

Latest Health News (Press Clippings Services of NDC)

Brain's speech

Brain's speech centre in different location than believed (New Kerala: 1.2.2012)

Human speech is processed in an entirely different part of the brain than researchers have long believed, a new study has claimed.

Scientists have long thought that human speech is processed towards the back of the brain's cerebral cortex, behind auditory cortex where all sounds are received — a place famously known as Wernicke's area after the German neurologist who proposed this site in the late 1800s based on his study of brain injuries and strokes.

But, now, research that analyzed more than 100 imaging studies concludes that Wernicke's area is in the wrong location.

The site newly identified is about 3 centimeters closer to the front of the brain and on the other side of auditory cortex — miles away in terms of brain architecture and function.

The finding, means that "textbooks will now have to be rewritten," said the study's senior author, Josef Rauschecker, Ph.D., a professor in the department of neuroscience at Georgetown University Medical Center (GUMC).

"We gave old theories that have long hung - a knockout punch," said Rauschecker, who is also a member of the Georgetown Institute for Cognitive and Computational Sciences.

"If you Google 'language organization in the brain,' probably every cartoon illustration out there is wrong," said lead author Iain DeWitt, a Ph.D. candidate in Georgetown's Interdisciplinary Program in Neuroscience.

The finding matters, Rauschecker said, because the new location of Wernicke's area matches that recently found in non-human primates, suggesting the origins of language between monkeys and humans is closer than many have thought, he asserted.

"Scientists have long argued that speech is unique to humans. They say monkeys make communication sounds but the fact that they don't have the same elaborate language that we do is due to different brain processing centers," Rauschecker said.

"This finding suggests the architecture and processing between the two species is more similar than many people thought."

Knowing that Wernicke's area is in the front of the auditory cortex could also provide clinical insights into patients suffering from brain damage, such as a stroke, or in disorders in speech comprehension.

"If a patient can't speak, or understand speech, we now have a good clue as to where damage has occurred," he said.

Rauschecker and DeWitt searched the peer-reviewed, scientific literature for studies that investigated auditory speech perception in humans using different scanning methods — either from functional magnetic resonance imaging (fMRI) or positron emission tomography (PET).

They found 115 brain imaging studies of speech perception, which in total had included over 1,900 participants and generated over 800 brain coordinates for speech processing.

They then used a type of analysis that allowed them to measure the degree of agreement among brain coordinates from these studies.

The results pinpoint the location of Wernicke's area to be in the left temporal lobe, and specifically to be in the superior temporal gyrus, in front of the the primary auditory cortex.

This is the area that Rauschecker had found to be activated in his own studies of speech processing.

The study has been published online in the Early Edition of the Proceedings of the National Academy of Sciences (PNAS). (ANI)

Heart health

Doubts cast over alcohol's affect on heart health (New Kerala: 1.2.2012)

Researchers have now claimed that the long-held belief - drinking a glass of red wine a day can help protect against heart disease- cannot be assumed for all drinkers.

A meta-analysis done by the Centre for Addiction and Mental Health (CAMH) provides new insight into the relationship between alcohol consumption and heart disease.

"It's complicated," said Dr. Juergen Rehm, director of social and epidemiological research at CAMH.

"While a cardioprotective association between alcohol use and ischaemic heart disease exists, it cannot be assumed for all drinkers, even at low levels of intake," said Dr. Rehm.

Ischaemic heart disease is a common cause of illness and death in the Western world. Symptoms are angina, heart pain, and heart failure. Based on 44 studies, the analyses used 38,627 ischaemic heart disease events (including deaths) among 957,684 people.

"We see substantial variation across studies, in particular for an average consumption of one to two drinks a day," said Dr. Rehm.

The protective association may vary by gender, drinking patterns, and the specific health effects of interest. Differential risk curves were found by sex, with higher risk for morbidity and mortality in women.

Moreover, for any particular individual, the relationship between alcohol consumption and ischemic heart disease should not be isolated from other disease outcomes. Even at low levels, alcohol intake can have a detrimental effect on many other disease outcomes, including on several cancers.

"Even one drink a day increases risk of breast cancer, for example," said Dr. Rehm.

"However, with as little as one drink a day, the net effect on mortality is still beneficial. After this, the net risk increases with every drink."

"If someone binge drinks even once a month, any health benefits from light to moderate drinking disappear."

Binge drinking is defined more than four drinks on one occasion for women, and more than five for men.

Given the complex, potentially beneficial or detrimental effects of alcohol on ischaemic heart disease in addition to the detrimental effects on other disease categories, any advice by physicians on individual drinking has to take the individual risk constellation (such as familial predisposition for certain diseases and behavior with respect to other risk factors) into consideration.

"More evidence on the overall benefit-risk ratio of average alcohol consumption in relation to ischaemic heart disease and other diseases is needed in order to inform the general public or physicians about safe or low-risk drinking levels," the study concluded.

Genetic

Genetic mutations behind fatal brain cancer in kids identified (new Kerala; 1.2.2012)

An international research team has identified two genetic mutations responsible for up to 40 per cent of glioblastomas in children - a fatal cancer of the brain that is unresponsive to chemo and radiotherapy treatment.

The mutations were found to be involved in DNA regulation, which could explain the resistance to traditional treatments, and may have significant implications on the treatment of other cancers.

The finding of the team led by the Research Institute of the McGill University Health Centre (RI MUHC) could change the way pediatric cancers are treated in the future.

Using the knowledge and advanced technology of the team from the McGill University and GEnome QuEbec Innovation Centre, the researchers identified two mutations in an important gene known as the histone H3.3.

This gene, one of the guardians of our genetic heritage, is key in modulating the expression of our genes.

"These mutations prevent the cells from differentiating normally and help protect the genetic information of the tumor, making it less sensitive to radiotherapy and chemotherapy," said Dr. Nada Jabado, hematologist-oncologist at The Montreal Children's Hospital of the McGill University Health Centre (MUHC) and principal investigator of the study.

"This research helps explain the ineffectiveness of conventional treatments against cancer in children and adolescents – we've been failing to hit the right spot.

"It is clear now that glioblastoma in children is due to different molecular mechanisms than those in adults, and should not be treated in the same way. Importantly, we now know where to start focusing our efforts and treatments instead of working in the dark," added Dr. Jabado, who is also an Associate Professor of Pediatrics at McGill University.

Inappropriate regulation of this gene has been observed in other cancers such as colon, pancreatic, lymphoma, leukemia and pancreatic neuroendocrine cancer, and future research could therefore reveal improved treatments for these diseases.

"What is significant here is that for the first time in humans we have identified a mutation in one of the most important genes that regulates and protects our genetic information. This is the irrefutable proof that our genome, if modified, can lead to cancer and probably other diseases. What genomics has shown us today is only the beginning," Dr. Jabado said.

Milk

One glass of milk a day could boost your memory power (New Kerala; 1.2.2012)

Drinking at least one glass of milk everyday could not only boost your intake of much-needed key nutrients, but it could also positively impact your brain and mental performance, experts suggest.

A news study has found that adults with higher intakes of milk and milk products scored significantly higher on memory and other brain function tests than those who drank little to no milk.

Milk drinkers were five times less likely to "fail" the test, compared to non-milk drinkers.

Researchers at the University of Maine put more than 900 men and women ages 23 to 98 through a series of brain tests – including visual-spatial, verbal and working memory tests – and tracked the milk consumption habits of the participants.

In the series of eight different measures of mental performance, regardless of age and through all tests, those who drank at least one glass of milk each day had an advantage.

The highest scores for all eight outcomes were observed for those with the highest intakes of milk and milk products compared to those with low and infrequent milk intakes.

The benefits persisted even after controlling for other factors that can affect brain health, including cardiovascular health and other lifestyle and diet factors. In fact, milk drinkers tended to have healthier diets overall, but there was something about milk intake specifically that offered the brain health advantage, according to the researchers.

In addition to the many established health benefits of milk from bone health to cardiovascular health, the potential to stave off mental decline may represent a novel benefit with great potential to impact the aging population. While more research is needed, the scientists suggest some of milk's nutrients may have a direct effect on brain function and that "easily implemented lifestyle changes that individuals can make present an opportunity to slow or prevent neuropsychological dysfunction."

Milk

जल्दी बूढ़ा नहीं होने देता दूध (Dainik Gaganan: 1.2.2012)

शोधकर्ताओं के अनुसार दूध पीने से दिमागी ताकत बढ़ जाती है। एक नए अध्ययन में वैज्ञानिकों ने कहा है कि इसका सबसे बड़ा फायदा यह है कि दूध दिमाग को तरोताजा रखते हुए व्यक्ति को समय से पहले वृद्ध होने से बचाता है। उम्र चाहे कितनी भी हो, अगर आप अपने मानसिक कौशल को बेहतर करना चाहते हैं तो रोजाना कम से कम एक ग्लास दूध जरूर पिएं। इंटरनेशनल डेयरी जर्नल की खबर के अनुसार, इस अध्ययन में कहा गया है कि रोजाना एक ग्लास दूध पीने से शरीर में न केवल जरूरी पोषक तत्वों की मात्रा बढ़ जाती है बल्कि दिमागी ताकत और प्रदर्शन भी अच्छा होता है। वैज्ञानिकों के अनुसार, दूध में मौजूद मैग्नेशियम जैसे पोषक तत्वों से स्मरण शक्ति अच्छी होती है। दूध और दुग्ध उत्पाद दिल की बीमारियों और उच्च रक्तचाप की समस्याओं से भी बचाए रखने में मददगार होते हैं। इसके नियमित सेवन से दिमाग बेहतर तरीके से काम करता है। माइन विश्वविद्यालय के शोधकर्ताओं ने अपने अध्ययन में पता लगाया कि अधिक दूध और दुग्ध उत्पादों का सेवन करने वाले वयस्कों का दिमाग और स्मरण शक्ति कम दूध पीने वालों या दूध ना पीने वाले लोगों की तुलना में कहीं बेहतर होती है। मां के साथ से बढ़ता है बच्चे का दिमाग लंदन : जीवन में तनाव अथवा दुख की घड़ी के समय जिन बच्चों को मां का समर्थन मिलता है, बाद में उनका मस्तिष्क भी तेज होता है। वाशिंगटन विश्वविद्यालय के अनुसंधानकर्ताओं ने पाया कि बचपन में जिन बच्चों पर माताएं अधिक ध्यान देती हैं और सुख-दुख की घड़ी में उनके साथ होती हैं उनके मस्तिष्क में याददाश्त और भावनाओं में मुख्य भूमिका निभाने वाले क्षेत्र हिप्पोकैंपस की स्नायु कोशिकाएं अधिक विकसित होती हैं। अध्ययन में हालांकि यह साबित नहीं हुआ कि माता

के व्यवहार से मस्तिष्क के आकार में सुधार आता है। हालांकि यह संकेत मिला कि बच्चे का साथ निभाना उसके मस्तिष्क के विकास में महत्वपूर्ण भूमिका निभाता है। अध्ययन में 92 बच्चों पर स्कूल जाने से पहले से लेकर ग्रेड स्कूल तक अध्ययन किया गया। मस्तिष्क के स्कैन से पता लगा कि जिनके माता-पिता ने तनाव कम करने में अधिक साथ बच्चों का दिया उनका हिप्पोकैंपी अधिक बड़ा निकला। साथ ही जिन बच्चों में अवसाद के लक्षण जल्द पाए गए उनमें इसका प्रभाव काफी कम देखा गया। इसका अर्थ हुआ कि उन्हें मां का अधिक समर्थन नहीं मिला। प्रोसिडिंग्स आफ द नेशनल अकादमी आफ साइंसेज में प्रकाशित अध्ययन के अगुआ प्रो. जॉन लुबे के अनुसार, हमारा मानना है कि यह नतीजा जन स्वास्थ्य प्रभाव को दर्शाता है। यह इस बात पर जोर देता है कि शुरू के जीवन में बच्चे पर ध्यान देना सार्थक सामाजिक निवेश है।

Sex Ratio

Taiwan: Abortion Curb Restores Birth Sex Ratio (Med India: 1.2.2012)

In Taiwan, tougher checks on illegal sex-selective abortions prevented nearly 1,000 terminations of female fetuses, say health authorities.

Taiwan's health authorities moved to tighten curbs on the illegal abortions last year, warning that doctors found guilty of the practice could have their licenses revoked.

"The strict measures have paid off," Lee Tsui-feng, an official at the Bureau of the Health Promotion, told AFP.

Government figures showed that 108 males babies were born for every 100 female babies in 2011, down from 109 to 100 in 2010. The normal sex ratio at birth globally is 104-106 males to every 100 females.

"That's the same as 993 female fetuses saved last year," Lee said.

Even though sex-selective abortions have never been legal in Taiwan, the practice is believed to have become common, due to a traditional preferences for male offspring.

Despite last year's progress, Lee said it may take another four or five years to weed out the illegal practice entirely.

Happiness,

Reliability Holds Key to Lasting Happiness, Not Love (Med India: 1.2.2012)

Those couples who can rely on each other are the ones to have the most successful lasting relationships, states to a new study.

Scientists at the Edinburgh University found that what people think they desire in a partner is often unrelated to what they end up choosing

"The most likely romantic partners are those that are around you every day at times when you are looking for a match," the Daily Express quoted relationship specialist Dr Lars Penke as saying.

"Students, exactly at the age when most people look for romance, are fortunate enough that they are surrounded by many potential partners," he said.

The findings of the study were published in the European Journal of Personality

Dairy Products

Dairy Products may Help Weight Loss Initiatives Med India: 1.2.2012)

A new study reveals that shifting to dairy products could provide an advantage in shedding those excess kilos

Researchers analyzed data from 14 different studies involving more than 880 participants and found that increasing your dairy intake and reducing your overall energy intake helped people to shed the extra kilos and reduce their waistlines.

While the findings are nothing new, it does emphasize that dairy products are indeed a healthy option for people who are weight-conscious. The study details are published in the International Journal of Obesity.

Leprosy

Leprosy Pathogen Eludes Vital Vitamin D-Dependent Immune Response (Med India: 1.2.2012)

The pathogen responsible for leprosy has an unusual ability to evade the human immune system by restraining the antimicrobial responses crucial to our defenses, reveals a new study.

In one of the first laboratory studies of its kind, researchers discovered that the leprosy pathogen *Mycobacterium leprae* was able to reduce and evade immune activity that is dependent on vitamin D, a natural hormone that plays an essential role in the body's fight against infections.

The pathogen manipulated micro-RNAs, tiny molecules made of ribonucleic acids that carry information and that help regulate genes to direct cell activity, including immune system defenses.

Micro-RNAs are short RNAs that do not code information for proteins, which carry out all cell activity; rather, they bind to the RNAs that do code for proteins and block them.

The new findings demonstrated how an infectious disease pathogen like *M. leprae* can use micro-RNAs to impact the immune system's fight response.

"We may find that these tiny micro-RNAs can be exploited by pathogens to weaken our immune response," said the study's first author, Dr. Philip T. Liu, an assistant professor of medicine at the Orthopaedic Hospital Research Center and in the department of dermatology at the David Geffen School of Medicine at UCLA.

"By better understanding how pathogens can escape our immune cells, we can design more effective therapies to boost our immune responses to these difficult to treat infections like leprosy."

Leprosy, one of the world's oldest known diseases, is a chronic infectious disease that affects the skin, the peripheral nerves, the upper respiratory tract and the eyes and can lead to disfigurement of the hands, face and feet.

For the study, researchers compared the micro-RNAs in human skin lesions from two types of leprosy: tuberculoid leprosy, a milder infection that is more easily contained, and lepromatous leprosy, which is more serious and causes widespread infection throughout the body.

In the lab, the scientists identified 13 micro-RNAs that differed between the two types of leprosy. The micro-RNAs that were found to be more common in lepromatous leprosy seemed to target the genes important for directing key immune system cells, including macrophages and T cells.

The team found that a particular micro-RNA, hsa-mir-21, inhibited the gene activity of the vitamin D-dependent immune pathway used to help fight infection. When researchers neutralized the activity of hsa-mir-21 in macrophages, the cells were able to kill the bacteria again.

"The leprosy pathogen was able to effectively evade the host's immune response by regulating critical immune system genes," said senior investigator Dr. Robert Modlin, UCLA's Klein Professor of Dermatology and chief of dermatology at the Geffen School of Medicine.

"It's like having the enemy sending a decoy message to your combat troops and telling them to lower their weapons."

To test the significance of this micro-RNA with other infectious diseases, the researchers also introduced hsa-mir-21 to human macrophages that were then infected with tuberculosis in the lab. Researchers found that the micro-RNA similarly blocked the ability of the macrophages to kill the bacteria.

In addition, the team showed that this micro-RNA was found in human immune cells only 18 hours after the onset of leprosy infection. The presence of the micro-RNA so early in the infection suggests it might play a role in actual disease development, the researchers said.

"We may find that a combination of vitamin D supplementation with a genetically targeted therapy could provide an optimal treatment approach to leprosy and possibly other chronic infectious diseases," said Modlin, who also serves as vice chair for cutaneous medicine and dermatological research at UCLA and is a distinguished professor of medicine and of microbiology, immunology and molecular genetics.

Diabetes

The findings could help scientists to more accurately assess personal diabetes risk and could lead to the development of personalized treatments. (Med India: 1.2.2012)

Previous research has found that people who work night shifts have a higher risk of type 2 diabetes and heart disease.

Studies have also found that if volunteers have their sleep disrupted repeatedly for three days, they temporarily develop symptoms of diabetes.

The body's sleep-wake cycle is controlled by the hormone melatonin, which has effects including drowsiness and lowering body temperature.

In 2008, a genetic study led by Imperial College London discovered that people with common variations in the gene for MT2, a receptor for melatonin, have a slightly higher risk of type 2 diabetes.

The new study reveals that carrying any of four rare mutations in the MT2 gene increases a person's risk of developing type 2 diabetes six times.

The release of insulin, which regulates blood sugar levels, is known to be regulated by melatonin. The researchers suggested that mutations in the MT2 gene may disrupt the link between the body clock and insulin release, leading to abnormal control of blood sugar.

"Blood sugar control is one of the many processes regulated by the body's biological clock. This study adds to our understanding of how the gene that carries the blueprint for a key component in the clock can influence people's risk of diabetes," Professor Philippe Froguel, from the School of Public Health at Imperial College London, who led the study, said.

"We found very rare variants of the MT2 gene that have a much larger effect than more common variants discovered before. Although each mutation is rare, they are common in the sense that everyone has a lot of very rare mutations in their DNA."

"Cataloguing these mutations will enable us to much more accurately assess a person's risk of disease based on their genetics."

In the study, the Imperial team and their collaborators at several institutions in the UK and France examined the MT2 gene in 7,632 people to look for more unusual variants that have a bigger effect on disease risk.

They found 40 variants associated with type 2 diabetes, four of which were very rare and rendered the receptor completely incapable of responding to melatonin.

The scientists then confirmed the link with these four variants in an additional sample of 11,854 people.

Professor Froguel and his team analysed each mutation by testing what effect they have on the MT2 receptor in human cells in the lab.

The mutations that completely prevented the receptor from working proved to have a very big effect on diabetes risk, suggesting that there is a direct link between MT2 and the disease.

The study has been recently published in Nature Genetics.

Environmental Bacteria

Exposure to Common Environmental Bacteria May Be Source of Some Allergic Inflammation (Science daily: 1.2.2012)

New research published in the Journal of Leukocyte Biology suggests that certain strains of *Pseudomonas aeruginosa* cause white blood cells to produce high levels of histamine, which worsens the severity of inflammation and infection.

•Histamine

Could some cases of asthma actually be caused by an allergic reaction to a common environmental bacteria? New research findings published in the Journal of Leukocyte Biology (<https://www.jleukbio.org>) suggests that this idea may not be as far-fetched as it seems. In a research report appearing in the February 2012 print issue, researchers show a link between common environmental bacteria and airway inflammation. Specifically, their research suggests that some strains of *Pseudomonas aeruginosa* cause white blood cells to produce very high levels of histamine, which in turn leads to inflammation, a hallmark symptom of asthma.

"We hope that these findings in mice will encourage human-focused research regarding bacterial stimulation of histamine production by white blood cells, like neutrophils, that

are not traditionally associated with allergic inflammation," said George Caughey, M.D., a researcher involved in the work from the Veterans Affairs Medical Center and University of California in San Francisco. "Such research could improve our understanding of inflammation in bacterial infections, and help us to craft therapies for relief of inflammation and its consequences for short and long-term health."

To make this discovery, scientists studied the effect of two strains of pseudomonas bacteria on isolated mouse white blood cells tasked with killing bacteria, called neutrophils. Results showed that one strain killed the neutrophils, but the second strain produced substances that caused the neutrophils to increase their production of histamine significantly. To see if their discovery was applicable outside of the test tube, the histamine-stimulating strain was then used to infect mice to produce bronchitis and pneumonia. These mice experienced a significant increase of histamine in their airways and lungs. Additional work showed that the bacteria persuade neutrophils to produce histamine by causing them to make much more of the key enzyme in histamine synthesis (histidine decarboxylase) than neutrophils would otherwise do in the unstimulated state.

"Despite advances in diagnosing and treating the symptoms of asthma and allergy, our understanding of the underlying initiating events remains elusive," said John Wherry, Ph.D., Deputy Editor of the Journal of Leukocyte Biology. "This report helps shed light on how an 'everyday organism' might trigger asthma and allergy from an immune cell type not normally thought to be involved in allergic disease."

Soft Drinks

Are Diet Soft Drinks Bad for You? (Science daily: 1.2.2012)

A new study finds a potential link between daily consumption of diet soft drinks and the risk of vascular events.

Individuals who drink diet soft drinks on a daily basis may be at increased risk of suffering vascular events such as stroke, heart attack, and vascular death. This is according to a new study by Hannah Gardener and her colleagues from the University of Miami Miller School of Medicine and at Columbia University Medical Center. However, in contrast, they found that regular soft drink consumption and a more moderate intake of diet soft drinks do not appear to be linked to a higher risk of vascular events. The research appears online in the Journal of General Internal Medicine published by Springer.

In the current climate of escalating obesity rates, artificially sweetened soft drinks are marketed as healthier alternatives to sugar-sweetened beverages, due to their lack of

calories. However, the long-term health consequences of drinking diet soft drinks remain unclear.

Gardener and team examined the relationship between both diet and regular soft drink consumption and risk of stroke, myocardial infarction (or heart attack), and vascular death. Data were analyzed from 2,564 participants in the NIH-funded Northern Manhattan Study, which was designed to determine stroke incidence, risk factors and prognosis in a multi-ethnic urban population. The researchers looked at how often individuals drank soft drinks -- diet and regular -- and the number of vascular events that occurred over a ten-year period.

They found that those who drank diet soft drinks daily were 43 percent more likely to have suffered a vascular event than those who drank none, after taking into account pre-existing vascular conditions such as metabolic syndrome, diabetes and high blood pressure. Light diet soft drink users, i.e. those who drank between one a month and six a week, and those who chose regular soft drinks were not more likely to suffer vascular events.

Gardener concludes: "Our results suggest a potential association between daily diet soft drink consumption and vascular outcomes. However, the mechanisms by which soft drinks may affect vascular events are unclear. There is a need for further research before any conclusions can be drawn regarding the potential health consequences of diet soft drink consumption."

Parkinson's Cells

Researchers Visualize the Development of Parkinson's Cells(Science daily: 1.2.2012)

In the US alone, at least 500,000 people suffer from Parkinson's disease, a neurological disorder that affects a person's ability to control his or her movement. New technology from the University of Bonn in Germany lets researchers observe the development of the brain cells responsible for the disease.

Up until now, research into the brain cells responsible for Parkinson's disease has focused on the function and degeneration of these neurons in the adult and aging brain. The new tissue slicing method, which will be published in the world's only peer-reviewed science video journal, the Journal of Visualized Experiments (JoVE), allows scientists to observe the development of these brain cells for the first time.

"Little is known about the behavior of these neurons during their differentiation and migration phase," said article author Dr. Sandra Blaess, "and with this technique, we can really observe how these cells behave during development."

The new technique also makes the cells available for genetic manipulation, and more information about how these cells develop and function could lead to new treatment options.

"Being able to visualize cell development in this area of the brain is exciting," said JoVE Editor Dr. Claire Standen. "The availability of this technique could help scientists understand diseases of the dopaminergic system- such as Parkinson's."

Skin Cancer

FDA Approves Drug for Common Skin Cancer (Med India: 1.2.2012)

On Monday, the US Food and Drug Administration approved a new type of drug to treat adult patients with advanced basal-cell carcinoma, the most common type of skin cancer.

The drug's generic name is vismodegib and was developed by the US part of Roche Holding AG. It will be sold in the US by Roche's South San Francisco-based Genentech under the brand name Erivedge.

Basal cell carcinoma is a slow growing, painless cancer that starts in the epidermis, the top layer of skin. It usually starts in places that are regularly exposed to the sun or UV light.

The once-a-day capsule drug works by inhibiting the Hedgehog pathway, which is active in most basal cell cancers and only a few normal tissues, such as hair follicles.

Dr Richard Pazdur, director of the Office of Hematology and Oncology Products in the Center for Drug Evaluation and Research at the FDA, said as we get to know more about the Hedgehog pathway and others important to cancer, we can develop more drugs that target specific diseases:

"This approach is becoming more common and will potentially allow cancer drugs to be developed more quickly. This is important for patients who will have access to more effective therapies with potentially fewer side effects," he explained.

Erivedge is designed for patients with locally advanced basal cell carcinoma, who are not having surgery or radiation therapy, and also for patients whose cancer has spread to other parts of the body (has become metastatic). It is the first FDA-approved drug for metastatic basal cell carcinoma.

The FDA reviewed Erivedge through its priority fast-track program, where it only takes six months to review drugs that show promise of major advances in treatment.

The review took into account a study that tested the safety and effectiveness of Erivedge. The study was a single, multi-center clinical trial in 96 patients whose basal cell carcinoma was either locally advanced or metastatic.

After taking Erivedge, 43% of patients with locally advanced disease showed a partial response or complete shrinkage or disappearance of the cancerous lesions, and 30% of the patients with the metastatic form of the disease showed a partial response.

The most common side effects were hair loss, muscle spasms, weight loss, fatigue, reduced appetite, distorted sense of taste, loss of taste function in the tongue, nausea, constipation, vomiting, and diarrhea.

The drug must carry a Boxed Warning telling patients and doctors about the potential risk of death or severe birth defects to an unborn child.

Women must check they are not pregnant before starting on Erivedge, and patients should be warned of these risks and the need for birth control before starting on the drug, said the FDA in a statement.

For more FDA information on Erivedge go to [Drugs@FDA](#) and enter "Erivedge" in the search box.

Nutrition

Nutrition Labels Being Ignored By Consumers (Med India: 1.2.2012)

The key outcome of the FLABEL conference (Food Labeling to Advance Better Education for Life) in November 2011 was reported to be that even though nutrition labeling is commonly used throughout Europe, consumers pay insufficient attention and lack motivation to use them. FLABEL Scientific Advisor, Professor Klaus G. Grunert, will present the final findings of this three-and-a-half-year project in a webinar today.

Nutrition labels provide consumers with the option to choose healthier foods, however, scientific studies on using these labels in real-life shopping situations are limited. According to the FLABEL project, consumers do understand the information presented in nutrition labels and use it to opt for healthier choices. Most of the consumers were able to correctly rank foods according to its health rating, when given information on key nutrients, such as fat, saturated fat, sugar and salt, as well as energy for a variety of products.

The key finding of the FLABEL research shows that consumer's choices are affected by their lack of motivation and attention in terms of nutrition labeling. Professor Grunert

says that these important hurdles need to be overcome, explaining, that: "consumers need to be motivated to engage with nutrition information - for instance, by having a health goal - in order to pay attention to nutrition labels".

Lack of attention also has a negative impact on nutrition labels' choices on healthy foods. For instance, researchers tracked consumer's eye movements in a mock grocery store experiment when people were shopping for food. According to the data, the consumers only scanned the nutrition labels for an average of between just 25 and 100 milliseconds, insufficient to process the information provided.

The attention consumers' pay to read the nutrition information provided on the labels can be improved by motivating the consumer, however, the most promising option for doing so, including using the labels to make healthy choices is to consistently provide information on key nutrients and energy on the front of the pack. According to Grundert:

"Complementing this information with a health logo can also increase attention to, and use of, the information, especially when the consumer is under time pressure. The use of color-coding can increase attention and use in certain situations, although the effects are not strong."

Participants in the FLABEL project reported they prefer and would like to use more complex labels, which offer the entire information of a product. The data also indicates that whether or not consumers' prefer certain products depend on previous exposure or familiarity with the label.

The findings of the project evidently demonstrated a very high presence of nutrition information on food labels in Europe.

In an investigation conducted in the EU 27 and Turkey, researchers evaluated more than 37,000 products in five product categories, including sweet biscuits, breakfast cereals, chilled pre-packed ready meals, carbonated soft drinks and yoghurts, and established that the majority (85%) of food products displayed nutrition information on the back of the pack, with almost half (48%) of the products showing nutrition information on the front packaging.

A table with a list of nutrition proved to be the most common method of labeling for the back of the pack (84%) whilst Guideline Daily Amounts (GDA) labels and nutrition claims were the most frequent method on packaging fronts. Both types of labeling were found on a quarter of all products.

The webinar was held today, from 9:30-10:20 CET (8:30-9:20 GMT), this link provide the full study results, including their policy implications.

Healthy lifestyle tips!

Mumbai doctors share with us some healthy lifestyle tips! (World Newspapers: 1.2.2012)

Come Saturday and the world will be observing the cancer awareness day. The recent past has seen a rise in the number of cancer cases in India, and this, says Dr Maheboob Basade, medical hematologist at Jaslok Hospital, “is basically happening because of change in diet”. He adds, “We are aping the Western culture blindly in our food habits. A lifestyle change is required at present. Eating less junk food and no tobacco in any form can reduce the burden of cancer in India.”

However, treatment of cancer at any stage is possible, if detected early, asserts Dr Indu Ambulkar, consultant medical oncologist, Seven Hill Hospital. “Awareness is the key to prevent cancer. Certain kinds of food have possibility of increasing cancer. Stay away from red meat as it increases the likelihood of having colon cancer. You should maintain a healthy diet. Intake of fruits, vegetables, calcium, vitamin D should be high to prevent cancer.

Apart from diet, exercise also can help prevent it, specially breast cancer and colon cancer. It’s imperative that exercise becomes a part of one’s everyday lifestyle,” he adds.

Dr Vimal Jain, onco-surgeon, Kohinoor Hospital for cancer, suggests some dos and don’ts for a healthy living:

Avoid eating junk food or food that has too much of preservatives.

Keep obesity and stress at bay, and exercise regularly.

Go for regular medical check up. Through this you can catch the cancer at an early stage.

Women, after 45 years of age, should go for mammography once in two years, and for PAP once in a year, it will help to detect early cervical cancer.

Go for vaccination like Hepatitis B vaccine. Hepatitis B is a risk factor for primary liver cancer.

Don’t consume tobacco and alcohol. And very importantly do not ignore warnings, which may be signal for cancer, like lump or swelling in any body part, non healing ulcer or white patch inside the mouth, alteration of voice (change in the quality of voice),

alteration of bowel habits, unexplained weight loss, or abnormal bleeding from any part of the body.

Smoking

Overweight mums who smoke during pregnancy can damage baby's heart (World Newspapers: 1.2.2012)

Mums-to-be who are both overweight and smoke during their pregnancy are likely to give birth to a child with a congenital heart defect, researchers say.

Congenital heart abnormalities are some of the most common defects found at birth, with around eight in every 1000 babies affected. A likely cause is only found in 1 per cent of cases.

The findings is based on an analysis of almost 800 babies and fetuses who were born with congenital heart abnormalities, but no other defects, between 1997 and 2008.

These babies were compared with 322 children and fetuses who were born with chromosomal abnormalities, but without any heart defects.

The analysis pointed to an enhanced damaging effect for a combination of overweight and smoking as opposed to one of these factors alone, after taking account of influential factors, such as the mother's alcohol consumption and educational attainment.

Mums-to-be who both smoked and were overweight, with a BMI of 25 or more, were more than 2.5 times as likely to have a child with a congenital heart defect as women who either smoked or were overweight, but not both.

The risk of outflow tract obstructive abnormalities, whereby blood flow from the ventricles of the heart to the pulmonary artery or aorta is reduced/blocked, more than tripled in babies born to overweight mums who smoked while pregnant.

“These results indicate that maternal smoking and overweight may both be involved in the same pathway that causes congenital heart defects,” write the authors.

While the exact mode of action is not clear, they point to disturbances in plasma cholesterol, which is independently associated with obesity and smoking, and which results in lower levels of “good” cholesterol and higher levels of “bad” cholesterol.

The findings add to the growing body of evidence for the links between smoking and overweight during pregnancy with, variously, miscarriage/stillbirth, stunted growth, and premature birth, say the researchers.

The finding has been published online in Heart.

Diseases

Many systemic diseases reflect in the eye (The Tribune: 1.2.2012)

When Silky, a case of severe chronic headache, entered an eye specialist's chamber, she was deeply fearful of an adverse outcome as it happened in the case of her mother, who was diagnosed as a case of brain tumour and her father declared to be suffering from hypertension for the first time by the eye specialist. Both were earlier referred to the eye specialist due to perpetual headache and were not diagnosed elsewhere.

Silky had already got her MRI scanning done, which was normal. "You are an eye doctor. How do you diagnose diseases like brain tumour and high blood pressure?", enquired the girl in her panic-ridden voice. The doctor said after examining her that she needed only eye glasses as treatment for her headache. However, eyes may get involved in several diseases, and an eye specialist can be your friend and your physician in several other situations besides headache. These are:

- n Diabetes mellitus – an imbalance in blood sugar levels.
- n Acquired immunodeficiency syndrome (AIDS).
- n Graves' disease – a thyroid disorder, with swelling in the front part of the neck and protruding eyes.
- n Sarcoidosis – a disease that mainly affects the lungs, brain, joints and eyes, found most often in young women.
- n Systemic lupus erythematosus involving mainly the skin, joints and kidneys.
- n Rheumatoid arthritis.
- n High blood pressure.
- n Atherosclerosis (hardening of the arteries) and heart disease.
- n Sickle cell disease –an inherited blood disorder that can block the circulation of retina.

n Multiple sclerosis – a disease that damages nerve coverings, causing weakness, coordination and speech disturbances.

Stroke.

How do systemic diseases affect the eye?

Diabetes can cause severe eye complications, including swelling of the retina (macular edema), abnormal growth of new retinal blood vessels and bleeding inside the eye.

Diabetic retinal disease is a leading cause of blindness in India. In addition, people with diabetes develop cataracts earlier than other people. Therefore, it is important for them to have regular eye examinations done.

AIDS can cause infections in the eye, retinal detachment, eyelid tumours and neuro-ophthalmic disorders. AIDS-related infections can often lead to blindness, but effective eye treatment is now available. Abnormal retinal circulation is another frequent complication of AIDS. Sometimes, the first signs of AIDS are abnormalities in the retina.

Graves' disease can cause protruding eyes (proptosis), limitations of eye movement, double vision and corneal disease. Severe cases may have damage to the optic nerve. Sometimes the eye symptoms in Graves' disease can appear before other symptoms and signs.

The eye is prone to inflammation. A type of inflammation called uveitis is the most common eye problem caused by sarcoidosis. Uveitis can result in painful and red eyes, blurred vision and glaucoma. Scleritis, an inflammation of the white part of the eye, can result from systemic lupus erythematosus and rheumatoid arthritis. Both of these conditions also can cause dry eyes.

High blood pressure and atherosclerosis can damage the retinal blood vessels. In persons with high blood pressure, the extent of damage in the eye can directly relate to the damage that occurs in the kidneys. High blood pressure can be first diagnosed when changes in the blood vessels of the eye are found. Sickle cell eye disease can sometimes lead to blindness if not treated with laser therapy. Multiple sclerosis can cause eye movement problems as well as the optic nerve disease leading to the loss of vision.

Cancer can start in the eye or can spread to the eye. Early detection and treatment of cancer in the eye can be vision-saving and, in some cases, life-saving. Brain tumours also may affect vision by causing swelling of the optic nerve. Occasionally, a doctor may first suspect a brain tumour after finding optic nerve swelling on an eye examination. Thus, an eye specialist has an important role to play in managing systemic problems besides the problems of vision.

The writer is Chandigarh-based eye-specialist.

Chilblains

Who is prone to chilblains? (The Tribune: 1.2.2012)

Swelling, itching and pain of the fingers of the hands and feet are a common problem in late December and January in the northern part of our country. Intense cold, rain and fog often occlude the sun and add to the misery of people, particularly those who are susceptible to chilblains.

Chilblains is an abnormal reaction of the body, more specifically, to the extremities, to exposure to cold temperature. Small blood vessels or capillaries are damaged due to extreme cold. It happens mostly in the small toes of the feet but may also occur in the hands and even on the nose or ear lobes. These areas become red, swollen and painful. Burning and itching are the usual accompanying symptoms. Some people may even have blisters on the skin. In the case of some people, it happens year after year while others are not at all affected. The precise reason for this difference in incidence is not properly understood. People who are most affected usually have poor blood circulation to the extremities. This poor circulation may be on account of anaemia, lack of exercise, inadequate diet or simply old age. Somehow, for reasons not clearly understood by medical science, women are more likely to develop chilblains. At the same time, people who are thin or rather underweight by 20 per cent or more are also more prone to this malady.

Do's and don't's

Prevention, as is true in the case of other problems, is better than cure in chilblains. Keeping the whole body warm and not just the feet or hands is important. It is better to wear two or three layers of warm clothing instead of just a single heavy one as they can trap the heat of the body better. The role of a balanced diet is often overlooked in the prevention of chilblains. Anaemic people often have a poor circulation and they are likely to develop chilblains more commonly. Taking a balanced and adequate diet goes a long way in the prevention of anaemia and also prevents many other complaints.

Controlling chilblains requires a regular walk as it helps in improving blood circulation as well as building the resistance of the body. At the same time, care ought to be taken to avoid exposure to low temperature and fog in the morning. Wearing tight or ill-fitting shoes may also contribute to this trouble.

It is a common practice to rub one's hands and feet in the cold weather. This is not a good habit, particularly for those who are prone to chilblains. In case one has had a prolonged exposure to cold, one should not try to warm the feet or the hands by directly exposing them to fire or any other source of heat as hot water bottle or a heater. It is important to understand that sudden changes in temperature inflict injury to the tissues and exacerbate the problem. Instead, it is better to warm the hands and feet gently by covering them by blankets, putting the hands in pockets or wearing woollen socks.

Homoeopathic medicines are very effective in not only treating the malady but also preventing its recurrence. The right selection of the medicine is dependent upon the individual symptoms which can vary from person to person.

The writer is a Mohali-based homoeopathic practitioner. Email -- drharshsharma@gmail.com.

Chronic inflammatory disorder

Managing ulcerative colitis? (The Tribune: 1.2.2012)

A chronic inflammatory disorder of the large intestine, ulcerative colitis is a worldwide health problem. Most commonly it begins during adolescence and early adulthood, but there have been cases of this disease having stricken youngsters and the elderly. Closely related to another inflammatory condition of the colon called Crohn's disease, ulcerative colitis is marked by wide-ranging symptoms such as passing loose or mucous-containing stools with intermittent rectal bleeding, retention of gas, abdominal cramps, acidity, occasional fever and general weakness. A majority of the symptoms and the pathology of the disease resemble the condition called 'raktatisar' as mentioned in ayurvedic classics.

Though definite causes of ulcerative colitis are not known, scientists today believe that most likely it involves the abnormal activation of the immune system in the intestines and such continued action causes chronic inflammation and ulceration. Of the aggravating factors, stress and dietary indiscretions come on top, but, etiologically, susceptibility of genetic inheritance of the patients with inflammatory bowel disease is also talked about. According to ayurveda, it is the disorder of vitiated 'pitta', when wrong diet and other lifestyle problems can become a predisposing cause for ulcerative colitis.

Apart from diarrhoea and rectal bleeding, the most common symptoms of ulcerative colitis, the disease doesn't affect all the patients in an equal manner. Generally, patients having inflammation confined to the rectum and a short segment of the adjacent colon have milder symptoms. But an increased involvement of the large intestine like the left colon, the transverse colon and the right colon produces more severe symptoms which include blood-spattered diarrhoea, abdominal pain, malabsorption, weight loss, fatigue and fever. Relapses and remissions of these symptoms is a marked feature of this disease.

Ulcerative colitis is known to follow a unpredictable course, and most of the times active treatment continues for years and the complications of this disease include anaemia, arthritis, low backache and rarely cancer of the colon.

The ayurvedic approach regarding the treatment of ulcerative colitis is to evolve a favourable diet plan supported by a regime of medicines which control bleeding and diarrhoea and reduce swelling in the colon. Patients of ulcerative colitis should eat small, light and easily digestible meals. 'Chapatis' of whole cereal 'atta' of wheat and maize or 'chapatis' made by mixing these two accompanied by non-fried dishes of vegetables and light lentils are good for them. Rice and its combination with lentils or khichdi also make a good meal for such patients. Use of curd and buttermilk instead of other dairy products like milk and cheese find overwhelming recommendation for persons suffering from this disease. Fruits like banana, mango, pomegranate and apple can also be taken.

Moderate use of certain digestive herbs like jeera, ajwain and hing help allay intestinal spasm and gaseous conditions commonly found in the patients of ulcerative colitis. Of the vast array of medicinal herbs, pulp of half-ripe bael fruit occupies an exalted position in treating the disease. Nagarmotha, kutaja bark, mochas, atees and sonth are some of the other herbs which reduce the inflammation of the colon, decrease the frequency of stool and lessen the passing of mucous and blood. Taking daily two tea-spoonful of isapgol husk with a bowl of curd also helps bind loose stools.

Depending upon the chronicity and severity of the case, classic ayurveda recommends many medicines for ulcerative colitis. The famous 'Parpati' regime with a preference for Vijay Parpati or Panchamrita Parpati should be given in the flare-up phase of the disease. Piyushvalli Rasa, Gangadhar Rasa, Praval Panchamrita Rasa, Sajivani Vati, Kutajghan Vati and Shankh Vati help reduce the frequency of stools. Bilvadi Churna, Gangadhar Churna and Vatskadi Qwath are also some of the other well-known classic ayurvedic medicines which are being used to treat ulcerative colitis since time immemorial.

The writer is a Ludhiana-based senior ayurvedic physician and Guru at the Rashtriya Ayurveda Vidyapeeth. E mail- ayu@live.in

Fruit, veggies

Fruit, veggies may help ward off colon cancer (The Tribune: 1.2.2012)

Washington: A vital nutrient found in fruits and vegetables could help protect against colon cancer, which is the second most frequent cause of cancer-related deaths in the Western world. Luteolin is a flavonoid commonly found in fruit and vegetables. This compound has been shown in laboratory conditions to have anti-inflammatory, anti-oxidant and anti-cancer properties but results from epidemiological studies have been less

certain. New research showed that luteolin is able to inhibit the activity of cell-signalling pathways (IGF and PI3K) important for the growth of cancer in the colon. Colon cancer cells have elevated levels of IGF-II compared to normal colon tissues. It is thought that this is part of the mechanism driving uncontrolled cell division and cancer growth. —

Cancer diagnosis

Many patients don't quit smoking even after cancer diagnosis (The Tribune: 1.2.2012)

A substantial number of lung and colorectal cancer patients continue to smoke after being diagnosed, a new study has revealed. When a patient receives a cancer diagnosis, the main focus is to treat the disease. But stopping smoking after a cancer diagnosis is also important because continuing to smoke can negatively affect patients' responses to treatments, their subsequent cancer risk, and, potentially, their survival. A team led by Elyse R. Park of the Massachusetts General Hospital/Harvard Medical School in Boston studied how many patients quit smoking around the time of a cancer diagnosis, and which smokers were most likely to quit. The investigators determined smoking rates around the time of diagnosis and five months after diagnosis in 5,338 lung and colorectal cancer patients.

Whole grains, protein-rich diet

Whole grains, protein-rich diet best for women to lose weight (The Tribune: 1.2.2012)

Eating a well-balanced diet that provides all the essential nutrients required by the body can help women keep in shape, researchers say. Women have some special nutritional concerns depending on how old they are and what stage of life they are in, Fox News reported. Thus, the Academy of Nutrition and Dietetics (formerly the American Dietetic Association or ADA) has recommended a healthy daily diet for weight maintenance which includes whole grains (three 1-ounce servings), dairy products (three fat-free or low-fat servings), protein (five to six ounces of lean meats or other proteins), fruit (two cups) and vegetables (two-and-a-half cups). Besides, women should also ensure that their diet includes vital nutrients like iron, calcium, vitamin D and folic acid.

Girl child

India deadliest place in world for girl child (The Times of India: 1.2.2012)

It's official — India is the most dangerous place in the world to be a baby girl. Newly released data shows that an Indian girl child aged 1-5 years is 75% more likely to die than an Indian boy, making this the worst gender differential in child mortality for any country in the world.

Infant (0-1 years) and child (1-5 years) mortality are declining in India and across the world, though not as fast as was hoped in India. Simultaneously, most of the world is experiencing a faster fall in female infant and child mortality than in male, on account of well established biological factors which make girls better survivors of early infancy given equal access to resources. The world's two most populous countries, however, buck this trend.

Newly released United Nations Department of Economic and Social Affairs (UN-DESA) data for 150 countries over 40 years shows that India and China are the only two countries in the world where female infant mortality is higher than male infant mortality in the 2000s. In China, there are 76 male infant deaths for every 100 female infant deaths compared with 122 male infant deaths for every 100 female infant deaths in the developing world as a whole.

Child mortality sex ratio'

'India worst in child mortality sex ratio' (The Times of India: 1.2.2012)

Data released by the UN department of economic and social affairs (UN-DESA) has found that India has a better infant mortality sex ratio than China, with 97 male infant deaths for every 100 female, but this is still not in tune with the global trend, or with its neighbours Sri Lanka (125) or Pakistan (120).

When it comes to the child mortality sex ratio, however, India is far and away the world's worst. In the 2000s, there were 56 male child deaths for every 100 female, compared with 111 in the developing world. This ratio has got progressively worse since

the 1970s in India, even as Pakistan, Sri Lanka, Egypt and Iraq improved.

The UN report is clear that high girl child mortality is explained by socio-cultural values. So strong is the biological advantage for girls in early childhood that higher mortality among girls should be seen as “a powerful warning that differential treatment or access to resources is putting girls at a disadvantage”, the report says.

“Higher female mortality from age 1 onwards clearly indicated sustained discrimination,” says P Arokiasamy, professor of development studies at Mumbai’s International Institute for Population Studies, who has studied gender differentials in child mortality in India. “Such neglect and discrimination can be in three areas: food and nutrition, healthcare and emotional wellbeing. Of these, neglect of the healthcare of the girl child is the most direct determinant of mortality,” says Arokiasamy. Studies have shown that health-related neglect may involve waiting longer before taking a sick girl to a doctor than a sick boy, and is also reflected in lower rates of immunization for girls than boys.

Moreover, since the outrage over India’s poor child sex ratio came out of census data for children aged 0-6 years, the UN data on child mortality indicates that a campaign against female foeticide alone is not a complete solution. “Pre-natal and post-natal discrimination are complementarily contributing to gender imbalance,” agrees Dr Arokiasamy. While pre-natal discrimination in the form of sexselective abortions is more common among better educated upper income households, post-natal discrimination or neglect is more common among poorer, less educated rural households, he adds.

Gender Bias

| Ratio of male to female mortality (per 100 females) | | |
|--|-----------------|----------------|
| Country | Infant (0-1) | Child (1-5) |
| India | 97 | 56 |
| China | 76 | 97 |
| Pakistan | 120 | 100 |
| Sri Lanka | 125 | 111 |
| Less Developed Regions | 122 | 111 |
| World | 122 | 116 |

Source: UN-DESA

Acupuncture

Acupuncture for women's disorders (The Times of India: 1.2.2012)

Acupuncture expert Sunita Kapur outlines how common problems encountered by women, such as pre-menstrual tension, mid-cycle pain and vaginal discharge, respond well to this therapy

Acupuncture treatment can treat the following problems that women encounter:

Dysmenorrhoea:

This means pain in the lower abdomen, lower back and lower limbs during or before the start of periods every month. After ruling out structural abnormality in the uterus through an ultrasound, acupuncture can be started a week before the date of periods and continued till the bleeding stops. The treatment is given for two to three menstrual cycles.

Pre-menstrual tension:

Hormonal changes before menstruation cause certain annoying symptoms like mood swings, anger outbursts, and swelling all over the body due to water retention, pain and nodules in the breasts. Acupuncture or scraping therapy on certain acupuncture channels provide relief from PMT. This therapy includes use of guasha oil with a Chinese scraper. This treatment is done for one week before periods for two to three cycles.

Mid-cycle pain:

This pain is due to ovulation and responds well to acupuncture.

Pelvic inflammatory diseases:

These cause pelvic pain and excessive bleeding during periods. Treatment with acupuncture or acu laser is good for such ailments. Cause of PID like cervical erosions responds well to laser treatment.

Irregular menstruation and menorrhagia:

Excessive bleeding during periods responds well to moxibustion, a therapy in which heat is given on acu points with Chinese herbs.

Other menopausal problems:

Irregular menses, depression and hot flushes are treated with acupuncture and colour therapy. Violet colour at the scalp acupuncture points tranquilises patients and reduces hot flushes. Blue colour applied on lower abdominal acu channels reduces menstrual flow. Patients can thereby avoid hormonal therapy normally used for treating such disorders.

Leucorrhoea or vaginal discharge:

After ruling out diabetes and cervical polyps, acupuncture can be performed. This includes needle treatment sessions for 20 days.

Dyspareunia (pain during sex): This can be treated too.

Infertility:

Acupuncture can be tried for infertility after structural abnormality in the man's or woman's reproductive organ is ruled out. Both should be treated simultaneously and treatment continued for a couple of months.

Other problems:

Frigidity and sexual performance are enhanced through acupuncture. Nausea and vomiting medicines can be avoided during the first trimester of pregnancy by using acupuncture.

Drug-resistant TB

Now, 2-hr test to detect drug-resistant TB (The Times of India: 1.2.2012)

Now, diagnosing multi-drug resistant TB (MDR TB) patients will take less than two hours. India has cleared the proposal to roll out a new diagnostic test GeneXpert across 18 sites that will test and confirm MDR TB within 120 minutes.

About 99,000 Indians suffering from TB are becoming drugresistant every year. However, the diagnostic tools available take two days to about four months to confirm a single drug-resistant case during which time the air-borne disease spreads to others. The new test aims to increase diagnosis of the disease by at least seven-fold.

The sites, where the new test is being introduced includes Rohtak (Haryana), Dharavi (Mumbai), Amravati (Maharashtra), Udaipur and Jodhpur (Rajasthan), Bilaspur (Chhattisgarh), Malkangiri (Orissa), Tehri (Uttarakhand), South 24 Parganas (West Bengal), Sangam Vihar (Delhi) Indore (Madhya Pradesh) and two sites each in Vijayanagaram (Andhra Pradesh), Kamrup (Assam) and Ranchi (Jharkhand).

While treating a TB patient costs India Rs 600 over six to eight months, the expense for every MDR-TB patient is about Rs 1.5 lakh during 24-28 months' period. Union health ministry officials told TOI that the cartridges for GeneXpert and the machine are being provided to India by the WHO for free for the next two years.

“At present, a Line Probe Assay test available across 18 sites takes two days to diagnose a single MDR sample, while a liquid culture test and the solid culture test takes two months and four months, respectively,” said a ministry official.

DNA

How did man evolve: DNA tells the true story? (The Times of India: 1.2.2012)

Faster And Cheaper Genetic Analysis Is Helping Scientists Draw A New Picture Of Human Origins

The tip of a girl's 40,000-year-old pinky finger found in a cold Siberian cave, paired with faster and cheaper genetic sequencing technology, is helping scientists draw a surprisingly complex new picture of human origins. The new view is fast supplanting the traditional idea that modern humans triumphantly marched out of Africa about 50,000 years ago, replacing all other types that had gone before.

Instead, the genetic analysis shows, modern humans encountered and bred with at least two groups of ancient humans in relatively recent times: the Neanderthals, who lived in Europe and Asia, dying out roughly 30,000 years ago, and a mysterious group known as the Denisovans, who lived in Asia and most likely vanished around the same time. Their DNA lives on in us even though they are extinct. “In a sense, we are a hybrid species,” Chris Stringer, a paleoanthropologist who is the research leader in human origins at the Natural History Museum in London, said in an interview.

The Denisovans were first described a year ago in a groundbreaking paper in the journal Nature made possible by genetic sequencing of the girl's pinky bone and of an oddly shaped molar from a young adult. Those findings have unleashed a spate of new analyses. Scientists are trying to envision the ancient couplings and their consequences: when and where they took place, how they happened, how many produced offspring and what effect the archaic genes have on humans today. Other scientists are trying to learn more about Denisovans: who they were, where they lived and how they became extinct.

A revolutionary increase in the speed and a decline in the cost of genesequencing technology have enabled scientists at the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany, to map the genomes of both the Neanderthals and the Denisovans. Comparing genomes, scientists concluded that today's humans outside Africa carry an average of 2.5% Neanderthal DNA, and that people from parts of Oceania also carry about 5% Denisovan DNA. A study published in November found that Southeast Asians carry about 1% Denisovan DNA in addition to their Neanderthal genes. It is unclear whether Denisovans and Neanderthals also interbred.

A third group of extinct humans, *Homo floresiensis*, nicknamed "the hobbits" because they were so small, also walked the earth until about 17,000 years ago. It is not known whether modern humans bred with them because the hot, humid climate of the Indonesian island of Flores impairs the preservation of DNA. This means that our modern era, since *H. floresiensis* died out, is the only time in the four-million-year human history that just one type of human has been alive, said David Reich, a geneticist at Harvard Medical School.

For scientists, the epicenter of the story on human origins is the Denisova cave in Altai Mountains of Siberia, where the girl's finger bone was found. It is the only known place where three types of humans — Denisovan, Neanderthal, modern — lived. NYT NEWS SERVICE