a regular basis can reduce the population of good bacteria residing in the stomach and the intestine. Good bacteria aid in digestion and so when their presence decreases, it can slow down the digestive system.

Treatment

Treatment will depend on what is making the digestive system so slow. The underlying cause has to be identified, so as to begin the treatment in the right direction. A well-balanced diet high in easily digestible foods may help to resolve the issue associated with high protein. The doctor may also prescribe digestive enzymes that are available in the form of tablets to kick-start the digestion process. For gastroparesis, patients are advised to modify their diet. Usually, the diet for gastroparesis, involves inclusion of foods easy to digest. Also avoiding heavy meals is necessary as it can aggravate gastroparesis symptoms. Having 4-5 small-sized meals, instead of two large meals is the best way to manage gastroparesis.

Avoid or Minimize Consuming Cold Drinks

Drinking soft drinks or normal chilled water can also make the digestive system sluggish. After having a heavy lunch or dinner, many have the habit of grabbing a bottle of water from the refrigerator to quench their thirst. This can hinder the digestion of ingested food.

Usually, the food consumed stays in our stomach for at least 2 hours, which is necessary for proper digestion. However, the ingested food does not spend much time in the stomach (hardly 20 minutes) when people drink cold water during or immediately after meals. This is why; digestion can become slow, so one should opt for water that is stored at normal room temperature.

Ditch Caffeinated Beverages

Coffee consumption and even soda, too can be detrimental to digestive health. To be honest, drinking coffee can reduce your ability to digest food. Indigestion is a common complaint in people who have been taking coffee for quite some time. Coffee is

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basically an acid forming beverage and it is a common knowledge that acidic foods are notorious for causing digestion problems. It is observed that drinking coffee increases the production of HCl in the stomach. So, every time you drink coffee, the stomach responds by producing more than normal amounts of HCl. Over time, the stomach loses its ability to produce adequate HCl, which impedes digestion.

Go For Fresh Foods

The habit of eating packed and processed foods should also be stopped as it can damage the digestive system and cause gas and bloating. Organically grown foods are found to be higher in essential vitamins and minerals in comparison to foods that involve use of synthetic pesticides. Eating foods that are fresh and properly cooked can go a long way in maintaining digestive system. Having raw foodstuffs such as a vegetable salad daily is equally important to keep the digestive system in optimal condition. On the whole, a healthy diet that focuses more on eating vegetables, fruits and whole wheat products can correct a sluggish digestive system.

On the whole, an easy solution to boost digestive health, is to follow a suitable diet and lead an active lifestyle. High fatty foods such as hamburgers and pizza need to be either avoided or consumed in moderation. Raw foods are also difficult to digest, so make sure that the food is properly cooked. Eating habits like chewing the food properly and following a regular exercise routine can also contribute immensely to keep digestion problems at bay. *12/6/2011*

http://www.buzzle.com/articles/slow-digestive-system.html

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The Digestive System, the Gallbladder, Acid Reflux and the Antacid Debacle

By Dr. Alexander

July 24, 2009

The human digestive system is nothing short of miraculous. Its intricacy and amazing detail is beyond anything that has been designed by the human scientist.

It takes diverse food groups, chews and kneads them to a pulp, subjects them to extremely acid conditions and then alkaline conditions. It pulses, contracts, expands and pours out enzymes, hormones and other digestive juices.

Then a highly selective, constantly changing proactive membrane called the Intestinal Lining lets in only the digested foods and prevents the other particles form invading the body. In addition the Gastrointestinal System (GI system) has the highest amount of nerve cells in the body after the brain.

Sometimes things go wrong with this system and we try to fix it by blocking acid production with drugs or cutting out gall bladders or parts of the intestine. All of these are the sad result of our incomplete understanding of the human body. But we really don't even have that excuse because what is discussed here has been know for decades but not implemented. Why? Topic for a different day!

Acid Reflux happens when the gastroesophageal valve whose job it is to prevent stomach acid from going back up the delicate esophagus is not completely functioning. So acid irritates the comparatively vulnerable cells of the esophagus and causes discomfort. The typical allopathic response to this ailment is to prescribe acid blockers. This is what I did too for many years even though deep inside my love of physiology told me there was something wrong with this approach. It was not till I worked with Dr. Jonathan Wright in Seattle that I realized how severe the consequences of such an approach can be.

After all, the acid phase of digestion is critical for absorption of Vitamin B 12, the breakdown of proteins and assimilation of most minerals and trace elements. Some individuals have to live with a genetic condition where they are unable to make hydrochloric acid. These individuals are at a higher risk of various diseases including esophageal and stomach cancer, stomach polyps, infections of the gastrointestinal tract, osteoporosis and autoimmune diseases.

Even the Wall Streeet Journal caught on to the dangers of using todays strong acid blockers. In their issue of October 10th, 2005 is an article titled "The Hidden Dangers of Heartburn', Tara Pope talks about the dangers of using the modern 'Proton Pump Inhihibitor'. She points out a five fold increase in cancer of the esophagus since the widespread introduction of acid blockers in the medical system.

Acid blockers may help the symptoms of reflux but does not alleviate the cause of the reflux itself.
http://www.ncbi.nlm.nih.gov/pubmed/19513836

So what do you do if you have reflux or digestive issues? It turns out quite surprisingly that more than 3/4ths of patients with Reflux have low stomach Acid!! (Number based on my clinical experiences). The weak acid production in turn decreases the stimulus for the valve to shut and hence causes reflux.

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So the problem in what has often been termed hyperacidity could be actually decreased acid production? Crazy as it initially sounds – in 3 out of 4 cases of reflux the cause is decreased production of hydrochloric acid. Other important causes of heartburn are unhealthy and excessive diets, food allergies and high intakes of caffeine.

My advice to anyone with reflux or other digestive problems is to go to a health care professional with a holistic outlook. Possible causes of low stomach acid like infection with a bug called Helicobacter pylori will be ruled out. (This seems to be one reason probiotics can help heartburn.) There are ways to assess acid production and the integrity of the stomach mucous lining to withstand acid production.. Once those things are squared away they will help you look at how to replace the acid that you should be making. Chances are not only will your reflux go away, but the biggest benefit of all is that your digestive system will be able to function normally. And that is imperative for a Happy Ending!!

As tragic as the use of Acid Blockers, is the often unwarranted surgeries that are done on the gall bladder. While there are situations where surgery is indicated and helpful, the vast majority of gall bladder surgeries are preventable and can do more harm than good. This is specially when there are no actual stones in the gall bladder but based on a test called a HIDA scan, you are told your gall-bladder is not functioning and ejecting out as much bile as it should. This problem can be addressed by cleaning up the diet, adding essential fatty acids like olive oil and eliminating food allergens.

I was sitting in a plane flying to Seattle once and next to me sat this young Mexican guy who had just moved to the US and dutifully taken up the American fast food lifestyle. He had been experiencing fatigue, pains in his gut and had been told that he needed his gall bladder taken out. Having nothing much else exciting to do in the air, I explained to him in detail what he could do to turn the situation around. He took my card and about two months later I got a happy, relieved and grateful e-mail from him on how not only his problems had resolved but he felt better than he had in a long time. I have to add the usual disclaimer that the FDA does not necessarily endorse my views and that this is not intended to be medical advice, but information you can use to find your way to optimum health.

http://thomasalexandermd.com/2009/07/24/the-digestive-system-the-gallbladder-acid-reflux-and-the-antacid-debacle/

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Can Ginger Beat Out The Multi-Billion Dollar Acid Blockers?

By Sayer Ji

August 19, 2012

Did you know that the multi-billion drug category known as "acid blockers," despite being used by millions around the world daily, may not work as well as the humble ginger plant in relieving symptoms of indigestion and heartburn?

Ginger is a spice, a food, and has been used as a medicine safely for millennia by a wide range of world cultures. Research on the health benefits of ginger is simply staggering in its depth and breadth. In fact, the **health benefits of ginger** have been studied extensively for over 100 health conditions or symptoms, making it one of the world's most versatile, evidence-based remedies.

The biomedical literature on **acid blockers**, on the other hand, is rife with examples of the many adverse health effects that come with blocking stomach acid production with xenobiotic, patented drugs, i.e. **proton pump inhibitors** and **H2 antagonists**. What started out as "heartburn" – which in its chronic form is now called "acid reflux" or "gastroesophageal reflux disorder" – soon becomes stomach acid barrier dysfunction, when these drugs *remove* the acid which protects us from infection, helps to break down food, and facilitate the absorption of minerals and nutrients.

The list of 30+ harms is extensive, but here are a few of the most well-established adverse effects you may not be aware of:

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- Clostridium Infections
- Diarrhea
- Pneumonia
- Bone Fractures
- Gastric Lesions and Cancer

Back to our friend – our "plant ally" – ginger. What happens when Pharma meets Farm in a biomedical face-off? When acid-blocking drugs are compared in efficacy to our little spicy ginger root? Well, this is what the journal *Molecular Research and Food Nutrition* found back in 2007 ...

Titled, "Inhibition of gastric H+, K+-ATPase and Helicobacter pylori growth by phenolic antioxidants of Zingiber officinale," the study set out to determine the anti-ulcer and anti-Helicobacter plyori (a bacteria commonly implicated in ulcer formation) capacity of ginger extracts versus conventional acid-blocking agents, such as lansoprazole (trade name Prevacid).[i] Researchers found that one fraction of ginger exhibited six- to eight-fold better potency over lansoprazole at inhibiting acid production (specifically, gastric cell proton potassium ATPase activity).

But, this was not all. Ginger was also found to have potent antioxidant properties, protecting both lipids from peroxidation (rancidity) and DNA damage, leading the researchers to conclude that specific fractions within ginger have "potential in-expensive multistep blockers against ulcer."

Also, whereas drugs which interfere and/or remove the stomach acid barrier also deactivate acid-dependent protein-digesting (proteolytic enzymes) such as pancreatic protease, and increases the risk of infection as a result of the loss of the anti-infective effects of the stomach's acid, ginger actually has *an exactly opposite set of benefits*: it contains a proteolytic enzyme several hundred times more potent than the one found in papaya (papain) and has broad-spectrum **antibacterial**, **antiviral** and **antiparasitic properties**, to name but only a few of its 40+ distinct pharmacological actions.

While this study focused on specific isolates of the whole ginger plant, it must be remembered that whole plants are not drugs, nor should be reduced to "nutraceutical" magic-bullets in order to become new palliative drug alternatives, which is to say, *symptom-repressors*, leaving the real healing job of changing the underlying nutritional, environmental, emotional context to lead to the problem in the first place, unchanged.

While taking a ginger pill is usually a better choice than a chemical one, for most folks, ginger should be consumed in whole forms, in moderate and balanced quantities, along with a nourishing, organic, whole-food and traditional foods diet, in order to move beyond the paradigm of popping pills, or proprietary fractions of herbs in order to balance out the pendulum of extremes.

Either way, I think its time with awaken from the sorcery-like spell of **pharmacia** (Greek word meaning: drug, potion, charm, spell, poison), and realize everything we already need is likely in our backyard, our refrigerators or cupboards – if not altogether within ourselves.

Additional Relevant Research:
Acid Reflux
Water Extinguishes Stomach Acid 175x Faster Than Some Drugs

[i] Mugur N Siddaraju, Shylaja M Dharmesh Inhibition of gastric H+, K+-ATPase and Helicobacter pylori growth by phenolic antioxidants of Zingiber officinale. Mol Nutr Food Res. 2007 Mar;51(3):324-32. PMID: 17295419

http://www.greenmedinfo.com/blog/can-ginger-beat-out-multi-billion-dollar-acid-blockers

Out of Africa -- Bacteria, As Well: Homo sapiens and H. Pylori jointly spread Across the Globe

ScienceDaily (Feb. 16, 2007) — When man made his way out of Africa some 60,000 years ago to populate the world, he was not alone: He was accompanied by the bacterium Helicobacter pylori, which causes gastritis in many people today. Together, man and the bacterium spread throughout the entire world. This is the conclusion reached by an international team of scientists led by Mark Achtman from the Max Planck Institute for Infection Biology in Berlin, Germany. The researchers also discovered that differences developed in the genetic makeup of the bacteria populations, just as it did in that of the various peoples of the world. This has also given scientists new insight into the paths taken by man as he journeyed across the Earth (Nature online, February 7, 2007).

More than half of all human beings are infected with Helicobacter pylori, a bacterium that can cause stomach

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ulcers. Like humans, the bacteria are also split up into numerous regional populations. A team of scientists led by Mark Achtman at the Max Planck Institute for Infection Biology, François Balloux at the University of Cambridge and Sebastian Suerbaum at Hanover Medical University have found signs of the parallel evolution of man and H. pylori. Using mathematical simulations, the researchers demonstrated that H. pylori must have left East Africa at the same time as man - around 60,000 years ago. This astonishing conformity was uncovered by scientists when they compared the nucleotide sequencing patterns in the DNA of human and H. pylori populations.

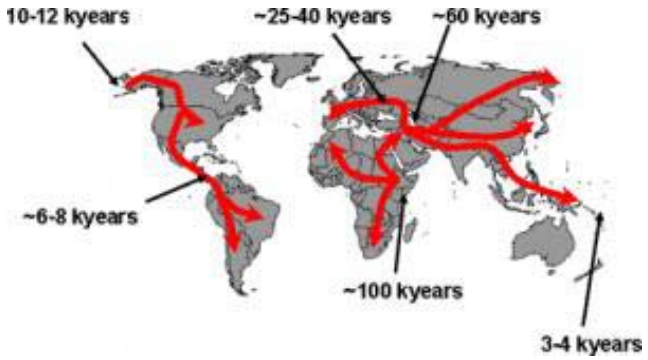
In order to characterise the individual populations, the scientists employed the principle of isolation by distance. According to this principle, the genetic distance between two populations has a linear correlation with the length of the migration paths taken since they were separated. "It's actually quite logical," explains Dr. Mark Achtman, "because in the time that elapses after a population leaves its point of origin, the number of mutations in its genetic makeup continually increases."

However, while man was spreading throughout the world, human populations had to repeatedly pass through what scientists call genetic bottlenecks: when a population shrinks, the gene pool also becomes smaller. These losses in genetic diversity linger, even when the population starts once again to increase in number. Since the Homo sapiens populations usually had to pass through several genetic bottlenecks on their way across the globe, their genetic diversity declined the further they journeyed from their origin in East Africa.

Scientists have now uncovered similar signs of historical population migration in the genetic makeup of H. pylori. However, the genetic diversity of the bacteria is larger than that of man. This paves the way for researchers to use H. pylori data to work out the migratory movements of modern man. "The parallels between the spread of man and of H. pylori are truly astonishing," says Achtman. "This bacterium could help us attain further information on aspects of human history that are still hotly disputed today if we analyzed H. pylori in conjunction with human data."

For example, after leaving East Africa, the H. pylori population spread through limited localities in southern Africa, West Africa, Northeast Africa, India and East Asia.

The genes of bacteria isolated in Europe, for instance, reveal influences from Central Asia - an indication that human immigrants came to Europe from Asia.



The migration paths taken by modern man as he colonized the world. 60,000 years ago, Homo sapiens left his original home in East Africa - taking the bacterium Helicobacter pylori with him. The abbreviation kyears stands for thousand years. (Image: Max Planck Institute for Infection Biology) Max-Planck-Gesellschaft (2007, February 16). Out Of Africa -- Bacteria, As Well: Homo Sapiens And H. Pylori Jointly Spread Across

http://www.sciencedaily.com/releases/2007/02/070215134529.htm

Helicobacter Pylori Infection - Causes, Symptoms and Treatment

What is Helicobacter Pylori Infection?

Manifesting as either an acute or chronic illness, *Helicobacter pylori* is an infectious disease responsible for more than 90% of duodenal ulcers and 80% of gastric ulcers. It is also responsible for atrophic gastritis and infected persons have a 2- to 6-fold increase in their risk of developing gastric cancer and mucosal-associated-lymphoid-type (MALT) lymphoma. *H. pylori* is probably the most chronic infection in human beings; approximately two-thirds of the world's population is infected with the bacterium. In the United States, it is estimated that 10% of Americans suffer from peptic ulcer disease (PUD). *H. pylori* is most prevalent among older adults, African Americans, Hispanics, and lower socioeconomic groups. Incidence occurs earlier and at increased rates in developing countries; however, prevalence of infection is probably decreasing in developed countries.

What are the Causes of Helicobacter Pylori Infection?

H. pylori is a gram-negative, spiral microaerophilic bacterium that occurs in the gastric mucus layer or the

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African Traditional Herbal Research Clinic

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FEATURED ARTICLES

Diabetes: From Ancient Egypt to Modern Pandemic

By Stephen Daniells
18 July 2011

It has been called a pandemic and a silent killer: Diabetes is a growing specter for public health agencies across the world. In the first part of our special series on diabetes, NutraIngredients examines the underlying condition and gets a grip on how big the issue is.

History

Diabetes is not a new disease, being first documented in 1550BC in Egypt. Back then diabetes, or what the historians believe was diabetes, was described as a rare disease. According to an exhibition on diabetes and endocrinology by the Royal College of Physicians of Edinburgh (Scotland), an Egyptian manuscript mentions *"the passing of too much urine"*, which historians take as the first reference to diabetes.

We had to wait a further 1600 years for a complete clinical description and name for the condition, when the Greek physician Aretaeus used the word diabetes (from the Greek meaning 'siphon') and noted *"the excessive amount of urine which passed through the kidneys"*.

The condition may have been rare 3,500 years ago, but it is not anymore.

According to the World Health Organisation (WHO), diabetes affects over 220 million people globally and the consequences of high blood sugar kill 3.4 million every year. If such statistics weren't scary enough, the WHO is predicting deaths to double between 2005 and 2030.

The total costs associated with the condition in the US alone are thought to be as much as $174 billion, with $116 billion being direct costs from medication, according to 2005-2007 American Diabetes Association figures.

Types

The condition exists in various types, most notably type-1, type-2, and gestational. All types are characterized by excessive levels of glucose in the blood because the pancreas does not produce enough or any insulin, a hormone that facilitates the uptake of glucose by the cells.

It may also be that the insulin does not function adequately, a condition known as insulin resistance.

Type-1 diabetes occurs when people are not able to produce any insulin after the cells in the pancreas have been damaged, thought to be an autoimmune response.

The disease is most common among people of European descent, with around two million Europeans and North Americans affected.

The development of high blood sugar levels during pregnancy, called gestational diabetes, is known to boost a woman's risk of subsequently developing type-2 diabetes, as well as putting the offspring at increased risk of childhood obesity and diabetes as they get older.

Type-2 diabetes – which reportedly accounts for at least 90 percent of cases – traditionally occurs in people over 40, a statistic that is changing:

A recent article in *The Lancet* by scientists from Australia, Denmark, and Canada noted that:

"Until 1990, type-2 diabetes was seldom seen in young people and inpregnant women, but this is no longer the case.

"In some countries type 2 diabetes is still rare in children and adolescents, for instance in Germany, where prevalence is 2.3 per 100 000 in people aged 0-20 years. The incidence of type-2 diabetes in young people has, however, become greater than that of type-1 diabetes in some ethnic groups, as seen in the USA (12.1 vs 7.4 per 100

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000 in Asians and Pacific Islanders aged under 20 years, and 19.0 vs 15.7 per 100 000 in African Americans aged 0-19 years).

"In young people type-2 diabetes associated with obesity frequently remains undiagnosed and is difficult to manage". (July 2011, Vol. 378, Pages 169-181)

How to stop it

Diet and exercise are seen as key to the prevention of developing type-2 diabetes. The WHO states simply: *"Healthy diet, regular physical activity, maintaining a normal body weight and avoiding tobacco use can prevent or delay the onset of type-2 diabetes"*.

Studies have indicated that specific nutrients may offer benefits for people at risk of diabetes, or already living with the condition. To date, the most widely reported nutrients include chromium, magnesium, calcium, potassium, vitamin B3, and antioxidants such as vitamin C, E and selenium.

Oxidative stress has been reported to be a key driver in the onset of insulin resistance, while diabetes itself is associated with increased levels of oxidative stress, and this can promote the development of diabetes-related complications (*Journal of Biochemical and Molecular Toxicology*, 2003, Vol. 17, pp. 24-38).

There is also some evidence on the importance of vitamin D to reduce the risk of diabetes. For example, a study published in *Maturitas* (2010, Vol. 65, pp. 225-236) suggested that the highest blood levels of the vitamin were associated with a 55 per cent reduction in the risk of type 2 diabetes , with researchers pointing out that the potential mechanism is not fully understood.

Another interesting area of research concerns coffee: A meta-analysis published in the *Archives of Internal Medicine* in 2009 concluded that consumption of three to four coffee may reduce the risk of developing diabetes by 25 per cent. The potential bioactive compounds in the beverage responsible for the reported benefits may include magnesium, antioxidant lignans or chlorogenic acids.

The Glycemic Index (GI) is also highlighted as a means of controlling blood sugar levels, since slow release carbohydrates – those with a low GI – may help balance blood sugar levels.

Commenting on supplements versus foods, the American Diabetes Association states: *"There isn't research that clearly points to supplementation, so always think first about getting your nutrients from foods"*.

Gut feeling

There has also been a proposed microbial element to diabetes. Preliminary data from Denmark indicated that bacterial populations in the gut of diabetics differ from non-diabetics.

The study, reportedly the first to look at intestinal microbiota in humans with and without type-2 diabetes, was published in the open-access peer-reviewed journal PLoS ONE.

"Our data suggest that the levels of glucose tolerance or severity of diabetes should be considered while linking microbiota with obesity and other metabolic diseases in humans," wrote researchers from the University of Copenhagen.

"It is especially important for developing the strategies to modify the gut microbiota in order to control metabolic diseases, since obesity and diabetes might be associated with different bacterial populations," they added.

http://www.nutraingredients.com/Consumer-Trends/Diabetes-From-ancient-Egypt-to-modern-pandemic

Nigeria: 'Diabetes Prevalence Higher in Blacks'

By Winifred Ogbebo

5 March 2012

Leadership
Interview

Diabetes as you know does not really have a cure, not at this time. It's a lifelong disease. But the good thing about it is that if it's managed well, one can live a normal life. But if it's not, it has a lot of complications that can lead to death. This summation was given by Dr Sunny Ekwunife, a Consultant Physician (Family Health/ General Medicine) at Cedar Crest Hospital, Abuja, in this interview with WINIFRED OGBEBO

How do you manage diabetes?

Management is a multi -approach. First of all, if you know why you have diabetes, for example, there are different types of it if you know the type you have, you will either control it by exercise, weight loss, taking care of the kind of food you eat and then if it Type 1 diabetes or Insulin dependent diabetes, you have to use the Insulin daily, Type -2 is usually controlled by drugs. The most important thing is, in addition to your drugs, you must watch your weight, you must watch

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what you eat and you must exercise. Those are the things that can keep diabetes under control in addition to the medication.

Do slim people have diabetes?
Oh sure. There are different types of diabetes. You have Type -1 or Insulin dependent diabetes which runs in the family. Usually, people get diabetes because they cannot make insulin or because their body cannot utilize the Insulin they make or both of them. So those that cannot make insulin usually are Insulin dependent. That means they have to prime them to give them insulin. That's why its called insulin-dependent diabetes. This occurs in a lot of young children but it can occur in anybody- young teenagers, young adults and so on. That's why its called Type-1. You have Type -2 which is the major class of diabetes. It can occur in older adults and also it's becoming a little more rampant-that is, more common even among young people because of obesity. A lot of people are getting so fat now and that's the reason why a lot of people can get it now even though it usually occurs in people older or older adults. Now, anybody can get it because of obesity. That means if you watch your weight especially and watch what you eat, you can control adult onset diabetes, known as Type-2 diabetes.

In slim people, what happens is that it may be hereditary. So what you do is to make sure if your mum, dad, siblings, grand-mum, grand -dad on either side has diabetes, you must monitor or check for this at an early age. For example, it runs in my family. I am diabetic. But I do a lot of exercise and I take my pill. I also check my sugar once every day or every other day. The key for me is to watch what I eat, exercise, maintain my weight and take my pills. A lot of people don't believe I am diabetic. Mine was adult onset after the age of 45 and above, I started having the manifestations.

Importance of Insulin to life
Usually, anytime we eat food, the food gets digested and eventually the body turns it into sugar- glucose that is in the blood. Remember we have different parts of the body called tissue, so how does this sugar go to all these parts? Because glucose is the only way our body can utilize as energy so what happens is that it is made by a tissue called Pancreas which is utilized by our bodies to carry those sugars from the blood to different parts of the body especially the brain. Without the energy of glucose supplied to the brain, we cannot function with our muscles, our liver cells, and any part of the body without that energy. That's why it's so function with our muscles, our liver cells, and any part of the body without that energy. That's why it's so critical that if we don't make the insulin, we now have a lot of sugar in our blood and that's why we have diabetes.

What are the complications from diabetes?
We have what is called the short term complications and long term complications.

Firstly, if they don't have the insulin to break down the sugar, what happens is that it's now back in the blood and you now have what is called hyperglycemia, that means too much sugar in your blood. You feel thirsty a lot, confused. Sometimes you feel you are in heaven when you're not. That means hallucinating. You pass out even without expecting it, and some people have seizures and some things like that.

Now, that is a very easy thing to manage once you know that the person is diabetic and this can happen. Once he comes to the hospital, it's something that is an emergency. You give him a lot of fluids because the person gets dry. What the sugar does once you have a lot of sugar is that it tends to dry up the person and you have to give the person a lot of fluid, and of course, insulin. So this is one aspect of what you call too much sugar. You also have what is called diabetic ketoacidosis .This occurs lots more in very young people. What happens is that when you remember that for you to be diabetic especially Type- 1, remember you don't make enough insulin and when you don't make enough Insulin, you know what happens. You cannot break down the food to sugar and you know the body is built in a unique way. When you are fasting, running or excited, the body develops adrenaline and if it recognizes that it does not have enough sugar, it starts breaking down its own self- muscles, liver cells to make that glucose. Once that happens, it makes some glucose but at the same time, it makes what is called fatty cells, fatty acids which can also be broken down into ketones. And that's when you get ketones acid in the urine and that's why it's called ketone diabetic. It still presents with the same complications, frequent urine, confusion and sometimes you get a kind of odour in the mouth due to tketones. The most important thing is that when you test the urine of that person, you see ketones in it. They also undergo the same kind of treatment by giving them lots of fluid and a little bit of insulin. When that happens, your potassium and sodium might go down because of hydration. So you have to put them back again by supplement.

Long term complications of diabetes
If you don't control diabetes, it can lead to kidney failure. People can be on kidney transplant or dialysis, and heart attack. Worst of all, for most men, it can affect sexual performance. Diabetes causes nerve damage and

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when that happens, the nerve that supplies blood to the penis and other areas can no longer do so. It also happens to women but more of that in men because of our disposition. It's so critical that sometimes it leads to blindness, stroke, and heart attack. Some diabetics have their legs amputated because diabetes cuts off blood circulation to their legs and they lose sensitivity. They don't feel anything when they step on a nail or any sharp object though they get easily injured because of the nerve that is damaged which can no longer carry blood vessels or glucose to that area to tidy up infection. That's why a diabetic patient should never walk without slippers or shoes. He should check his foot and eyes once every year or two. He must control his blood pressure if he has any and his cholesterol, it's very important.

Is diabetes prevalence higher in blacks?

To an extent, yes. The reasons are, first of all, it's genetically motivated. Secondly, the diet. Remember if you don't watch what you eat, avoid a lot of carbohydrates and if you don't exercise, you are prone to it. The Type -2 especially, which is the majority of diabetes, usually, it's adult onset, meaning that it comes out at an older stage . But a lot of teenagers get it now because of obesity. If you are big or fat, you have a tendency to have diabetes, and not only that, high blood pressure, stroke and cancer. All these things are tied to your weight. Your weight can affect them a lot. So weight is so critical to preventing a lot of diseases. As a matter of fact, what I tell my patients is that if you lose weight, everything comes down but if you add weight, everything goes up. You may not need any medication but if you're obese, you have a more chance of Type -2. Now, you start testing for Type -2 diabetes in overweight kids, 10 years and older for every two to three years and adults that are 40 years or above, whom has a family history. It may not have a cure but you can control it and live a normal life.

http://allafrica.com/stories/201203050406.html

Soy and Soy Products linked to Type-1 Diabetes and Erectile Dysfunction

By Shona Botes

April 20, 2011

(NaturalNews) Over the past few years, soy has been hailed as a miracle health food. Unfortunately, the complete opposite is true. Soy has been linked to a myriad of health conditions such as infantile leukaemia, various forms of cancer, type-1 diabetes, malnutrition, thyroid dysfunction and even erectile dysfunction.

Research has shown that babies who have been fed soy-based formulas were at higher risk for developing type-1 diabetes and thyroid disease later in life. Soy-based formulas also contain up to 1000 times more aluminium than non soy-based formulas.

Soy contains a large amount of anti-nutrients (otherwise known as toxins). One of these is what is referred to as enzyme inhibitors. Enzyme inhibitors block the action of the enzymes which are required to digest proteins. Even cooking the soy at high temperatures does not break down these inhibitors. As a result, consuming soy and soy products can lead to conditions such as reduced protein digestion, excessive bloating, a deficiency of essential amino acids, abnormal thyroid functions, a higher risk of breast cancer in women who have had ovaries removed and abnormal blood clotting. Mineral deficiencies of calcium, magnesium, copper and zinc have also been reported.

Soy isoflavones are another form of soy product which is found in almost all so-called diet products like protein shakes and 'health bars.' People who are trying to fall pregnant, those who have difficulty urinating under normal circumstances, breastfeeding moms, those with kidney problems and prostate cancer and anyone suffering from peanut allergies should avoid this ingredient.

The consumption of soy products is especially harmful for men as it has been known to cause them to form breasts, and it is also reported to lower or even destroy their sex drive. Studies also showed that it causes men to lose arm, chest and leg hair.

The amount of oestrogen contained in 100 grams of soy protein is equivalent to that of one high-dose birth control pill. In women, this can be responsible for the onset of early menopause, hot flushes, PMS and many other hormone-related issues.

Soy contains a high number of phytoestrogens. These are an oestrogen-like chemical which is produced by plants. A study estimated that babies who are being fed a soy-based formula are being fed the equivalent of around five birth control pills worth of oestrogen every day. This amount of oestrogen is thought to be responsible for the increased amount of learning disabilities and cases of ADD/ADHD. It is also thought to be

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responsible for the fact that girls are now going through puberty from as young as eight or nine years old.

That being said, the only safe forms of soy to consume are those which have been properly fermented, such as Japanese natto and properly prepared Chinese tofu.

http://www.naturalnews.com/032141_soy_products_diabetes.html

Anti-Diabetes Drugs May Cause Diabetes

By D. Holt

March 08, 2012

(NaturalNews) Statin drugs are prescribed to lower cholesterol in the UK for obese patients, and also to those who have type-2 diabetes. But according to the Food and Drug Administration in the USA there is a risk of developing diabetes if you take statins -- so much so that the FDA has demanded that warnings of the risk of the development of diabetes on put the labels of statin drugs distributed within the US. In the UK, however,there has been a reluctance to include a labelling policy as it would cause patients to be adverse to their treatment.

Do statin drugs cause diabetes?

The link is a 'statistical' one; there is an increased risk of being affected by the risk of diabetes if you take the medicine. However, the link between the medicine and the side effect is severe enough for the FDA to act, which is a factor that the UK government seems to disregard. Other cases of this disregard for the research of other nations includes the banning of all except eight artificial food colors in the USA and other nations, whereas the UK still allows several of these banned colors to remain on the market.

Yet again, the medical establishment seems to think the way forward is treating a condition with a drug that has the side effect of causing the same problem it is treating.

Diabetes is a serious disease that can be prevented with education about good nutrition and exercise; however, there is no profit in this and therefore we have to tolerate the pushing of drugs to control this affliction.

The same can be said for depressionthat is treated with antipsychotic drugs which can cause depression and carry a suicide risk. A simple way to avoid depression is good diet, meditation and an outlook on life that embraces celebration of achievements no matter how small, the treatment of problems as opportunities for improve-ment, and conflict as a means to communicate and build relationships.

Natural living is the answer

Diabetes, cancer, stress, depression, addiction and obesity are diseases of the modern Western world caused by a lifestyle of unnatural living both in diet and approach. Whilst we harm the environment and each other in the pursuit of profit and material gain, we lose sight of the things that are important to us and our loved ones. Also, whilst we tread upon the earth we should understand the need for balance at all costs and the effect of disturbing this balance. If we eat an unhealthy fatty and sugary diet, we will harm ourselves and cause diabetes, obesity and other illnesses requiring expensive drugs that in turn mean more harm is done. On the other hand, a balanced lifestyle means we are much more statistically probable to not endure the issues and afflictions connected to the Western diet.

It is the way of the corporate world to suck us in by promising great taste and a world akin to the cottage in the story of Hansel and Gretel. However, it is also "natural law" that there is cause and effect; to reduce need for these drugs, all adults must take responsibility for what they put in their mouths, even if it is only to reduce the profits of the greedy corporate machine.

http://www.naturalnews.com/035183_statin_drugs_diabetes_warnings.html

Is There a Link Between Soft Drinks & Pancreatic Cancer?

By Bonnie Vanaman

Jun 20, 2011

There were 9.4 billion cases of carbonated soft drinks sold in the United States in 2009, according to "Beverage Digest," and the National Cancer Institute reported 43,140 new cases and 36,800 deaths from pancreatic cancer in 2010. What many researchers have been trying to determine is if there is a link between all that soft drink consumption and pancreatic cancer.

Although study results are inconclusive, there are other reasons your pancreas would be a lot happier if you swapped your next can of soda for water or juice.

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Identification

The pancreas is an organ in your abdomen behind the lower part of the stomach that produces enzymes to help digest food and hormones to help regulate sugar metabolism. It's not clear what causes cells in your pancreas to develop genetic mutations that lead to cancer, but pancreatic cancer has a high mortality rate because it typically doesn't present any symptoms until it's already in the advanced stages. When symptoms do occur, they may include upper abdominal pain that radiates to your back, dark urine, pale stools that float, yellowed skin and eyes from jaundice, loss of appetite, weight loss, nausea, vomiting, weakness and depression.

A Positive Link

Research into the link between pancreatic cancer and soft drinks is strongly mixed. One study that did find an increased risk of the cancer among soda drinkers involved 60,524 adults in the Singapore Chinese Health Study over 14 years. The results, published in "Cancer Epidemiology, Biomarkers and Prevention" in February 2010, found that Individuals who consumed two or more soft drinks per week increased their risk of developing pancreatic cancer by nearly two-fold compared with those who didn't consume soft drinks. A second multi-year study among 77,797 women and men in Sweden, reported in 2006 in the "American Journal of Clinical Nutrition," found that consumption of sugar-containing soft drinks was also positively associated with the risk of pancreatic cancer.

Negative Results

On the other hand, Italian researchers investigated 326 pancreatic cancer cases and 652 matched controls between 1991 and 2008 who were involved in several different studies in Italy and other countries. The findings were published in "Cancer Causes & Control" in January 2011 and concluded that the risks of developing pancreatic cancer was no different among people who drank sodas and those who didn't.

The Obesity Factor

Obesity and type 2 diabetes appear to be linked to an increased risk for cancer of the pancreas, perhaps due to an abnormal glucose tolerance. The Nurses' Health Study, which followed 90,000 women for eight years, found that nurses who had one or more servings a day of a sugar-sweetened soft drink were twice as likely to have developed type 2 diabetes during the study than those who rarely consumed them.

But it's not just sugary sodas that may cause problems. Researchers have also found a link between drinking diet sodas and metabolic syndrome, a collection of risk factors for heart disease and diabetes that includes abdominal obesity. A research team from the University of Minnesota reported in the journal "Circulation" in 2008 that the risk of developing metabolic syndrome was 34 percent greater among subjects who drank one can of diet soda a day compared with those who didn't drink any.

http://www.livestrong.com/article/475194-is-there-a-link-between-soft-drinks-pancreatic-cancer/

Cancer: Utilizing the Doctor Within

"My people are destroyed for lack of knowledge." Hosea 4:6

By Mauris L. Emeka

January 2010

What most of us learn during our lifetime about cancer is not the truth; and because of our misperception, we erroneously assume cancer to be something that it is not. All too many people think that cancer is the presence of a malignant tumor, and that if the tumor(s) can be removed either surgically, or with chemicals then the body is said to be "cancer free". This incomplete understanding is a big part of why cancer is fast becoming the number one cause of death. People die from this disease for three main reasons: 1.) lack of information, 2.) lack of discipline, and 3.) blind trust in their cancer doctors. Unfortunately, not many cancer patients play an active role in their own recovery. They do not take responsibility for their condition by redirecting their lives, and fundamentally changing the way they nourish themselves. Instead, they say to the doctor, 'you fix it'. The doctor proceeds to try and 'fix it' by focusing almost exclusively on the tumor *symptom*, while ignoring the underlying condition in the body that caused the symptom to appear.

The malignant tumor symptom that's commonly called cancer is NOT cancer. Cancer is actually the underlying *process* that gives rise to the tumor symptom, and the tumor is merely an indication that a metabolic process within the body has gone wrong. We know, for instance, that smoke rises from fire. But the smoke is not the fire, it is an indication or *symptom* of the fire. Instead of focusing only on locating and treating the symptom of cancer, a better use of our time would be to create an environment in the body that supports health instead of supporting cancerous activity that produces tumor symptoms.

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The good news is that it is within our power to address the underlying malfunctioning *process;* each of us can do it if we have the right commitment to dietary and lifestyle changes. No one else can do it for us! The idea is to change the chemistry in the body to make it less conducive for the cancerous *process* to thrive. That change involves three main things: 1.) making the body chemistry less acidic and more alkaline, 2.) introducing more digestive enzymes (especially enzymes that digest protein) and more oxygen at the cellular level, and 3.) detoxifying the body and strengthening the immune system.

The three things just mentioned can go a long ways toward enhancing the body's innate healing power, enough to suppress the cancerous *process* and cause the 'doctor' who resides inside the body to go to work. For example, nearly all raw fruits, vegetables create a more alkaline and less acidic chemistry. On the other hand, cancer cells thrive in an acidic environment, and they CANNOT thrive in an alkaline environment. A preponderance of cooked food makes the body chemistry more acidic, so does all animal products and grains.

For reasons too extensive to detail in this article, it is vital to note that a whole food plant-based diet is best for preventing and overcoming cancer in its various forms. Certain raw fruits, vegetables, and nuts are particularly beneficial, as they introduce beneficial digestive enzymes into the body. Chlorophyll rich leafy vegetables facilitate oxygen circulation at the cellular level, and oxygen suppresses cancer cell growth while enhancing healthy cells. Dr. Otto Warburg, a German scientist, won a Nobel Prize in the early 1940s for discovering that cancer cells thrive on a process called fermentation, which requires simple sugars and no oxygen.

A few especially strong cancer fighting foods include collard greens, wheat grass, garlic, aloe vera, papaya and papaya seeds, pineapple, millet, apricot kernels, blackberries, raspberries, lima beans, and curcumin spice. These foods are especially useful in normalizing the acid/alkaline balance by making body chemistry less acidic. In addition, they increase the flow of oxygen at the cellular level, and introduce critically needed fiber into the body. It is seldom noted, but in fact, the fiber in foods binds with and removes cancer promoting harmones. On the other hand, animal products and refined foods have no fiber, and they promote a cancer friendly acidic environment. An 1882 article in *Scientific American* begins with the following words: "Cancer is more frequent among branches of the human race where carnivorous habits prevail."

Last but not least, a strong immune system is our first line of defense against cancer. Unfortunately, our immune system is often ineffective because of lifestyle choices that we make. Here are some things that compromise and depress the immune system: consumption of polyunsaturated oils and partially hydrogenated oils (they make digestion difficult),chemotherapy, stress, and inadequate sunlight, dehydration, and lack of rest and regular exercise. The natural approach to cancer is based on making the body healthier by reversing the conditions that allow cancer to thrive. As is noted here, it is vital to strengthen the immune system, and change the internal environment so that cancer cells are simply not welcomed.

Essentially, cancer is a clarion call to drastically change the way the body is nourished to make it more enzyme rich, oxygen rich and less acidic in its chemistry. Those who heed that call can overcome this dreaded disease.

"Each patient carries his own doctor inside him. They come to us not knowing that truth. We are at our best when we give the doctor who resides in each patient a chance to go to work." ---Dr. Albert Schweitzer

"And God said, Behold, I have given you every herb bearing seed which is upon the face of all the earth, and every tree in which is the fruit of a tree yielding seed; to you it shall be for meat." --- Genesis 1:29

Mauris Emeka currently resides in Oberlin, Ohio. He is the author of "Cancer's Best Medicine", second edition, copyright 2008, and "Fear Cancer No More", copyright 2002. His website is: www.cancernomore.com

http://www.blackherbals.com/cancer_utilizing_the_doctor_within.htm

Bowel Cancer 'could be fuelled by E coli Stomach Bug'

Two-thirds of the 21 samples taken from bowel cancer patients contained the bug, compared to just one in five of those taken from healthy people

By Fiona Macrae

20 August 2012

One of Britain's most common cancers could be fuelled by the E coli stomach bug, scientists believe.

The breakthrough raises the prospect of a vaccine against bowel cancer, which claims 16,000 lives a year and is the second most common form of the disease in women after

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African Traditional Herbal Research Clinic

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FEATURED ARTICLES

Infectious Diabetes and Obesity - A New Genetically Engineered Plague?

By Sydney Ross Singer
October 24, 2007

The following vital information is, frankly, frightening; as it means that we have entered into a new world of disease never before imagined. This is not a conspiracy theory. When you read what follows, you will understand why this issue may already be known by a select few, but kept from the public domain.

The issue has to deal with obesity and type 2 diabetes. Over the last several decades, obesity and diabetes have become epidemic. Children, adults, poor people, wealthy people, Americans, Africans - all over the world people are becoming obese and developing diabetes. We are concerned that the current epidemic of obesity and diabetes may be caused by a new problem, never before considered because it never before existed.

Of course, when you think of the cultural/lifestyle causes of obesity and diabetes, the answer quickly comes that these people need to eat less and exercise more. Our lifestyles have become sedentary, and people have become more spectators, and less doers. And catering to this "market" is a large supply of dietary products, weight loss methods, and pharmaceuticals, like insulin.

It is this insulin that plays a key role in the new crisis.

Insulin, of course, is a hormone. It is active in very minute concentrations. All hormones are chemical messengers and facilitators that allow our body's organs to keep integrated and modulated as they perform their vital functions. Insulin is a very important hormone, responsible for getting sugar (glucose) from the bloodstream absorbed by the cells, which need the sugar for energy. The cells have receptors for insulin on their cell membranes, which act as "locks" for which the insulin is the "key", turning on the cell to take up the life-supporting sugar.

Without the effect of insulin, the cells would not be able to drink up the sugar from the bloodstream, and would starve. The blood "spills" the sugar out in the kidneys, and into the urine. This condition of reduced insulin activity and sugar in the urine is called diabetes.

Type 1 diabetes is a rarer form of the disease, in which the pancreas, the organ that manufacturers and releases insulin into the bloodstream, reduces or stops its insulin production. These people can die without insulin being provided in drug form. Type 2 diabetes constitutes 90% of diabetes cases, and is typically associated with overeating and obesity. It is often cured by dietary and other lifestyle changes.

However, not all people recover. There are also other conditions that can lead to obesity and diabetes. One is having too much insulin. If you have too much insulin in your bloodstream, it will cause your cells to take up so much sugar that it lowers your blood sugar level, a condition called hypoglycemia. This makes you hungry, so you would eat more to raise you sugar level back up. But the high insulin quickly sends that new sugar into the cells for storage as well, along with water to help keep the sugar in solution. This makes the cells swell, as well as make fat cells convert the sugar into more fat, ultimately leading to obesity. Since the cells also become less sensitive to insulin because of the high levels, it also causes diabetes.

Hyperinsulinemia, then, causes obesity and diabetes. This condition is also epidemic, and parallels the current diabetes and obesity trends. More and more people are developing these problems every day, at an alarming rate. It is as though diabetes and obesity were contagious, spreading from person to person, like some germ plague.

Actually, this is what we are afraid may be happening!

It has to do with genetic engineering, and the production of human insulin in certain species of bacteria and yeast.

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There was a time when diabetics needing insulin would receive insulin from a pig's pancreas. As you can imagine, taking injections of pig insulin could lead to allergic reactions. Far better, some thought, to have human insulin to give to humans. But there was simply no source of human insulin. Until genetic engineers found a way!

Insulin is a protein, even though it is a hormone. Some hormones are steroids, like estrogen and testosterone. These are produced in the cells by a metabolic process that starts with cholesterol and, through a series of enzymatic reactions, produces the final steroid hormone. Other hormones are proteins, directly coded for in the DNA of the cell's genes. Other protein hormones are growth hormone, and glucagon.

We all have genes that code for these protein hormones. Genetic engineers have been able to find these genes, and cleanly cut them out of the section of DNA in which they are normally located. They took the human gene for insulin and placed it into the DNA chain of a bacterium. This makes the bacterium "part human", so to speak, in that the bacterium now makes human insulin. All you have to do is extract the insulin from the bacterium, and you have a relatively inexpensive source of human insulin.

The idea is simple to state, but it took science decades to develop this technology of splicing genetic information from one organism and putting it into another organism - of another species! The possibilities are endless. But like all technology, there is also a cost. Every new invention that changes the world has its advantages and disadvantages, its rewards and its risks, its successes and its failures.

The bacterium chosen to be the recipient of this human gene is the commonly found, and well studied, E. coli. Our intestines team with trillions of E. coli bacteria. Some E. coli strains cause disease, and are the leading cause of food poisoning. Most are benign, and are our constant intestinal companions. Why use this particular bacterium for genetic engineering? It has to do with its genetic make-up, and the ease with which E. coli DNA can be manipulated, even with foreign DNA.

The company that developed genetically engineered E. coli that makes human insulin was Genentech. They did this in 1978. Eli Lilly, another drug company, purchased the license for this process, and is now the producer of human insulin from E. coli.

Besides E. coli, scientists have also done a great deal of genetic research and manipulation with another micro-organism - Saccharomyces cerevisiae, also known as Baker's yeast. That's right, the same yeast used to make bread, wine, beer, and other foods. It wasn't long after Genentech's E. coli success that another company, Novonordisk, developed a Baker's yeast engineered to produce human insulin. Both these GMO's - the E. coli and Baker's yeast that both produce human insulin - are now virtually the only sources of insulin for diabetics. Animal insulin manufacturers can not compete with this cheap, genetically engineered human insulin supply.

It may sound like a good idea to have all this genetically engineered insulin cheaply available, given the epidemic of obesity and diabetes. But what is the price of having these GMO's making human insulin?

The price, we believe, is that these GMO's are causing the obesity and diabetes epidemics!

Just as with all new technology, there are accidents. Novonordisk reports several accidental spills of genetically modified, human-insulin producing Baker's yeast! For example, in one case in 2004, according to Novonordisk, "During the cleaning process, 10 litres of media containing GMO were discharged directly into the sewage system. Normally the media would be discharged into a tank. When the operator saw the accidental release, the discharge of the media was stopped and the sewage system was disinfected."

There have been other such incidents over the years. Eli Lilly admits to many dozens of "serious environmental events", in fact, 29 such events between 2003 and 2005.

The effect of these organisms on the environment is an experiment in the making. While these companies say their E. coli and Baker's yeast are too weak from laboratory conditions to survive and compete in the wild, the fact is that they don't really know what will happen until it actually does happen. It's all so new, that the impacts of a spill are still considered a mystery.

Obviously, the "Precautionary Principle" is not in effect here.

But if these GMO's did get out, the manufacturers assert, they are harmless to humans. Of course, since there are no published scientific studies of what happens when a human is infected with these GMO's, this is another optimistic assumption by these manufacturers. What would happen? One can make some educated guesses based on known medical knowledge. What would happen if you had bacteria and/or yeast in your intestines that were producing insulin?

Your intestinal fluid would be high in insulin, produced

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by the genetically modified microbes. Some of that insulin would be absorbed into the bloodstream. This would make your blood high in insulin, causing hyperinsulinemia. Over time, this would make you obese and diabetic, a known outcome of hyperinsulemia!

Since GMO's would be producing insulin in your intestines, your pancreas would reduce its insulin production, since more is not needed. This would eventually create dependence on the GMO insulin absorbed from your intestines. The level of GMO's in your intestines will rise and fall depending on your diet and intestinal health. Some times, if the level is high, the insulinemia would be higher. Other times, the GMO's can virtually disappear, causing a shortage of insulin, catching the pancreas by surprise, before it has time to reactivate its insulin production. It would be as though you were taking varying doses of insulin medication at erratic times. Your blood sugar and metabolism would be a mess. You would be obese, diagnosed as a diabetic, and ironically prescribed more insulin!

Are these GMO's as harmless as their manufacturers claim? We may just be starting to see just how harmful they can be.

It is not only insulin that is produced in E. coli and Baker's yeast. Human Growth Hormone is also manufactured this way. What would happen if GMO's making growth hormone colonized your intestines? Excessive growth hormone would be absorbed into your bloodstream, and over time this can lead to in excessive body growth, arthritis, carpel tunnel syndrome, excessive snoring from enlarged throat, impaired vision, headaches, fatigue, menstrual disorders, high blood pressure, and - diabetes!

Then there is the hormone glucagon, which has the opposite action as insulin. That is, this hormone raises blood sugar by making the cells give up their sugar stores. This hormone is also manufactured in genetically engineered E. coli and Baker's yeast. Having these GMO's in your intestines would also cause havoc to your blood sugar level and metabolism.

So here is the crisis. There are drug companies making human hormones in the most common bacterium that humans live with - E. coli - and in the yeast commonly used for our food supply - Baker's yeast. Both of these genetically modified microbes have entered the environment. These GMO's constitute a new threat to human health, as our intimate contact with them may lead to their colonization of the human intestinal flora.

Besides accidental releases of these GMO's there is the deliberate selling of old GE yeast to pig farmers. Once the yeast is used to make insulin, the yeast is heated to inactivate it, and the resulting slurry is sold for animal feed. However, yeast (and E. coli) are known to make very heat stable spores, which can theoretically survive the heating process. A few surviving spores out of trillions of yeast cells is statistically insignificant. But those spores can enter the environment and reproduce, and possibly enter the food chain and human (or animal) intestines.

Of course, before everyone gets alarmed that a new plague has come, there needs to be more research. If these GMOs have contaminated our environment and are causing diabetes and obesity, then it should be possible to take intestinal samples from some obese, diabetic people and find the offending, rogue microbes. Ideally, this is something that the manufacturers of these GMOs should be paying for. However, these manufacturers should not be doing the research themselves. It is not wise to trust research into a GMO leak with the company that makes the GMO. If insulin, growth hormone, glucagon, and other hormones are being produced in human intestines, causing a pandemic of obesity and diabetes and who knows what else, then the results would be too important and damaging to the manufacturer to trust it to anyone but a third party.

But who would that third party be? Government regulation of the genetic engineering industry is minimal. Lobbying by GE companies is extensive, and effective. The attitude of the government has been that, since the GE industry could be harmed by safety regulations based on the precautionary principle, we must all accept the technology now to let the nascent industry get established, and wait for an obvious disaster before making any impositions. As a result, the industry is policing itself, which is as big a mistake as letting these corporations tinker with these microbes in the first place.

The big question is, if the results showed that this nightmare of infectious obesity and diabetes, spread by GE bacteria and yeast, is, indeed, a reality, then will the public be told? You don't have to be a conspiracy theorist to see that the truth may be untold. Of course, perhaps not surprisingly, the result of an insulin-producing GMO spill would be increased cases of diabetes, and this would translate into higher sales of insulin. Those responsible for the problem would be the first to benefit from it. ***Continued on page 64***

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Perhaps these organisms could be called GERMs, or Genetically Engineered Rogue Microbes. We believe there needs to be a broad discussion of this threat posed by GERMs to human health. Endocrinologists will have to work with gastroenterologists, nutritionists, and epidemiologists as they explore this new form of disease - contagious hormonal disease. Public health experts will have to advise the public and institutions on ways to minimize the spread of these GERMs. There should be a department at the Centers for Disease Control that is dedicated to GERM Surveillance and epidemic control.

How do you personally take precautions against a coming GERM plague, especially when it will probably be emphatically denied by these companies and their government accomplices? How will medicine meet the challenge of diagnosing and treating diseases caused by GERMs? Is there any way to put this genie back into its bottle?

Whether or not it is too late remains to be seen. Research is desperately needed, along with continuous monitoring of commercial Baker's yeast supplies for food production, and peoples' intestinal contents for signs of GERMs. Our food and our homes may be contaminated with GERMs. Some E. coli and Baker's yeast have been modified to produce, not hormones, but drugs and enzymes. Obesity and diabetes may only be the beginning of a series of health problems that confuse doctors, disable and kill patients, and are spread from person to person in a handshake or in a piece of bread or a glass of beer.

We have been sold the advantages of Genetic Engineering. The creation of new GERMs, and the havoc they cause, may be the high price we are forced to all pay for this awesome, terrifying technology.

Sydney Ross Singer is a medical anthropologist and director of the Institute for the Study of Culturogenic Disease, located in Hawaii. His unique form of applied medical anthropology searches for the cultural/lifestyle causes of disease. His working assumption is that our bodies were made to be healthy, but our culture and the attitudes and behaviors it instills in us can get in the way of health. By eliminating these causes, the body is allowed to heal. Since most diseases of our time are caused by our culture/lifestyle, this approach has resulted in many original discoveries into the cause, and cure, of many common diseases.

http://EzineArticles.com/795100

We Can Make You Healthy and Wise

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breast cancer and the third most diagnosed in men.

The elderly, who are most at risk of the bowel cancer, could also be screened for the 'sticky' strain of E coli that makes a DNA-damaging poison.

Although the idea that a bug is involved in cancer might seem strange, it is not unheard of, with a virus being to blame for most cases of cervical cancer and a bacterium strongly linked to stomach cancer.

Now, tests on mice and people, carried out in the UK and US, have pointed to E coli being a strong suspect in bowel cancer.

The concern surrounds a version that sticks well to the inside of the lower bowel, or colon. It also contains genes that make a poison which causes the type of damage to DNA usually seen in cancer.

Although we usually think of E coli as causing food poisoning, these strains had been thought to live in the bowel without causing any problems.

However, tests show them to be much more common in bowel cancer patients than in healthy people.

Two-thirds of the 21 samples taken from bowel cancer patients contained the bug, compared to just one in five of those taken from healthy people, the journal Science reports.

Experiments also showed that mice inoculated with the bug are at very high odds of developing bowel cancer – as long as the E coli carries the poison-making 'pks' genes.

Liverpool University's Dr Barry Campbell, a co-author of the study, said: 'The research suggests that Ecoli has a much wider involvement in the development of colon cancer than previously thought.

'It is important to build on these findings to understand why this type of bacteria, containing the pks genes, is present in some people and not in others.'

Professor Jonathan Rhodes said: 'The bottom line message is that there seems to be a strong association between a type of E coli and the development of colon cancer.

'And given that this type of E coli is specifically able to damage DNA and inflict the sort of damage you get in a cancer, it is very likely it has a causative role, at least in some patients.'

The scientists, who collaborated with scientists from the University of North Carolina, aren't sure why some

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people who have the bug go onto develop cancer and others don't.

But factors such as genes and diet are probably important.

Professor Rhodes said: 'The literature on colon cancer taken as a whole suggests that having the right genes, taking exercise, possibly taking an aspirin a day, limiting red meat and eating plenty of leafy green vegetables all have a protective effect.'

If the link is confirmed, it could lead to tests for the rogue form of E coli being included in bowel cancer screening for the elderly.

In the long-term, a vaccine that stops the bug from taking root is also possible, added the professor. There is a precedent for this – the HPV vaccine which is given to teenage girls wards off infection by the human papilloma virus - the bug behind the majority of cases of cervical cancer.

Henry Scowcroft, of Cancer Research UK, said: 'This is an intriguing study in mice suggesting that the bacteria in our gut may play a role in the development of bowel cancer.

'This would make sense, as we know that being infected with bacteria called H pylori can increase the chances of developing stomach cancer.

'But since this study only involved mice and is still at an early stage, it's not yet clear whether E coli is actually linked to bowel cancer in humans at all, let alone whether this knowledge could be used to help improve things for patients or people at risk.'

http://www.dailymail.co.uk/health/article-2190990/Bowel-cancer-fuelled-E-coli-stomach-bug.html

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Continued from page 53 – Helicobacter Pylori Infection - Causes, Symptoms and Treatment

epithelial lining of the stomach. Transmission is believed to be via an oral-oral or fecal-oral route, but the exact source remains unknown. Humans are the only known reservoirs; however, infected water sources may also be implicated. Iatrogenic infection via contaminated endoscopes has also been documented.

What are the Signs and Symptoms of Helicobacter Pylori Infection?

Although *H. pylori* infections are wide-spread, not all infected persons become symptomatic. Acute infection is characterized by gnawing or burning epigastric pains, which typically occur when the stomach is empty, between meals, and in the early morning hours. The pain, which may persist for minutes to hours, is often partially relieved by eating or taking antacids and H 2 blockers.

Other symptoms may include nausea, vomiting, loss of appetite, and bleeding - which can manifest as hematemesis, hematochezia or melena. Severe or prolonged bleeding can cause anemia, fatigue, and weakness and hypotension. Comorbid conditions such as cardiopulmonary disease may be exacerbated by significant blood loss. Chronic infection may result in the finding of gastric carcinoma or MALT lymphoma.

Diagnosis for Helicobacter Pylori Infection

H. pylori can be diagnosed through serologic tests that measure *H. pylori* antibodies in the blood. The 13 C-urea breath test, involving the drinking of a special carbon-labeled urea formula and subsequent measuring of expired CO 2 levels, is also available. Upper endoscopy is the diagnostic test of choice; histological identification ofthe bacterium via tissue biopsy remains the gold standard. The biopsy urease test, based on the bacterium's ability to produce urease, may also be undertaken and provides for rapid identification at the time of biopsy. The 13 C-urea breath test is more reliable than serology for the detection of active *H. pylori* infection in children. Below 10 years of age, serology is insufficiently sensitive for clinical purposes, whereas the 13C-urea breath test remains a reliable test.

Differential diagnoses to consider include: functional gastrointestinal disorder, viral gastroenteritis, pancreatic disease, and gastric cancer.

Treatment for Helicobacter Pylori Infection

Anyone with active PUD, a documented history of PUD, early gastric cancer or MALT lymphoma should be tested for *H. pylori* infection and treated if found to be infected. *H. pylori* can be effectively eradicated with antibiotics. Currently, there are five Food and Drug Administration (FDA) approved treatment regimens consisting of 1 to 2 weeks of one or more antibiotics such as tetracycline, metronidazole or clarithromycin, plus either ranitidine bismuth citrate, bismuth subsalicylate, or a proton pump inhibitor. (See *FDA-approved treatment options for* Helicobacter pylori.) Treatment regimes for children have not yet been formalized. Eradication rates range from 70% to 90%, depending upon the regimen used, antibiotic resistance patterns, and patient compliance.

Conditions resulting from substantial bleeding, such as hypotension, anemia, and cardiopulmonary complications should also be treated accordingly. Retesting after treatment may also be prudent in cases of complicated PUD.

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Continued from page 65 – Helicobacter Pylori Infection - Causes, Symptoms and Treatment

Special Considerations and Prevention Tips for Helicobacter Pylori Infection

- Monitor for signs and symptoms of bleeding, such as hypotension, tachycardia, dyspnea, fecal occult blood, occult blood in vomitus, and decreased hemoglobin values.
- Be aware that tarry black stools may result from bismuth and iron preparations and do not indicate gastric bleeding.
- Active gastric bleeding may require insertion of a nasogastric tube; the patient may be unable to take oral nutrition during the acute episode.
- Discontinue nonsteroidal anti-inflammatory drugs.
- Utilize appropriate personal protective gear when performing patient care activities that may result in soiling with bodily discharges, such as blood, feces, or vomitus.
- Advise patients that past infection with *H. pylori* does not confer immunity.
- Advise people to wash hands thoroughly, before and after eating food - and should only eat food which has been properly prepared, and to drink water from a safe, clean source only.
- Since the mode of transmission of *H. pylori* is unknown, stress the importance of thorough hand washing after using the toilet.

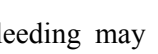
http://www.health-diseases.org/diseases/helicobacter-pylori-infection.htm

Role of Helicobacter pylori in Pathogenesis of Upper Respiratory System Diseases

Helicobacter pylori (H. pylori) is one of the frequently encountered micro-organisms in the aerodigestive tract. Although infections caused by H. pylori are this common, the exact mode of transmission has not been fully understood yet. Oral-oral, fecal-oral and gastrointestinal-oral routes are the possible modes of transmission. This infection is usually acquired in childhood and may persist for the whole life of the patient. However, about 80% of the infected humans are asymptomatic. Human stomach was considered to be the only reservoir of H. pylori until bacteria were discovered in human dental plaque, in oral lesions, in saliva, in tonsil and adenoid tissue. It is suggested that H. pylori enters the nasopharyngeal cavity by gastroesophageal reflux and colonize in the dental plaques, adenoid tissues and tonsils. From these localizations, the bacteria ascend to the middle ear and to the paranasal sinuses directly or by the reflux again and may trigger some diseases, including otitis, sinusitis, phyrangitis, laryngitis and glossitis. But still, the exact mechanism remains unclear.

PMID: 18942285 MEDLINE

http://www.biomedsearch.com/nih/Role-Helicobacter-pylori-in-pathogenesis/18942285.html



Vomiting virus outbreak plagues Germany

October 1, 2012
Associated Press

BERLIN — A vomiting virus outbreak has struck Germany.

German health authorities say the number of children that have fallen ill with the vomiting and diarrhea after eating food from school cafeterias and daycare centers has risen from about 4,500 to 8,400.

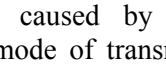
Authorities in Berlin and the surrounding eastern German states reported the new gastroenteritis cases Saturday, while laboratory investigations to determine the exact cause of the outbreak were still under way.

Berlin's health department says the sicknesses are moderate and most children recover within two days without requiring to be hospitalized.

In Saxony state, at least 16 cases of norovirus, a mostly food- or water-borne illness, were proven, according to German news agency dapd.

The government-affiliated Robert Koch Institute said Friday that all facilities where the illness occurred likely received food from a single supplier.

http://www.clarionledger.com/viewart/20121001/NEWS/121001037/Vomiting-virus-outbreak-plagues-Germany



Obesity Causes over 100,000 Cancers Per Year

By James Schreiber

July 26, 2011

NaturalNews) As it turns out, fat tissue isn't just a

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dormant storage depot for calories. According to the *American Institute for Cancer Research*, more than 100,000 cancer cases in the U.S. are linked to excess body fat - most of them are preventable.

The data shows that on top of the list of obesity-linked cancers is endometrial cancer, followed by esophageal, pancreatic and kidney cancers, among others. Increased body fat is linked to:

- 49% of endometrial cancers (20,700 cases/year)
- 35% of esophageal cancers (5,800 cases/year)
- 28% of pancreatic cancers (11,900 cases/year)
- 24% of kidney cancers (13,900 cases/year)
- 21% of gallbladder cancers (2,000 cases/year)
- 17% of breast cancers (33,000 cases/year)
- 9% of colorectal cancers (13,200 cases/year)

A groundbreaking - and startling - study published in ACS' *Journal of Proteome Research* proved that fat cells actively secrete dozens of hormones that act as chemical messengers in various parts of the body. Scientists suspect that these chemical signals may promote not only cancer, but also a wide range of other chronic diseases, including diabetes and heart disease.

"The evidence is clear," said Laurence Kolonel, MD, PhD, Deputy Director of the Cancer Research Center of Hawaii and member of the American Institute for Cancer Research (AICR) expert panel. "If people sustain a normal body weight and remain physically active throughout life, it will have a major impact on cancer incidence."

The recent research adds to the growing body of evidence concerning the many negative effects of obesity on cancer incidence. Previous studies have shown that excess fat tissue causes increased levels of inflammation compounds in the bloodstream and promotes oxidative stress on the body, leading to DNA mutation and diminished immune function. Both of these factors are conductive for not only the formation of diseased cells, but also their multiplication.

Reducing Your Risk

If you don't want to fall prey to a chronic degenerative disease such as cancer, maintaining a healthy weight, reducing stress and choosing alkaline forming foods will do wonders in maintaining optimum health.

The American Cancer Society recommends at least 30 minutes of physical activity five days per week or more. Shedding excess weight can be beneficial even after diagnosis. "An increasing number of studies suggest that regular physical activity improves cancer survival, even among survivors who are overweight or obese," explained Melinda Irwin, PhD, MPH, Associate Professor of Epidemiology at Yale School of Medicine.

"That's really the take-home message here."

Resources:
http://articles.cnn.com/2009-11-05/health/obesity.cancer.link_1_cance...
http://www.sciencedaily.com/releases/2010/09/100901121526.htm
http://www.cancer.org/cancer/news/news/report-over-100,000-cancers-li...

http://www.naturalnews.com/033124_obesity_cancer.html

Obesity Epidemic Taking Root in Africa

ScienceDaily (Jan. 1, 2010) — The urban poor in sub-Saharan Africa are the latest victims of the obesity epidemic. Researchers writing in the open access journal *BMC Public Health* claim that overweight and obesity are on the increase among this group.

Abdhalah Ziraba worked with a team of researchers from the African Population and Health Research Center, Nairobi, Kenya, who used data from seven African countries to investigate changes in body mass index (BMI) between early 1990s and early 2000s. He said, "Despite being the least urbanized continent, Africa's population is becoming increasingly urban and its cities are growing at unprecedented rates. In spite of rampant poverty in urban areas, access to cheap foods with a high content of fat and sugar is commonplace."

The researchers found that the number of people overweight/obese increased by nearly 35% during the study period. Those of higher socio-economic status were more likely to be overweight or obese, but the rate of increase in obesity was higher in the poor group. According to Ziraba, "Given the chronic nature of most diseases associated with obesity and by extension the huge cost of treatment, the prospects look grim for the already under-funded and ill-equipped African health care systems unless urgent action is taken."

http://www.sciencedaily.com/releases/2009/12/091214201003.htm

What's the Main Cause of Obesity -- Our Genes or the Environment?

ScienceDaily (Sep. 12, 2012) — The ongoing obesity epidemic is creating an unprecedented challenge for healthcare systems around the world, but what determines who gets fat? Two experts debate the issue on bmj.com today.

Timothy Frayling, Professor of Human Genetics at the University of Exeter thinks that genetic factors are the main driver for obesity in today's environment. Twin and adoption studies show consistently that variation in body mass index has a strong genetic component, with estimated effects of up to 70%, he says.

Studies also show that people carrying two copies of a gene associated with obesity (the FTO gene) are, on average, heavier than those carrying two copies of the protective version.

A recent study of over 200,000 people showed that the FTO variant had a stronger effect in sedentary people than in those who are physically active, while studies of physical activity in schoolchildren suggest that education may not be as important as we think, he adds.

"Although DNA variations explain only a small percentage of the variation in body mass index, they provide proof of principle that genetic factors influence it over environmental factors," writes Frayling.

In conclusion, he says, genetic factors influence substantially where you are on the body mass index scale in a given population at a given time, and evidence is accumulating that these genetic factors may operate largely through appetite control.

He adds: "If true, plans based on changing our environment, such as banning the sale of supersized sugary drinks, may be more successful than plans to increase awareness through education."

But John Wilding, Professor of Medicine at the University of Liverpool believes that changes in our environment are responsible for increasing obesity.

He acknowledges the role of genetics in the regulation of body weight, but argues that the rapid increase in obesity seen over the past 30 years cannot be due to genetic changes.

In contrast, the evidence that the environment has changed is overwhelming, he says.

He points to the recent fall in the cost of energy dense foods, alongside successful promotion by the food industry, and a decline in physical activity due to changes in transport, technology, and the built environment as key drivers for the obesity epidemic.

It will be important to identify genetic causes for rare cases that may be treated, he says. However, changes to the food and physical environment are going to be essential if we are to have a meaningful impact on the obesity epidemic.

He calls for "a radical approach … backed by strong legislation influencing food production and marketing, and ensuring the built environment and transport systems are designed to encourage active living."

In summary, he says "obesity is a complex disorder with both genetic and environmental causes. The predominant driver is environmental, and changes to the environment will be essential if we are to tackle the current epidemic."

Journal References:

T. M. Frayling. ***Are the causes of obesity primarily environmental? No****.* BMJ*, 2012; 345 (sep11 1): e5844 DOI: 10.1136/bmj.e5844*

J. Wilding. ***Are the causes of obesity primarily environmental? Yes****.* BMJ*, 2012; 345 (sep11 1): e5843 DOI: 10.1136/bmj.e5843*

http://www.sciencedaily.com/releases/2012/09/120911200520.htm

On the Causes of the Obesity Epidemic, maybe Everyone's Right

By The Mermaid's Tale

May 16, 2012

Interesting how much various perspectives differ on the light they can shed on a subject. Obesity is a significant and increasing problem in the US and much of the rest of the world. Why? The answer depends on who you ask. A geneticist says it's genetic, and probably billions of research dollars have been spent on looking for genes 'for' obesity.

An epidemiologist is likely to say it's gene by environment interaction, though these days an epidemiologist may well finger only genes, given that identifying environmental risk factors for complex traits, even those for which environmental factors are clearly primary, has so often proven to be daunting.

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Many epidemiologists excuse their jumping onto the genomic bandwagon with the rationale that yes, genetic effects are weak, but we need to know them anyway because once they are identified they can be regressed out of the search for the *real* (to them, environmental) effects.

A nutritionist might say it's diet, and/or not enough exercise, and the girth of the diet section of any bookstore tells you how many ways that explanation can be parsed. Indeed, that girth itself is an indicator of the size of the problem — a simple and cheap epidemiological stand-in!

Some people pick out a single component of the diet — sugar is a big one these days; we blogged about that here – as the culprit. A lipid scientist might chalk it up to leptin, a hormone involved in regulating appetite and metabolism. A person struggling with his or her weight might say it's personal weakness.

And now mathematics weighs in. An interview with an applied mathematician at the NIH was reported in yesterday's Science Section of the *New York Times Times*. Carson Chow is at the National Institute of Diabetes and Digestive and Kidney Diseases, where they have a growing interest in mathematical study of obesity. Why not, math is technical, opaque, and so has sex appeal! Chow was hired in 2004, at which time he had little knowledge of obesity, but quickly learned.

I could see the facts on the epidemic were quite astounding. Between 1975 and 2005, the average weight of Americans had increased by about 20 pounds. Since the 1970s, the national obesity rate had jumped from around 20 percent to over 30 percent.

The interesting question posed to me when I was hired was, "Why is this happening?"

When he first arrived, Chow worked with a mathematical physiologist who had developed a model of obesity that involved "hundreds of equations", including all the usual variables — height, weight, exercise, caloric intake, and so on. Chow says he pared it down into a simple equation, the essential message of which is that the obesity epidemic has been caused by "the overproduction of food in the United States."

This is interesting, but not the first time this explanation has been proffered. 'Food chain journalist' Michael Pollen has also blamed obesity on overproduction of food. In particular, the excess of nitrogen after World War II, and its subsequent use as a fertilizer, which meant more corn being grown, and thus more corn-based processed food, all dependent on farm subsidies. And, it has long been felt that the generally post-war epidemic of obesity and related disorders in Native Americans was due to sedentary, depressed lifestyles and the open-ended availability of cheap calories.

But, overproduction of food can't really be the answer by itself, because excess corn can sit in the field until the cows come home if no one is going to buy it or what's made from it. *Some*one had to convince the consumer to buy, and then eat the stuff. So then, maybe it's the advertising industry that's responsible for the obesity epidemic. Those paid-deceivers lie (so to speak) at the heart of many of the more serious problems in the US these days, after all. Indeed, Chow believes that if the industry stopped marketing food to children that would be a start. (Oh, no, can't limit free speech, bleats Madison Avenue, claiming in effect that making you obese is their first-amendment right!) Further, Chow says, "You simply have to cut calories and be vigilant for the rest of your life." Vigilant in resisting the appeal of all that food that's being flashed at you wherever you look.

But maybe there is no single cause of obesity. Maybe obesity is yet another complex trait and, collectively, everyone is right. Perspective is important — if you're studying leptin, what matters to you is not why there's so much excess food in the marketplace, but why people want to eat it. If you're a geneticist, nothing matters except your next GWAS. It's like the question of what causes AIDS — is it HIV, needle sharing, poverty? It's all of the above.

This is, in a way, a lesson for much of life — including evolution and genetic causation. Life is not about single factors. If it were, or had been, it would be far too vulnerable to extinction. The buffer of complexity spares life, while the complexity of buffets generates spare tires.

http://beforeitsnews.com/science-and-technology/2012/05/on-the-causes-of-the-obesity-epidemic-maybe-everyones-right-2143902.html

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Some Symptoms of Gastric Ulcers

- Gastric ulcers generally cause a dull aching pain, often right after eating
- Eating will not relieve pain as is the case with other types of ulcers
- Indigestion and heartburn, or acid reflux
- Nagging pain in the upper abdomen area below your breastbone
- Episodes of nausea
- A noticeable loss of appetite
- Unplanned weight loss

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African Traditional Herbal Research Clinic

Volume 7, Issue 11 NEWSLETTER October 2012

FEATURED ARTICLES

USE OF SPICES AS MEDICINES

History & Special Collections
UCLA Louise M. Darling Biomedical Library

The ancient Middle Eastern civilizations utilized all types of plant, animal and mineral products to treat disease. The ancient Egyptians developed a somewhat more sophisticated pharmacopoeia, although magic and religion were always utilized as part of therapy. Nevertheless, the Egyptian priests, physicians and embalmers became familiar with a significant number of herbs and spices, some of which (such as cinnamon and myrrh – which were expensive imports) they employed in embalming preparations. The Ebers Papyrus, which was written in Egypt about 1500 B.C., mentions the use of several spices as medicines, including coriander, cumin, fenugreek and mint. The Old Testament recognized the role of apothecaries in compounding ointments; the holy anointing ointment consisted of myrrh, cinnamon, cassia and calamus in olive oil. The exotic spikenard from India was used to anoint Jesus; this fragrant herb is regarded as a perfume source. See a list of spices and their medical use: Medical Use of Spices.

WINES

Peppers were known as an important import from India in biblical times. These spices were used in wine as medications for stomach pain, and similar spiced wines were used therapeutically for centuries afterwards by Greeks, Romans and medieval Europeans. One famous spiced wine that was popular in medieval Europe was named ypocras or hippocras, after tissanes that were prescribed by Hippocrates: a typical recipe would include cinnamon, ginger, melegueta, nutmeg, galingale and honey in wine. Many other sweetened spiced wines were used for pleasure or as prescriptions for numerous diseases. The warming qualities of peppers derived from peppercorns, long-pepper, melegueta (Guinea pepper from Africa) or cubebs would make these pungent wines suitable for use on cold evenings or for diseases characterized by excess of cold humors such as the excessive phlegm of respiratory tract inflammatory conditions. Similar spiced wines, ciders and mead are used today, but they are prepared mainly for their festive value, such as their characteristic use at Christmas time.

Many commercial wines, cordials and liqueurs contain proprietary mixtures of herbs and spices. Cardamon, aniseed, allspice, cloves, cinnamon, ginger and other spices and herbs such as juniper are favorites, while mints and other herbs such as celery might be used as garnishes as much as flavors. Undoubtedly, folk remedies and family traditions lead to many people favoring specific spicy beverages for a spectrum of health purposes varying from aphrodisiacs and digestives to cold preventatives and bronchitis therapies.

One drink of past days was piment, consisting of wine flavored with honey and various spices. The word piment has been used to mean capsicum pepper (chiles), allspice (also called pimento) or black pepper (pimienta). The word is related to the Latin pigmentum, meaning pigment: this word was often applied to the colorful imported spices from Asia. The Anglo-Saxons prepared a sweet, spicy wine which they called “piment”; this was called “pigment” by the Danes who used it. The apothecaries who were entrusted to make this wine were known as pimentarii. Chaucer refers to such people making hippocras or the similar glarry. The pimentarii of Byzantium prepared many medical products according to the needs of physicians.

ANTIDOTES and MITHRIDATIUM

Poisoning was a favored means that was employed in ancient Greece and Rome to eliminate enemies. In the 1st century B.C., Mithridates VI, King of Pontus (located in present-day Turkey) worked with his physician to devise an effective antidote to all poisons.

Two hundred years later, Galen wrote about antidotes, and he credited the King of Pontus with creating a “mithridatium” that contained 41

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ingredients. By that time other famous antidotes had been described; some of these persisted in use for centuries, including one devised by Galen. The most popular of the herbal antidotes besides mithridatium included galene, diascordium and philonium, which were named for their inventors. A generally used antidote that was alleged to be effective against venomous bites and stings was called theriaca; the theriacas of Damocrates and those produced in Cairo, Venice and other large cities became very popular.

The word "theriaca" was corrupted to the word "treacle" in English, especially for preparations of herbs in a thick, sweet base. The famous 17th century herbalist Nicholas Culpeper declared that the virtues and inexpense of garlic made it the "poor-man's treacle", and that it can be used as an effective panacea. Most of the other forms of theriacas and the various mithridatiums contained dozens of constituents, including exotic spices such as ginger, cinnamon, cassia, malabathrum, galbanum, cardamon, nard, pepper, frankincense, myrrh and saffron. Although these ineffective multiherb remedies remained in official use until the 19th century, they have spawned a host of similar tonics and stimulants that contain a comparable, illogical array of herbs and spices that enjoy a wide market today. See section on Spices as Aphrodisiacs. The only differences in today's theriaca equivalents are the incorporation of various modern constituents such as vitamins, minerals, amino-acids and newly fashionable herbs.

A similar group of medical recipes included bitters or "hiera", which were introduced in Greece for use in the Temples of Ascalepios. The components and the number of constituents varied considerably over the ages, although aloes and cinnamon were commonly used. These were prescribed as purgatives and tonics, and were eventually recommended as valued panaceas for a great number of different disorders. Their use persisted – despite no evidence of effectiveness – for many centuries. Today, some European countries still make available similar bitter tonics (such as the ancient Hiera picra or "holy bitter"), and they are marketed as non-specific remedies; people regard them as digestives, cough medicines and so on.

SPICES AND PUTREFACTION

In all medical systems of Asia and Europe, spices have been used both as therapeutic foods and as medicines. Despite the contrasting opinions of different experts who insisted on their indications, there is little evidence of any specific benefit from most spices. Many pungent spices are unattractive to animals (excepting most, humans, many birds and some rodents), and they do have some antimicrobial, gastrointestinal, and mucus-loosening properties. Modern studies suggest that garlic, onion, allspice and oregano are the most potent antibacterial and antifungal agents; thyme, cinnamon, cloves and chile peppers are among the next best, while cardamon, black and yellow pepper, ginger, anise and celery seeds are less effective. However, there is lack of uniformity in findings, and this may reflect non-uniformity in source material. Furthermore, some fungi and bacteria use spices as supportive media for their growth.

Although it is often claimed that exotic spices were sought as valuable food preservatives, this is not correct. Thus, simple pickling with common-place vinegar, garlic and mustard can preserve and flavor food almost as well as dehydrating and salting can. Honey and strong sugar soultions can also be used as food preservatives. There is little evidence that pepper, cloves, nutmegs, ginger and other expensive spices were used as alternatives to garlic, etc. to preserve food or to delay the spoilage of cooked dishes. Their use in their countries of origin is not related to spices serving as an alternative to refrigeration, since they are usually added to fresh foods as flavors. In particular, they add zest to a bland diet based on rice and other high-carbohydrate vegetable staples. Indeed, the concentrations of spices that would be needed to significantly retard food spoilage by microorganisms would result in an overwhelming flavor that may be worse than that of the decaying food.

While it is true that ancient recipes suggest that spices were added in extraordinary large amounts to banquet recipes, it is not clear how many people were meant to be served. It is likely that in practice large amounts were used only if a huge number of people were to participate in the feast. Thus, the actual amount of spice per individual may have been closer to what is acceptable today. Moreover, banquets were an opportunity to enjoy a prolonged bout of gorging, and it is likely that little food remained to be preserved from putrefaction over the ensuing post-banquet days.

The evidence does not support claims that spice imports were driven by a need to either disguise the taste of spoiled food or to prevent putrefaction of cooked dishes. Furthermore, when coffee, tea, tobacco and snuff became fashionable in the 18th century, spices in food became less acceptable; thus, spice use declined in France and many other countries, even though methods for food preservation had not improved.

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It is noteworthy that honey was recognized to be an effective preserver of meats and other foods. In ancient times honey was applied to wounds, and more recent studies have shown it to be more effective than granulated sugar. Honey may have more than a simple osmotic effect that contributes to its bactericidal and fungicidal benefits. History records that when Alexander the Great died in Babylon, his body was encased in honey in a tomb for transfer to Alexandria for burial. There is no evidence that any spices are superior to or offer additive benefits to honey as a food preservative.

WHAT IS A SPICE?

The name spice is derived from the word species, which was applied to groups of exotic foodstuffs in the Middle Ages. Aromatically scented herbal products have been used since ancient times to flavor foods and for preparing incenses and perfumes. Exotic imports obtained from Asia were particularly appealing to Greeks and Romans, who spent vast fortunes on trade with Arabia, which was the center of the spice trade.

Rare spices were utilized in cooking as a sign of wealth in Rome, and later in Medieval and Renaissance times, and the privileged developed an exaggerated taste for spicy foods. The need to supply European markets spurred explorations, culminating in the extraordinary voyages that resulted in the discovery of the New World and demonstrated that the globe could be cir-cumnavigated by sea. The fabled Spice Islands of Indonesia became the site of horrendous colonial practices by competing European powers. The desire to control spice sources took the British to India, the Portuguese to Brazil, the Spanish to Central and South America and to the Philippines, the French to Africa, and the Dutch to Indonesia. However, each country feuded with others to establish a monopolistic control over the spice-growing regions and the major trade routes.

Today, many of the valued old spices, such as nutmeg, have lost their fabulous attraction, while the more lowly garlic, peppers and other commonplace kitchen herbs have become, paradoxically, increasingly popular. It is now impossible to give a strict definition of a spice: the word suggests an imported tropical herbal plant or some part of it that is valued for providing color and aromatic flavoring along with stimulating odor for use in cooking and in condiments, as well as in candies, cosmetics, fragrances and medications. A host of such products utilize spicy herbs varying from ajowan and aniseed to wasabi and zedoary. Indeed, the term spice could include chocolate, coffee, kola nuts, tea, wine and olive oil, since these mouthwatering delicacies are generally imported from tropical or sunny countries into the more temperate countries of northern Europe and North America to give a zestful taste to food products and beverages. See a list of spices by Taste and Hotness.

SOURCES OF SPICES

European countries over the last two thousand five hundred years have found the allure of spices to be irresistible. The wide prevalence of garlic, onions and chives, radishes, mustard and horseradish, and the availability in Mediterranean countries of herbs such as mint, thyme, basil and saffron, made these well distributed flavors seem less appealing to the sophisticated taste buds of the more wealthy. The Romans, and then the Portugese, Dutch, and finally the British, were attracted to India by a persisting appetite for pungent peppercorns (the source of yellow and black pepper). Major importing countries came to appreciate the other curry spices of India, such as cardamon, turmeric, ginger, and cloves, while the British greatly overextended their welcome by staying on for tea. To this day, the British involvement in India is symbolized on every dining table by the presence of salt and pepper; the British came for pepper, but left when Gandhi aroused his country by symbolically flouting the tax on salt. Perhaps a cup of tea at the end of the meal emphasizes a more lasting value of the British interaction with India.

China and its neighboring countries supplied cassia, cinnamon, licorice, rhubarb and sugar. Coffee originally came from Yemen; chocolate as well as tomatos from Central America and the Yucatan; chile peppers in addition to potatos from Bolivia and Peru. The allure of trade for the valuable spices that could be transported successfully over vast distances was spurred by an increasing appetite in Europe for new spicy culinary experiences. The desire to monopolize major spices and the need to control the profitable sea routes were the driving forces that led to many of the dramatic events of history during the past 2000 years.

In ancient times, Arabia, Syria and Egypt provided well-organized marketing sites along the major recognized spice routes from which Asiatic spices were sent on their final land or sea journeys to the great spice ports of Europe, such as La Spezia, Venice and Genoa in Italy, Seville in Spain, Lisbon in Portugal, and the major port cities of England, Belgium and Holland.

The most important of the exotic spices in Medieval Europe was Asian pepper; this could be transported, stored and traded as peppercorns without any loss in its taste. The great growth of the pepper trade in Europe

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that occurred between the 12th and the 16th centuries was controlled by Venetian importers, and their enormous income led to the richness of Venice and its prominent role in the patronage of the arts of the Renaissance.

Extraordinary efforts were often made to mislead merchants as to the source of origin of spices, but it was gradually realized that the most uniquely desired flavors came from the indigenous plants of the Moluccas, or Spice Islands, where cloves and nutmeg grew. The Portugese, Dutch and British each tried to establish spice monopolies in these coveted islands. Eventually, French and other adventurers were able to transplant many precious spice plants to other sites. Currently, nutmegs are grown in Grenada in the Caribbean, and in Madagascar. More cloves are produced in Zanzibar than in Indonesia, where they now need to be imported to meet the demands of manufacturers of the popular kretek clove cigarettes.

It is noteworthy that some spices have moved in the opposite direction, and have been transplanted into Africa and Asia from the New World. Thus, the fiery hot chiles that are so characteristic in the cooking of India, China and other countries of the Far East were imported and established there following the 16th century exploration of the New World of the Americas where these peppers are native. Similarly, mustard and coriander were imported into Asia from Europe, where they were so commonplace; they then became important culinary flavors in Indian, Chinese, Thai, Vietnamese and other ethnic cooking of the Orient. Chocolate was transplanted from Mexico to Africa, but it was developed as a confectionary by the Europeans, including the Swiss who popularized milk chocolate.

One spice, licorice, which is very popular in China, is largely unknown in the U.S., where so-called licorice candy is usually made of molasses and corn oil with anise or fennel flavoring and artificial coloration. On the other hand, so-called cinnamon is often an inferior related spice, cassia; both are marketed as sticks of bark that are currently harvested from trees in Sri Lanka and many other countries. Variants of common spices are numerous: thus, the "peppers" include peppercorn, black and yellow pepper, chiles, cayenne pepper, long pepper, paprika, bell pepper, grains of Paradise (African melegueta), cubeb, allspice (pimento), and Szechuan pepper (anise pepper).

WHY WERE SPICES IMPORTANT?

Spices can improve the palatability and the appeal of dull diets or spoiled food. Piquant flavors stimulate salivation and promote digestion. Pungent spices can cause sweating, which may even cause a cooling sensation in tropical climates; on the other hand they can add a sense of inner warmth when present in cooked foods used in cold climates. Local and inexpensive herbs and flavors, such as garlic, onion and horseradish, sufficed for the poorer people of old Europe, but influential, rich hosts would wish to impress or politically intimidate their guests with the liberal use of rare exotic spices. These expensive imports could be added in large amounts and in complex mixtures to each course and to accompanying alcoholic beverages to provide a gustatory statement about the wealth, power and initiative of the host. Thus, spices served to make a political statement when a baronial lord invited possible rivals to an expensive display of profligacy at a sumptuous banquet.

Spices also fitted into philosophic concepts of improving health, since it was understood that they could affect the four humors (blood, phlegm, yellow bile and black bile) and influence the corresponding moods (sanguine, phlegmatic, choleric and melancholic). Thus, ginger would be used to heat the stomach and improve digestion; clove was believed to comfort the sinews; mace would prevent colic and bloody fluxes or diarrhea; nutmeg would benefit the spleen and relieve any bad cold. Cinnamon, one of the most popular flavors in cooking, was considered to be particularly good for digestion and for sore throats. Hot pungent spices were used more liberally in winter diets or to treat "cold" diseases accompanied by excess phlegm. It is noteworthy that rheumatism was believed to be caused by abnormal "rheum", or phlegm; the appropriate therapy would be pepper – just as it is today, with the topical use of capsaicin, a chile pepper extract.

Spices, along with salt, would have been incorporated in mixtures to pickle and preserve meats; the pungent spices were useful for relieving the salty taste of such foods. Aromatic spices, such as cloves, cardamon and mint, would be useful to disguise the foul breath of onion and garlic eaters who were likely to have additional halitosis from caries and gingivitis. Burnt spices or incenses could be used to help counteract the malodors that were prevalent in rich homes that lacked sanitary mechanisms for the disposition of excreta and rotting foods. Some spices, such as pepper and cinnamon, do have antimicrobial properties, but their reputation as food preservatives is unwarranted.

One fascinating tribute to the value of spices, such as peppercorn, was their acceptance in medieval times as

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a substitute for money; thus, some landlords would be paid a "peppercorn rent". Conquerers would accept spice stores as booty or as a victory tax. The flow of pepper along trade routes provided opportunities for trade taxes to be imposed at major trading cities by Arabians, Egyptians, Turks and Venetians. The increasing custom duties in the 15th century resulted in a 30-fold rise in the price of Indian pepper, at a time when the social desire for pepper and other exotic spices was maximal. Changes in pepper prices had an effect on national economies and on aggressive reactions comparable to that seen in the Western appetite for fuel oil today.

Chocolate pods at one time were so valued that they also were used as the equivalent of money by Aztecs. The excessive value of spices in Europe is revealed by the fact that Magellan's circumnavigation of the globe started with five ships which were supplied to last their 250 or so crew members for many months; the expedition limped home with only one ship and an emaciated crew of 18 surviving men who returned to Spain in 1522 after their three-year horrendous expedition. Despite their enormous losses, the incredibly valuable cargo of 50,000 pounds of cloves and nutmegs from the Moluccas made the enterprise seem like a commercial success.

CULINARY HERBS

Numerous herbs have been classified as spices, but currently many are grown so readily that they are seen as common food flavors rather than aromatic spices. The alliacious herbs – garlic, onion, shallot and chive – could be regarded as both foods and flavors, while radish, daikon, watercress and other pungent leaves and flowers are used as salad flavors. Mustard, horseradish and salsas containing chiles are used as condiments, while peppers, capers, fermented fruits (including grape juice), mango and vegetables are used as pickles or chutneys. Thus, herbs such as marjoram, oregano, basil, mint, parsley, sage, tarragon, thyme, savory, rosemary, sesame, poppy seeds, bay leaves and celery seeds could be considered as flavorful culinary ingredients, as fragrant herbal medicines or as inexpensive, easily grown spices.

Perhaps all flavorful herbs that are used in food preparation and for modifying disease states or improving specific aspects of health need a special classification as "spicy herbs". This would exclude other comparable spice-like products such as orange peel, juniper berries, anchovy paste, pungent honeys, flavorful vinegars, perfumy agents such as myrrh and rose water, fashionable cooking oils, exotic fruits, and unusual items that are used parochially in different parts of the world – such as ajowan, annatto, lemon grass and asafetida.

Most spicy herbs do have traditional medical values. All could be regarded as digestants, carminatives (which help remove excess air from the stomach) and bowel function improvers. Many are used in aromatherapy as topical agents that improve skin condition and result in pleasurable sensations such as relaxation or calmness. Some may be used as incenses or room air fresheners, or be incorporated in cosmetics and body lotions, both for their pleasant sensory qualities and for possible healing properties. A few herbs, such as mint (containing menthol), basil, thyme and sage, are often used to treat pharyngitis, coughs and bronchitis, and they are likely to be used in combination with medical herbal extracts from eucalyptus, camphor, benzoin, aloes and so on.

Culinary herbs thus span the continuum between foods, medicines and exotica, and therefore they rightly earn their place in the spice section in markets and in either the spice rack or bathroom cabinet (or both!) at home. See a list of spices by Taste and Hotness.

Spice Exhibit URL:
http://unitproj.library.ucla.edu/biomed/spice/index.cfm

http://unitproj.library.ucla.edu/biomed/spice/index.cfm?spicefilename=Aphrodisiacs.txt&itemsuppress=yes&displayswitch=0

Chocolate: A Superfood for Teeth

By Mark Burhenne, DDS

March 01, 2011

A dentist recommending CHOCOLATE? Yes, that's right, you read correctly.

Recent studies emerging from Japan, England, and the U.S. support the fact that chocolate is effective at fighting cavities, plaque, and tooth decay in the mouth. In fact, it's better than fluoride according to some.

Dark chocolate (I can't speak for sugary milk chocolate) doesn't deserve its bad rap as a cavity-causing treat. It may actually help prevent cavities! And here's where the gauntlet gets thrown down. Compounds in chocolate may be more effective at fighting decay than fluoride. Researchers are predicting that one day, the compound found in chocolate called CBH will be used in mouthwashes and toothpaste.

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Tooth decay occurs when bacteria in the mouth turn sugar into acids, which eat away at the tooth's surface and cause cavities. Compounds in the cocoa bean husk have an anti-bacterial effect and also fight against plaque. This makes chocolate less harmful than many other sweet foods your dentist might warn you against because the antibacterial agents in cocoa beans offset its high sugar levels.

This research has even revealed that the cocoa extract is more effective than fluoride in fighting cavities. To many, this is shocking news, but for me that's not saying much. I'm not a big fan of ingesting fluoride, and I think it has long been over-hyped (more on that in future posts).

The compound CBH, a white crystalline powder whose chemical makeup is similar to caffeine, helps harden tooth enamel, making users less susceptible to tooth decay. This specific compound has been proven effective in the animal model, but it will it will take another two to four years before the product is approved for human use and available for sale (in the form of mouthwashes and toothpastes).

In the mean time, however, one can "administer" this compound via the ingestion of chocolate. Eating 3-4 oz of chocolate a day is a great way to take advantage of this wonder compound and lower your chance of getting cavities. What an easy and fun recommendation a doctor can make; it's been called the food of the gods, a supposed aphrodisiac, and the drink that Casanova favored.

Now, this isn't an excuse to binge on bonbons, nor ditch your floss and toothbrush.

- For the best therapeutic effect (yes, I'm still talking about chocolate), it's best to chew on cacao nibs. Most will find this option unpalatable.
- The second best choice, is dark chocolate with less than 6-8 grams of sugar per serving - organic if possible. Be aware that chocolate is a calorie-rich food, so modify your calorie intake accordingly.
- Raw chocolate is even a better choice, as it it less processed, and more of the antioxidants are left intact.

Do all of this for your teeth, but enjoy the other benefits of mood elevation and better blood flow as well!

With the recent findings, it's now more true than ever, that chocolate is a superfood. Chocolate has over 300 chemical compounds in it, making it one of the most complex foods we know of, and I predict that many new compounds in chocolate beneficial to us will surface over time and cement its nutritional star rating.

http://health.yahoo.net/experts/thefamilydentist/chocolate-superfood-teeth

Turmeric Medicinal Use

From many years awareness of turmeric and its use as medicine is continuously increasing. A flowering plant, Turmeric, in the ginger family, is commonly used as a food coloring and is one of the basic ingredients in curry powder. To heal many health disorders like liver problems, digestive disorders, treatment for skin diseases and wound healing turmeric has long been used in Medicinal as an anti-inflammatory. Curcumin is the active ingredient in turmeric which has been shown to have a wide range of therapeutic effects.

Digestive Disorders

Turmeric is considered as a digestive bitter and a carminative. It can be added into foods including rice and bean dishes to improve digestion, reduce gas and bloating. It is a cholagogue, stimulating bile production in the liver and encouraging excretion of bile via the gallbladder. This improves the body's ability to digest fats. For chronic digestive weakness and/or congestion turmeric is recommended. It can be taken as a single extract or in the form of digestive bitters, which combine turmeric with other bitter and carminative herbs. Turmeric is beneficial for people who feel tired after consuming meals or who experience gas and bloating. Whatever way turmeric is consumed it is beneficial to both the digestive system and the liver.

Liver Diseases

Turmeric is beneficial for its influence on the liver. In

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spring more consumption of herbs and foods can strengthen the liver. Turmeric shares similar liver protectant compounds that milk thistle and artichoke leaves contain. It is said to shrink engorged hepatic ducts, so it can be useful to treat liver conditions such as hepatitis, cirrhosis, and jaundice.

Cancer
Recent scientific research confirm that turmeric can cure host of diseases, also they found that turmeric restrain the growth of various types of cancer. Turmeric is used for the treatment of skin cancer or pre cancerous skin conditions. Both topical and internal uses are beneficial.

Atherosclerosis
Turmeric may helpful in preventing the blockage of arteries that can gradually cause a heart attack or stroke in one of two ways. Turmeric makes cholesterol levels low and inhibited the oxidation of LDL (bad cholesterol). Oxidized LDL deposits in the walls of blood vessels and contributes to the formation of atherosclerotic plaque. Turmeric may also prevent platelet build up along the walls of an injured blood vessel. Platelets collecting at the site of a damaged blood vessel cause blood clots to form and blockage of the artery as well.

Osteoarthritis
Turmeric may help relieve the symptoms of osteoarthritis because of its ability to reduce pain and disability.

Menstrual problems of Woman
For women who experience monthly menstrual cramps, try using turmeric extract or bitters twice daily for two weeks prior to expected menstruation. Turmeric is an antispasmodic to smooth muscles so it reduces digestive and menstrual cramping. It should reduce the severity of pain, if not ease them completely. Certainly, diet and standard of living have a reflective influence on the menstrual cycle, but turmeric is a great addition.

Bacterial Infection / Wounds
Turmeric is useful as an external antibiotic in preventing bacterial infection in wounds.

Eye Disorder
Curcumin may prove to be as effective as corticosteroids in the uveitis (inflammation of the uvea, the middle layer of the eye between the sclera - white outer coat of the eye and the retina - the back of the eye) the type of eye disorder.

Other Health Disorders
Turmeric decreases congestion and inflammation from stagnant mucous membranes. Turmeric is anti-inflammatory to the mucous membranes, which coat the throat, lungs, stomach and intestines. Regular use of turmeric can benefit from Colitis, Crohn's disease, diarrhea, and post-giardia or post salmonella conditions. The itching and inflammation that accompanies hemorrhoids and anal fissures can reduce by use of turmeric. Turmeric can also benefit skin conditions including: eczema, psoriasis and acne, for those it is potent detoxifier.

"Turmeric gives the energy of the Divine Mother and grants prosperity of health. Turmeric is effectual for purification the chakras, as well as purifying the path of the subtle body."

http://www.turmeric.co.in/turmeric_medicinal_use.htm

Dangerous Food Additives

By Madhura Pandit

December 10, 2010

Do you know that there are several dangerous food additives which you regularly consume through the medium of foods and drinks? This article will give you more information on food additives to avoid.

We gorge on our favorite fast food, pizzas, Chinese dishes, etc. without bothering about the ingredients used in these dishes. Secondly, most of us calorie conscious people, avoid sugar and use aspartame instead. Thirdly, we also love to add a lot of color to our foods and hence, use food colors. However, does any of think whether these food additives are good for our health or not? Many of these products are termed as dangerous food additives and are not meant for regular consumption. Let us take a look at the list of harmful food additives that one should avoid.

Most Dangerous Food Additives to Avoid
The most common dangers of food additives and preservatives is that these can lead to abdominal pain and discomfort. One may experience nausea, vomiting, flatulence, etc. on consumption of these products. However, there are some food additives that can lead to more severe side effects, like they can increase the risk of cancer or many other fatal diseases. The following are such dangerous food additives which should be avoided.

Monosodium Glutamate (MSG)
One of the most common food additive, food enhancer and flavoring agent, Monosodium Glutamate or MSG, is commonly found in Chinese cuisine. It is found in a variety of packaged and processed sauces, salad

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dressing, gravy, soy sauce; fish, chicken and sausage products. Monosodium Glutamate side effects include headache, nausea, migraine, Alzheimer's disease, abdominal inflammation, and sudden cardiac death.

Aspartame
If you are a regular user of Nutra-sweet and Equal, think twice! It contains aspartame which is also one of the most dangerous food additives today. Apart from these products, it is also found in diet sodas, and products that claim 'no sugar'. Aspartame is linked to several cancer types like leukemia, lymphoma, etc. It is specially advised not to be used during pregnancy. Dangers of aspartame also include weight loss, hair loss, memory loss, confusion, etc.

Potassium Bromate
Potassium bromate is banned in most of parts of the world but, not in the United States. This product is specially added to flour while making biscuits and rolls to increase their volume. It was found to be a cause of cancer, when tested on animals. In some parts, one may come across food product packages, containing potassium bromate, warning of cancer.

Olestra
Olestra is fat substitute, used as a food additive, widely popular under the brand name Olean. This additive is harmful to the human body as it does not get absorbed in the body. Consumption of this product leads to abdominal discomfort, stomach cramps, diarrhea, flatulence, etc. On the other hand, regular consumption of this product also decreases the body's ability to absorb natural and beneficial fats.

Sodium Nitrate
Most of the preserved meats contains a dangerous food additive that is sodium nitrate. Foods like hotdogs, bacon, ham, smoked fish, breakfast sausages, luncheon meats, corned beef, etc, contain this food additive which is believed to turn carcinogenic when exposed to the acid in the stomach. Regular consumption of cured meats is also believed to be one of the reasons for causing cancer in people.

Dangerous Food Additives List
Apart from the above mentioned harmful ones, there are several other food additives to avoid. The following is a list of such products that one should be aware of and avoid completely.

Butylated hydroxytoluene (BHT)
Butylated hydroxyanisole (BHA)
Calcium Disodium EDTA
Carrageenan
Cyclamate
Disodium Guanylate
Disodium Inosinate
Food Colors
Preservatives
Propyl Gallate
Sucralose
Saccharin
Sodium benzoate
Sulfites

These were some of the most dangerous food additives food additives that you need to avoid, as they are harmful to health. Rather than adding the spice and color to your food artificially, you can favor food safety by opting for natural, freshly made and raw food to have a healthy and disease free life! Take care!

http://www.buzzle.com/articles/dangerous-food-additives.html

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This happens where people involved have made a distinction between medicine and practice. Many modern medicines are often better than traditional; they relieve symptoms better and faster than many traditional medicines. It is for this reason that many people now resort to modern medicines when ill.

On the question of medical practice, however, Western ideas have little in common with those found in Africa. Practices such as change of climate, exercise, and cutting down on smoking, are not generally found in African culture. On the other hand, such things as offering to placate spirits or ancestors, rubbing oneself with a chicken or goat in order to transfer the sickness to that creature, are not generally recommended by modern doctors as curative techniques. Thus, the power of modern medicines in relieving symptoms may be sought from the modern doctor, while the practices suggested by the traditional healer for relieving the basic cause of illness, plus the hope he gives the patient, may also lead the patient to him.

These facts should alert us to the possiblility that the process by which the definition of the illness is arrived at, the people making the definition and the situation in which the definition is made may all be important in understanding illness behavior.

The inclusion of spirits in a discussion of causes of illnesses often puzzles many modern medical scientists. Spirits are unobservable objects. And because of this

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they belong to a realm about which the Western scientist has no accumulated empirical knowledge. Western or modern medical science has, therefore, tried to disown this level of knowledge. Modern medicine is rooted in scientific method; illness is viewed as a natural phenomenon that can be explained in terms of physical processes and therefore curable by rational methods. Traditional medicine has added another dimension, that is, *non-scientific* or *subjective knowledge*. They are right because medical knowledge is, in fact, produced in society of objective and subjective ways because medicine deals with human beings who exhibited both objective and subjective dimensions. Non-scientific or subjective knowledge has a place in the practice of medicine.

Psychology can help us understand one way by which spiritis can cause illnesses. People who believe in spirits can become sick and a result of this belief. They believe, for example, that ancestors can punish them if they commit certain anti-social acts. The ancestors, when offended, can punish an individual with illness and in extreme cases, with death. Thus, when people who believe in spirits commit certain anti-social acts that they believe will offend their ancestors, they may well become sick. After all, what people believe to be true is true in its consequences. Emotional shock induced by prolonged and tense emotion due to the belief that one has been attacked or is about to be attacked by spirits is often sufficient to cause illness or death.

Because these spirits are considered to be of such immense importance in the general concepts of health and illness, religious rituals and invocations, magical methods constitute integral parts of African traditional medicine and are often applied to the advantage of the patient.

Witchcraft is another major cause of illness. Many people agree that witches exist in society. On the other hand, modern science has taken the view that witches do not exist except in the minds of certain people. The difference of opinion has been caused by two main factors. There is, firstly, the absence of a shared, clear and correct definition of African witchcraft. People who take part in the witchcraft debate do not usually argue about the same thing. The second cause of conflict has been the reliance on the part of many people on the English or European literature relating to witchcraft. It is from this literature and not from personal experience or research that their ideas of witchcraft were acquired. There are important differences between European and African witchcraft ideas. Witchcraft in Africa includes harmful medicines, harmful charms, harmful magic and any other means or devices in causing any injury to any person or animal or property. The connection between the use of certain types of harmful medicines and illnesses can easily be demonstated. Other ways such as the use of certain charms and contagious magic are more complex.

It is important, however, to bear in mind that many people who accuse others of witchcraft are not seeking a legal ruling of the matter. The accusation may be a response to situations of anxiety and stress or means for the expression of social strains and tensions. The accusation may also be a means of social control or of social rupture, or a means of adaptation to rapid and disruptive social change. These are not legal issues; they are cultural, social and psychological issues that nonetheless call for urgent attention. In other words,it is not always helpful to try and prove whether an individual accused of witchcraft is in fact a witch; it is often more useful to examine the events that led to the accusation of witchcraft and attempt to solve the social problem involved.

Many people believe that abnormal illnesses may to a certain extent be avoided or prevented by wearing charms, making the necessary offerings to the ancestors, behaving in such a way thatdoes not make enemies, and avoiding plaes where witches may attack one. But all these measures may fail. Curative measures must then involve the use of medicines to correct the bodily condition and also rituals to remove the bad cause.

http://www.ewfi.de/Text/Illness.pdf

What is E.coli?

By Nakato Lewis

The bacteria Escherichia coli was named for an Austrian doctor, Theodor von Escherich (1857-1911), who first isolated the genus of bacteria belonging to the family enterobacteriaceae, tribe Escherichieae. This bacterium is the common inhabitant of the intestinal tract of man and other animals. Because of its difficult name, it is usually referred to as E.coli. We need these bacteria to breakdown cellulose and it assists in the absorption of vitamin K, the blood-clotting vitamin.

What is E.coli O157:H7?

Not all forms are so helpful. E. coli O157:H7, which was first identified in 1982, is a particularly nasty version. It secretes a powerful poison, called a verotoxin that binds to receptors on human kidney, brain and gut

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African Traditional Herbal Research Clinic

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FEATURED ARTICLES

Think Twice: How the Gut's "Second Brain" Influences Mood and Well-Being

The emerging and surprising view of how the enteric nervous system in our bellies goes far beyond just processing the food we eat

By Adam Hadhazy
February 12, 2010

As Olympians go for the gold in Vancouver, even the steeliest are likely to experience that familiar feeling of "butterflies" in the stomach. Underlying this sensation is an often-overlooked network of neurons lining our guts that is so extensive some scientists have nicknamed it our "second brain".

A deeper understanding of this mass of neural tissue, filled with important neurotransmitters, is revealing that it does much more than merely handle digestion or inflict the occasional nervous pang. The little brain in our innards, in connection with the big one in our skulls, partly determines our mental state and plays key roles in certain diseases throughout the body.

Although its influence is far-reaching, the second brain is not the seat of any conscious thoughts or decision-making.

"The second brain doesn't help with the great thought processes…religion, philosophy and poetry is left to the brain in the head," says Michael Gershon, chairman of the Department of Anatomy and Cell Biology at New York–Presbyterian Hospital/Columbia University Medical Center, an expert in the nascent field of neurogastroenterology and author of the 1998 book *The Second Brain* (HarperCollins).

Technically known as the enteric nervous system, the second brain consists of sheaths of neurons embedded in the walls of the long tube of our gut, or alimentary canal, which measures about nine meters end to end from the esophagus to the anus. The second brain contains some 100 million neurons, more than in either the spinal cord or the peripheral nervous system, Gershon says.

This multitude of neurons in the enteric nervous system enables us to "feel" the inner world of our gut and its contents. Much of this neural firepower comes to bear in the elaborate daily grind of digestion. Breaking down food, absorbing nutrients, and expelling of waste requires chemical processing, mechanical mixing and rhythmic muscle contractions that move everything on down the line.

Thus equipped with its own reflexes and senses, the second brain can control gut behavior independently of the brain, Gershon says. We likely evolved this intricate web of nerves to perform digestion and excretion "on site," rather than remotely from our brains through the middleman of the spinal cord. "The brain in the head doesn't need to get its hands dirty with the messy business of digestion, which is delegated to the brain in the gut," Gershon says. He and other researchers explain, however, that the second brain's complexity likely cannot be interpreted through this process alone.

"The system is way too complicated to have evolved only to make sure things move out of your colon," says Emeran Mayer, professor of physiology, psychiatry and biobehavioral sciences at the David Geffen School of Medicine at the University of California, Los Angeles (U.C.L.A.). For example, scientists were shocked to learn that about 90 percent of the fibers in the primary visceral nerve, the vagus, carry information from the gut to the brain and not the other way around. "Some of that info is decidedly unpleasant," Gershon says.

The second brain informs our state of mind in other more obscure ways, as well. "A big part of our emotions are probably influenced by the nerves in our gut," Mayer says. Butterflies in the stomach—signaling in the gut as part of our physiological stress response, Gershon says—is but one example. Although gastrointestinal (GI) turmoil can sour one's moods, everyday emotional well-being may rely on messages from the brain below to the

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brain above. For example, electrical stimulation of the vagus nerves—a useful treatment for depression—may mimic these signals, Gershon says.

Given the two brains' commonalities, other depression treatments that target the mind can unintentionally impact the gut. The enteric nervous system uses more than 30 neurotransmitters, just like the brain, and in fact 95 percent of the body's serotonin is found in the bowels. Because antidepressant medications called selective serotonin reuptake inhibitors (SSRIs) increase serotonin levels, it's little wonder that meds meant to cause chemical changes in the mind often provoke GI issues as a side effect. Irritable bowel syndrome—which afflicts more than two million Americans—also arises in part from too much serotonin in our entrails, and could perhaps be regarded as a "mental illness" of the second brain.

Scientists are learning that the serotonin made by the enteric nervous system might also play a role in more surprising diseases: In a new *Nature Medicine* study published online February 7, a drug that inhibited the release of serotonin from the gut counteracted the bone-deteriorating disease osteoporosis in postmenopausal rodents. (*Scientific American* is part of Nature Publishing Group.) "It was totally unexpected that the gut would regulate bone mass to the extent that one could use this regulation to cure—at least in rodents—osteoporosis," says Gerard Karsenty, lead author of the study and chair of the Department of Genetics and Development at Columbia University Medical Center.

Serotonin seeping from the second brain might even play some part in autism, the developmental disorder often first noticed in early childhood. Gershon has discovered that the same genes involved in synapse formation between neurons in the brain are involved in the alimentary synapse formation. "If these genes are affected in autism," he says, "it could explain why so many kids with autism have GI motor abnormalities" in addition to elevated levels of gut-produced serotonin in their blood.

Down the road, the blossoming field of neuro-gastroenterology will likely offer some new insight into the workings of the second brain—and its impact on the body and mind. "We have never systematically looked at [the enteric nervous system] in relating lesions in it to diseases like they have for the" central nervous system, Gershon says. One day, perhaps there will be well-known connections between diseases and lesions in the gut's nervous system as some in the brain and spinal cord today indicate multiple sclerosis.

Cutting-edge research is currently investigating how the second brain mediates the body's immune response; after all, at least 70 percent of our immune system is aimed at the gut to expel and kill foreign invaders.

U.C.L.A.'s Mayer is doing work on how the trillions of bacteria in the gut "communicate" with enteric nervous system cells (which they greatly outnumber). His work with the gut's nervous system has led him to think that in coming years psychiatry will need to expand to treat the second brain in addition to the one atop the shoulders.

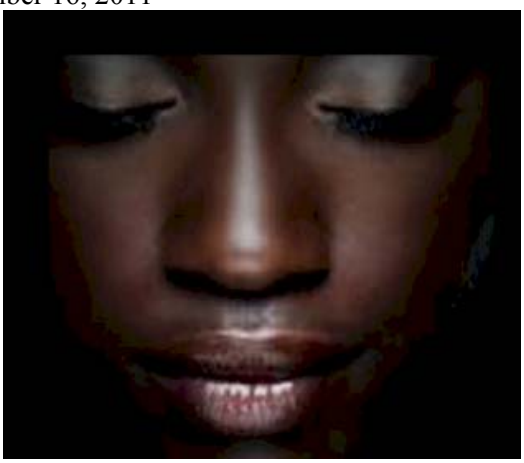
So for those physically skilled and mentally strong enough to compete in the Olympic Games—as well as those watching at home—it may well behoove us all to pay more heed to our so-called "gut feelings" in the future.

http://www.scientificamerican.com/article.cfm?id=gut-second-brain&page=2

Feeding Our Melanin

By The Body Temple

December 16, 2011



Chlorophyll's molecular structure is similar to the hemoglobain of human blood and melanocytes. Hemoglobin is our body's oxygen transporter. From a chemical standpoint, the components of chlorophyll are almost identical to those of hemoglobin.

A German chemist, Dr Richard Wilsstatter, determined in 1913 that the two molecules closely resemble on another. He found that hemoglobin is composed of four elements - carbon, hydrogen, oxygen and nitrogen - organized around a single atom of iron. Hemoglobin's iron content is the main reason we need a dietary supply of that mineral.

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Chlorophyll has the same elements, however they are organized around a single atom of magnesium.

Melanocytes are cells that produce **melanin**, a dark pigment responsible for the coloration of hair and skin. In addition to being found in the skin, melanocytes are also present in the brain, inner ear, heart, and eye, among other locations in the body. They usually are buried below the surface. The cells produce melanin in response to environmental cues, including exposure to ultraviolet radiation and certain chemicals. The melanin travels out of the melanocytes and up to the surface of the tissue where the cells are found.

Melanin also plays some other roles in the body, including the brain, where it appears to be a source for the basic ingredients for some neurotransmitters in people with limited melanin production in the brain, reductions in some neurotransmitters have been observed. The brain synthesize chemicals to make up for its lack and chlorophyll is a strong source of nutrients needed to support healthy brain pineal regeneration.

The benefits of various green foods seem related to their chlorophyll content. Chlorophyll has the power to regenerate our bodies at the molecular and cellular level.

It is known to help cleanse the body, fight infection, help heal wounds, and promote the health of the circulatory, digestive, immune, and detoxification systems.

Chlorophyll consumption increases the number of red blood cells and, therefore, increase oxygen utilization by the body. Chloropyll also reduces the binding of carcinogens to DNA in the liver and other organs. It also breaks down calcium oxalate stones for elimination, which are created by the body for the purpose of neutralizing and disposing of excess acid.

Two of the best sourcces of chlorophyll are wheat grass and barley grass. Grass - this humble plant that we walk on, mow and usually take for granted is an amazing doorway to health.

http://thebodytemple.ning.com/forum/topics/feeding-our-melanin

Health Benefits of Dandelion

By Aparup Mukherjee

The health benefits of dandelion include relief from liver disorders, diabetes, urinary disorders, acne, jaundice, cancer and anemia. It also helps in maintaining bone health, skin care and weight loss.

Perhaps dandelion is more popular as an ornamental flowering plant than as a medicine. The flowers of dandelion look brilliant and can be seen in various gardens and parks. There are many varieties of dandelion, but the common dandelion is scientifically known as Taraxacum Officinale. Dandelion, which literally translates into "lion's tooth" in French, is rich in vitamin-A, C, iron and calcium and detoxifiers which explains its use in medicines. We shall find out what we can do with dandelion apart from using it to decorate our gardens and rooms.

- **Bone Health:** Dandelion is rich in calcium, which is essential for growth and strength of bones, and is rich is anti oxidants like vitamin-C and Luteolin, which protect bones from age related damages due to free radicals, such as weakening and loss in density.
- **Liver Disorders:** Dandelion can help liver in many ways. While its anti oxidants such as vitamin-C and Luteolin keeps it functioning in full gear and protect it from aging, other compounds in it help treating hemorrhage in liver, maintaining proper flow of bile etc. It also stimulates liver and promotes digestion

  Diabetes: Dandelion juice can help diabetic patients by stimulating production of insulin from pancreas and thus help keeping low the blood sugar level. Since it diuretic in nature, it makes the diabetic patients urinate frequently which too helps remove the extra sugar from the body. Moreover, diabetics are prone to renal problems. The diuretic properties of dandelion can help removing the sugar deposition in the kidneys through urine. Moreover, dandelion juice is slightly bitter to taste, which also effectively lowers sugar level in the blood, as all bitter substances do.
- **Urinary Disorders:** Dandelion is highly diuretic in nature. Thereby it helps clean deposits of toxic substances in the kidneys and the urinary system. Moreover, its disinfectant properties inhibit microbial growth in the urinary system. In fact, the diuretic properties of dandlion are so strong that in French its is also called "pissenlit" which means “urinate in bed”.
- **Skin Care:** Dandelion sap, also known as dandelion milk, is useful in treating skin diseases which are caused due to microbial and fungal infection, as this sap is highly alkaline and have germicidal, insecticidal and fungicidal properties. Care should be taken while using this sap as to avoid its contact with eyes. This sap can be used on itches, ringworm, eczema etc. without risk.

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Continued from page 81- Health Benefits of Dandelion

- **Acne:** Dandelion juice is a good detoxifier, diuretic, stimulant and anti oxidant. These four properties make it a good treatment for acne. Before we know how it treats acne, we must know what causes it. Acne is caused mainly during teens, when the body undergoes many physiological and hormonal changes. The hormones, which bring about changes in the body, if do not maintain proper ratio among themselves or are not regulated properly, tend to deposit as toxic substances in the body which tend to come out with sweat through the sweat glands or sebaceous glands on the skin. Now, during these changes, these glands secret more oils which, mixed with dead skin, block the pores and the secretion is obstructed. Due to this, these toxic substances cannot escape and result in acne. This is further worsened by the microbial infections on the effected places. Dandelion juice, being a stimulant, diuretic and detoxifier in nature, can help regulate proper secretion of hormones, increases sweating and widens up the pores facilitating removal of toxics through sweat and also through urine, as it is diuretic too. Its sap, if externally applied on acne, can inhibit microbial infection.
- **Weight Loss:** Our urine contains up to 4% of fats. So, more we urinate, more water and fats are lost from the body. Dandelion, being diuretic in nature, promotes urinating and thereby helping lose weight without side effects.
- **Cancer:** Dandelion is high in anti oxidants such as vitamin-C and Luteolin which reduce the free radicals (very much responsible for causing cancer) in the body, thereby reducing the risk of cancer. It also detoxifies the body, which also helps protect from cancer.
- **Jaundice:** Jaundice is primarily a disorder of the liver in which it starts over producing bile, which ultimately gets into the blood stream damaging the whole metabolism. The excess of bile is also reflected through color of the skin, eyes etc. The treatment of jaundice includes three main steps. First, checking production of bile; second, removal of excess bile from the body and third, fighting the viral infection. Dandelion is very helpful in all of these. It promotes liver health and regulates bile production. Being diuretic in nature, it promotes urination through which the excess bile is removed. Finally, being anti oxidant and disinfectant in nature due to presence of vitamin-C and Luteolin, it fights viral infection too. It is more beneficial if taken with sugarcane juice, since it replaces the sugar in the body which is very much lowered due to action of bile, causing extreme fatigue and weakness.
- **Gall Bladder Disorders:** Dandelion is very beneficial for gall bladder and liver, as it improves their functioning, protects them from ill effects of oxidants and infections and regulates secretions from them.
- **Anemia:** Dandelion has pretty good iron, vitamin and protein content. While iron is the integral part of hemoglobin in the blood, vitamins (particularly vitamin-B) and protein are essential for formation of red blood cells and certain other components of the blood. This way dandelion can help anemic people.
- **High Blood Pressure:** Urinating is an effective way of lowering blood pressure. In fact, most of the modern drugs for lowering blood pressure are based on this phenomenon. Dandelion juice, being diuretic in nature, increases urinating, both in quantity and frequency and thus helps lower high blood pressure. The fiber in dandelion is also helpful in reducing cholesterol and thereby assists lowering of blood pressure, since cholesterol is one of the factors which make blood pressure high. Then there is potassium, which is in plenty in dandelion juice and is very effective in lowering blood pressure by replacing sodium.
- **Other Benefits:** Dandelion can also be used as a vegetable and is a good source of fiber. It promotes digestion. In old days it was also used to treat scurvy, due to presence of vitamin-C in it. It also has healing effects on dyspepsia, infections in the stomach, intestines and urinary system.

http://www.organicfacts.net/health-benefits/herbs-and-spices/health-benefits-of-dandelion.html

Capsicum Nutritional Benefits

Capsicum or otherwise known as **Cayenne Pepper** and there are number varieties are found such as red pepper, green pepper, bell pepper, chili pepper and yellow pepper. Capsicum belongs to the nightshade family group of plants like tomatoes, egg plants and botanically to the family of Solanaceae, and scientifically called as Capsicum annum. The most common variety found and available in all seasons is Green Pepper or Capsicum.

Though it is native of America and now it is being

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cultivated in all tropical regions of the world. Capsicum green variety is mostly available in the market.

Capsicum or Cayenne Pepper is widely used as vegetable, spice, medicine as well for its nutritious and medicinal qualities.

Capsicum or Cayenne Pepper consists of vital carotenoids like, Lutein, carotene, capsorubin and capsanthin, and comprises of proteins and fats, Vitamins such as Vitamin C, Vitamin E, Vitamin A, Vitamin B1, B2, B3 and Capsaicinoid Oleoresin, alkaloidal glycosides like Solanine and Solasadine and Coumarin or Scopoletin, which are termed as essential phytonutrients that provide numerous health benefits.

Capsicum nutritional benefits include; Capsicum or Cayenne Pepper improves eye sight as it is rich in Vitamin A, maintains healthy skin and mucus membrane. Capsicum boosts immune system, prevents regular infections such common cold and fever due to the rich content of Vitamin C. It prevents the damage to tissues and cells, caused by free oxygen radicals, as it eliminates scavenging radicals due to the rich source of antioxidants. Capsicum hastens the metabolism process and helps to burn more calories thereby aids to lose weight, as it stimulates digestive secretions to improve digestion. Capsicum reduces triglycerides levels in the blood thus lowering Cholesterol thus regulates hypertension, thereby preventing Cardiovascular disorders.

Due to the presence of laxative properties, it relieves constipation. The other important medicinal benefits are, it is likely to stimulate the release of neurotransmitters and endorphins that is produced in the brain, which in turn provide relief from pain and inflammation. Capsicum is proved to be beneficial for diabetic patients also, as it regulates glucose levels in the blood. Capsicum is also used for the treatment of chronic rhinitis. It also lowers the assimilation of fatty substances and as such this effect, helps to lose weight, prevents accumulation fats, and prevents Obesity. Capsicum improves reproductive health, and prevents the formation of cancerous tumors and cells by blocking the supply of oxygen to such cells making them to die, and as such it prevents cancers.

Capsicum is recommended for the treatment to boost metabolism process, to reduce obesity, to treat respiratory disorders. Capsicum or Cayenne Pepper is used as external application to treat pain due to arthritis, rheumatoid arthritis and painful conditions of joints, muscles, and back pains. The presence of Vitamin C found in Capsicum plays an important role in preventing blood clots as the recent studies proved. The Researchers also proved the effect of antioxidant known as Capsaicin that effectively destroys the bacteria called as Vibrio vulnificus that causes food borne bacterial disease.

One teaspoon of Cayenne Pepper mixed with a glass of hot water, prevents heart strokes naturally in progress, if it is taken on regular basis as per the advice of Doctors, and as such this process can be termed as life saving process. Capsicum relieves mild depression and anxiety, provides relief from chronic fatigue syndrome, it reduces blood pressure as it dilates blood vessels, and helps to get rid of addiction. It provides relief from sore throat if it is gargled. By sprinkling of capsicum one can prevent frostbites. Capsicum aids to remove toxic substances from the body, provides relief from colic pain, provides relief from gastrointestinal disorders such as flatulence, bleeding ulcers and diarrhea, and heals cluster headaches, cures diabetic feet, itching palms as well. Capsicum is also used for the treatment of kidney disorders, vascular headaches, thyroid malfunction, menstrual disorders, asthma and pleurisy.

To conclude, the information cited above is only for educative purpose and to create awareness among the people about the medicinal, health and nutritional benefits of **Cayenne Pepper or Capsicum.** Considering the potential health benefits of Capsicum vegetable, it can be added as one of the ingredients in the preparation of food items, and can be added to the regular diet to ward off regular health disorders. Before trying to use Capsicum as home remedy for various ailments, consult Doctor or nutritionist to treat the health disorders accordingly.

http://ideas4health.in/health-ideas/health-foods/vegetables/capsicum-nutritional-benefits/

How Aloe Vera Can Help You Achieve Weight Loss?

By Aqeel Syed

June 25, 2011

Aloe vera is no doubt one of the wonder herbal products that has taken the world by a storm. It is now the main product of some companies in the 500 fortune companies in the world including Forever Living Company based in the USA. Of the many purported health benefits, many consumers wonder if *aloe vera* can help them achieve their weight loss goals.

Yet this product is not really new to the traditional herbal medicine industry. It has been used for treatment of

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human and animal illnesses and also as beauty products in almost all the continents in the world. Due to its preference for warmer climates, it is found in the tropics and does well in countries along the equator.

The leaves and the roots are used in most cases. A concoction is made from these parts of the plant and taken as it is r sweetened to dull the bitter taste. Mixtures can be made with other products with medicinal benefits such as honey products, vanilla or used as a cream.

How *Aloe vera* contributes to Weight Loss

- *It aids in removal of extra water in the cells*: all metabolic processes end up releasing water as a by-product. This means that your body generates water from internal sources besides the external or water that you drink.
- *Helps build enough supply of vitamins and minerals which help in burning excessive fats*: there are Vitamins such as B12 that are required for metabolism. By taking Aloe vera, you would improve the availability of the B12 and other similar vitamins. The body therefore becomes efficient in energy utilization, reduces the false hunger and reduces energy intake. The high metabolism also increases demand for drinking water and this helps clean the body organs.
- *Promotes a lean body*: the use of Aloe vera helps in catabolism of fatty acids and leaves little stored in the skin and other body organs such as the heart muscles. The individual becomes leaner and has a feel good effect.
- *It reduces body mass index*: this results in less energy demanded leading to less food intake.
- *It is rich in collagen protein:* and therefore promotes muscle development and weight loss.

How to Ensure Effective Use of *Aloe vera* in Weight Loss

- *Seek professional advice*: even though most natural products are not known to have bad reactions with human body system, it helps to seek advice from your physician. Depending on the soil type that the aloe plant was grown, you may find high amounts of sulfur in the aloe product.
- *Start off by cleansing the colon*: the effectiveness of your digestive system often contributes to weight gain. Therefore before you get into weight loss program, take the specially formulated Aloe vera solution that helps to remove the toxic wastes that often remain in the colon.
- *Avoid the high calorie foods*: however much Aloe vera products that you consume, you will be neutralizing the effects of Aloe by eating foods that have higher amounts of calorie. The extra calorie would end being converted into fats and stored in adipose tissues. Therefore make a decision to completely cut off the use of foods high in calories and less in fiber content. These are often junk foods and foods high in fats.
- *Ensure that you have a regular program of exercising:* there is no magic to cutting weight without an actual physical process. The biochemical process such as enhanced metabolism in the cells will only aid the body to burn the fats faster but would still require the actual metabolic process.

Other medicinal benefits of *Aloe Vera*

- *Enhances the circulation of blood*: by cutting down on the fatty acid deposits, Aloe vera helps in the veins and capillaries to have more space and a low better circulation of blood. This improves individual performance in work because of being more alert. The blood will carry more oxygen and other nutrients which are essential for body function. The threat of high blood pressure is reduced.
- *Boosts immune system*: Aloe vera on its own has antibiotic properties and even anti-protozoa effect.
- *Improves the immune system:* it cleans the fat deposits in the blood capillaries which allows more space for blood flow.
- *Promotes cartilage formation*: this is because Aloe vera supplies the materials required for cartilage formation such as sulfur based amino acids.
- *Contains essential amino acids*: the Aloe vera drink is rich in Serine, Methionine and Threonine. These are amino acids that have sulfur bonds and therefore good for the formation of hair and nails.

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In finishing, Aloe vera is definitely a wonder drug. Its benefits are proven scientifically and therefore guaranteed results. You can take it without a doctor's prescription therefore safe for most of the family members. You could also mix it with other foods and therefore very easy to serve. If you may be having allergic reactions, then you need to seek medical advice.

http://www.hivehealthmedia.com/aloe-vera-cut-weight/

Continued from page 78 – What is E. Coli?

cells and kills them. Not all people have the receptors, which explain why some people and animals, including cattle that get O157:H7 become very ill and some don't.

E.coli 0157:H7 is a mutant form of this bacteria found specifically in the intestinal tract of cattle. According the United States Department of Agriculture, the muscle of cattle, which we eat as meat, is sterile. It is only after this meat comes in contact with the contents of the intestines or the feces of infected cattle does it become contaminated.

Up until the late 1970's no one had any idea of what was causing this strange illness now known as E.coli poisoning or "the hamburger disease. The symptoms were severe abdominal cramps, followed by bloody diarrhea. Some of the infected people came down with hemolytic uremic syndrome (HUS), which starts by shutting down a victim's kidneys and then attacking and shutting down just about every organ in the body. There is no cure for HUS, and it is very often fatal. The USDA believes that the incidences of E.coli poisoning are increasing. Today HUS is the leading cause of kidney failure in children. For some odd reason E.coli appears to affect primarily children and senior citizens.

Escherichia coli is one of the most diverse bacterial species with several pathogenic strains with different symptoms and with only 20% of the genome is common to all strains. Because of its long history of laboratory culture and ease of manipulation, E. coli also plays an important role in modern biological engineering and industrial microbiology.

Considered a very versatile host for the production of heterologous proteins (a protein experimentally put into a cell that the cell does not normally make), researchers can introduce genes into the microbes using plasmids, allowing for the mass production of proteins in industrial fermentation processes. Genetic systems have also been developed which allow the production of recombinant proteins using E. coli. One of the first useful applications of recombinant DNA technology was the manipulation of E. coli to produce human insulin.

Another example was the use of impure modified bacillus bacteria (E. coli), in the mass production of tryptophan in late 1980s and early 1990s that cause 37 deaths and 1500 disabilities. Tryptophan is an amino acid used by the body to make serotonin. Tryptophan is a routine constituent of most protein-based foods or dietary proteins. It is particularly plentiful in chocolate, oats, dried dates, milk, yogurt, cottage cheese, red meat, eggs, fish, poultry, sesame, chickpeas, sunflower seeds, pumpkin seeds, spirulina, bananas, and peanuts. Despite popular belief that turkey has a particularly high amount of tryptophan, the amount of tryptophan in turkey is typical of most poultry. There is also a myth that plant protein lacks tryptophan; in fact, tryptophan is present in significant amounts in almost all forms of plant protein, and abundant in some.

Aspartame is also genetically engineered in E. coli bacteria. The stuff you find in your toilet. The vats are full of toxic sludge. Then they press it into a white powder and you're consuming it along with those vitamins in Diet Coke. Aspartame has caused an epidemic of obesity and diabetes. Aspartame makes you crave carbohydrates so you gain weight. It's addictive because the free methyl alcohol causes chronic methanol poisoning. This affects the dopamine system of the brain and causes addiction. Aspartame can precipitate diabetes, simulates and aggravates diabetic retinopathy and neuropathy, destroys the optic nerve, causes diabetics to go into convulsions and to lose their limbs, and interacts with insulin.

Modified E. coli have been used in vaccine development, bioremediation, and production of immobilised enzymes. The use of the bacterium E. coli, reconfigured to consume nuclear waste and waste from chemical and biological weapons, has been supported by a team at LBNL (Lawrence Berkeley National Laboratory). E. coli was one of the first organisms to have its genome sequenced; the complete genome of E. coli K-12 was published by *Science* in 1997.

E. coli O104:H4 A Newly Emergent Pathogen - Excerpts

A deadly new strain that has picked up the Shiga toxin genes with the help of a virus that smuggles genes between bacteria

Prof. Joe Cummins

Continued from page 85 – E. coli O104:H4 A Newly Emergent Pathogen

The outbreak of Shiga toxin-producing *Escherichia coli* O104:H4 began in Germany in May 2011. Between 2 May and 14 June 2011, 3,332 cases were reported, including 818 cases of HUS (haemolytic uremic syndrome, or bloody urine) were reported from 13 European Union Member States, and 36 patients died. Over 95 percent of the afflicted were from Germany and the vast majority live in, or have travelled to northern Germany. Cases were also found in US and Canada. Some 100 patients have such bad kidney damage in Germany that they need an organ transplant or will require dialysis treatment for the rest of their lives. *E. coli* O104:H4 is a new strain more threatening than *E. coli* O157:H7 that has killed many in North America and Europe during the past thirty years.

Origin of E coli O157:H7

The toxic strain O157:H7 emerged in the United States during the 1980s, and has since caused illness and death globally. Ten years ago, Mae-Wan Ho argued that genetic engineering may have contributed to the rapid evolution of *E. coli* 0157:H7, which has many genetic differences compared to the common harmless *E. coli* strain. Indeed, it is legitimate to question whether genetic engineering over the past 40 years may have contributed to the accelerated rate at which new and recurrent strains of antibiotic and drug resistant pathogenic viruses and bacteria have been emerging during the same period. Along with the toxin genes, the toxic strains contain plasmids bearing antibiotic resistance. For example, analysis of O157 strains from Nigeria showed that one or resistance plasmids were present and an aquatic O157 isolate containing two plasmids was resistant to seven drugs, including ampicillin, cefuroxime, ciprofloxacin, cotrimoxazole, nalidixic acid, nitrofurantoin and tetracycline. A Greek study of milk from cows, goats and sheep showed that all 29 *E. coli* O157 isolates displayed resistance to a wide range of antimicrobials, with the Shiga toxin positive isolates being, on average, resistant to a higher number of antibiotics than those which were Shiga toxin negative. All *E. coli* O157 isolates were found to be resistant to ampicillin, an antibiotic used in human medicine for the treatment of coliform infections.

Origin of E. coli O104:H4

The first isolates of the *E. coli* O104:H4 with Shiga toxin date back to 2001, and were described by scientists as HUSEC41. It turned up again in 2006, in a woman who contracted HUS in Korea. The current O104:H4 outbreak strain is a recombinant of two pathogenic *E. coli* types, enterohaemolytic *E. coli* (EHEC), causing haemolytic uremic syndrome HUS, and enteroaggregative *E. coli* (EAEC), a recognized cause of diarrhoea in children in developing countries. Recent outbreaks implicate EAEC as a cause of foodborne illness in industrialized countries. EAEC infection causes bacterial cells to form biofilms that adhere to the intestinal mucosa and elaborate enterotoxins and cytotoxins, which result in secretory diarrhoea and mucosal damage. EAEC's ability to stimulate the release of inflammatory mediators may also play a role in intestinal illness. *E. coli* O104:H4 may have arisen through mating between male and female *E. coli* that produced recombinants bearing new and deadly gene combination or by repeated horizontal gene transfer, resulting in deadly strains.

E. coli O104:H4 also contains an array of antibiotic resistance genes conferring resistance to ampicillin amoxicillin/clavulanic acid, piperacillin/sulbactam, apiperacillin/tazobactam, cefuroxim, cefuroxim-zxetil, cefoxitin, cefotaxim, cetfazidim, streptomycin, nalidixinsäure, tetracyclin, trimethoprim and sulfamethoxazol, exceeding the numerous resistance genes found in previous lethal outbreaks. The antibiotics are predominantly available in medical applications. The convergence of multiple antibiotic resistance genes and novel toxins suggest that the lethal bacteria originated in a hospital or hospitals.

Any defence?

Is there any defence against the newly emergent toxic bacteria? Researchers found that children treated with antimicrobials had a relative risk of 14.3 of developing HUS. They concluded that antibiotic treatment of children with *E coli* O157:H7 gastroenteritis significantly increases the risk of developing HUS. Some antibacterial drugs, including fluoroquinolones and trimethoprim–sulfamethoxazole, increase the induction of phage-mediated production of Shiga toxin and increase the risk of development of HUS. Most authorities recommend supportive treatment only in patients with Shiga toxin–producing *E. coli* infection. Recent animal studies found that virulence was inhibited by zinc in Shiga-Toxigenic *Escherichia coli* in animals but that treatment has not yet been used with humans. Composting manure may be enough to prevent the spread of toxic, foodborne *E coli*, if the strain is harboured by livestock. O104:H4 does not appear to be harboured by livestock, but rather by human hosts. So personal hygiene especially of food handlers are of primary importance in preventing infection; giving no substance to those who try to implicate organic farming in the recent outbreak.

http://www.i-sis.org.uk/E_coli_O104_H4_Newly_Emergent_Pathogen.php

Continued from page 88 – Cassia Alata

Other investigations revealed that water extract from Cassia alata leaves contained potential antifungal agents against C. albicans and antibacterial agents against E. coli, for the treatment of opportunistic infections in patients afflicted with (AIDS). These results were comparable to commercial antifungal drug amphotericin B and antibiotic chlorampenicol.

The leaf extracts also exhibit various pharmacological properties: antimicrobial, anti-fungal activities as well as anti-inflammatory effects. The therapeutic efficacy of Cassia alata leaf extract against Pityriasis versicoloriias been reported and finally the anti-aging effect of Cassia alata was demonstrated allowing the use of extracts of Cassia alata in cosmetic and/or dermatological skin care products.

The main medicinal uses of Senna alata are as a laxative or purgative and in the treatment of skin problems. For laxative purposes usually a decoction of the leaves is drunk, and less often the flowers, roots or the stem are used.

Skin problems treated with Senna alata include ringworm, favus and other mycoses, impetigo, syphilis sores, psoriasis, herpes, chronic lichen planus, scabies, shingles, eczema, rash and itching. Skin problems are most often treated by applying leaf sap or by rubbing fresh leaves on the skin.

Other ailments treated in tropical Africa with Senna alata include stomach pain during pregnancy, dysentery, hemorrhoids, blood in the urine (schistosomiasis, gonorrhoea), convulsions, heart failure, edema, jaundice, headache, hernia, one-sided weakness or paralysis. Decoctions of the wood are used to treat liver problems (jaundice), urticaria, rhinitis, and loss of appetite caused by gastro-intestinal problems.

From the leaves of Senna alata a number of anthraquinone derivatives have been isolated. Crude leaf extracts have shown antibacterial activity against a range of bacteria. Antifungal properties and antitumour activity have been confirmed by tests. The bark of Senna alata contains tannins. The petals contain anthraquinones, glycosides, steroids, tannins and volatile oil. Extracts of the petals have bactericidal activity against gram-positive bacteria but not against gram-negative bacteria.

Bosch, C.H., 2007. Senna alata (L.) Roxb. [Internet] Record from Protabase. Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands.

COME BACK TO YOUR ROOTS

WE ARE WHAT WE EAT

GM foods have permeated every part of the food industry and the dangers we all face are coming to the surface. Do we all eat the same food? We can understand that people with ways and means eat better than those without. But the haves and have nots seem to be on two different planets. This should have nothing to do with class differences, which places a value on life in monetary terms. Our food and our medicine are being genetically manufactured for profit, many using the bacteria, E. coli. This bacteria, normally found in our digestive tract and in the digestive tract of all warm-bloodied animals, is being genetically manipulated to help create deadly life-threatening biological toxins, vaccines, pharmaceutical drugs, artificial vitamin and food supplements, foods, milk, organisms that bind heavy metals (bio-remediation) and explosives, just to name a few. The application of E.Coli in genetic engineering starts from the cradle to the grave.

Most of our digestive diseases centers on the food we eat and let's face it, we are eating contaminated food, even down to the animals, the soil and the water. If diabetes was rare in ancient Egypt, then the question of whether this is a genetic disease or environmental becomes mute. We are told that our bodies have not changed in 20,000 years. What has changed is the food we eat and our environment. It's easier to blame people for their diabetes and obesity when the fault may not be theirs alone. We can alleviate some of our own digestive problems using traditional spices like cayenne pepper, ginger and herbs like aloe vera and cassia alata, not to mentioned use of the culinary herbs. Wars have been fought over the availability of spices.

Our digestive system is a work of art. It has its own brain, nervous system and of course, melanin. 95% of serotonin is found in the gut. 70% of our immune system is aimed at the gut to expel and kill foreign invaders. It's a regular food factory supplying the necessary energy and nutrients to all parts of the body to maintain its existence. So who needs GM food with all the health problems that are coming to light? Do we want to eat ourselves into extinction? How could we maintain existence on this planet without the body? We would be required to join the spirit world.

Blackherbals – A Marcus Garvey Pan-African University's Community Site of Knowledge

Mission Statement

Our aim at **The African Traditional Herbal Research Clinic** is to propagate and promote the awareness in Afrikan peoples at home and abroad of their health, biodiversity, history and cultural richness. We gather pertinent information on these issues and disseminate these freely to our people in Uganda, the rest of the continent, and anywhere in the Diaspora where Afrikans are located…. One of the main ingredients for increasing poverty, sickness, exploitation and domination is ignorance of one's self, and the environment in which we live. Knowledge is power and the forces that control our lives don't want to lose control, so they won't stop at anything to keep certain knowledge from the people. Therefore, we are expecting a fight and opposition to our mission. However, we will endeavor to carry forward this work in ***grace and perfect ways.***

"Where there is no God, there is no culture. Where there is no culture, there is no indigenous knowledge. Where there is no indigenous knowledge, there is no history. Where there is no history, there is no science or technology. The existing nature is made by our past. Let us protect and conserve our indigenous knowledge."

☻ ☻ ☻ ☻ ☻ ☻

CALENDAR OF EVENTS

SPECIAL EVENT: CLINIC OPENING

PLACE: AFRIKAN TRADITIONAL HERBAL RESEARCH CLINIC

TIME:

Afrikan Traditional Herbal Research Clinic
54 Muwafu Road, P.O. Box 29974
Ntinda, Kampala, Uganda East Africa
Phone: +256 (0) 702 414 530
Email: clinic@blackherbals.com

Herbs of the Month

CASSIA ALATA

SENNA LEAVES (OMUCHULA)

Cassia alata L. or senna is a shrub, 2-3m high, widely distributed in the tropical countries.It is native to South America, but has been planted widely for medicinal and ornamental purposes and is now pantropical. In many countries, including most countries of tropical Africa, it has become naturalized and is often considered a weed.

It is is known as ringworm shrub, winged Senna, candle tree or ringworm Cassia, owing to its traditional use of the juice from fresh leaves or as leaf decoction against ringworm, eczema, pruritis, itching, scabies, ulcers and others skin diseases.

Cassia alata leaves are used in Africa for the same properties. The flowers are used in bronchitis, asthma and other respiratory ailments. Other uses of Cassia alata are as an antihelminthic, antibacterial, laxative, diuretic, for uterine disorders. In Africa, cassia is also used for digestive complaints such diarrhea, cholera, dysentery, gastritis and heartburn. ***Continued on page 85***

ADDRESS CORRECTION REQUESTED

Mailing Address
Street Number and Name
City, Country, etc.