



The Vitamin & Herb Stores

Human Technology Research Synopsis

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Public release date: 29-Sep-2009

Obesity in middle-aged women cuts chance of a long and healthy life by almost 80 percent

Research: Adiposity and weight change in mid-life in relation to healthy survival after age 70 in women:
Prospective cohort study

The more weight women gain from the age of 18 until middle age, the less likely they are to enjoy a long and healthy life, according to new research published on bmj.com today.

Compared with lean women, the results show that being obese in middle age reduces those odds by 79%, underscoring the importance of maintaining a healthy weight from early adulthood, say the authors.

Despite the evidence that overweight and obesity can significantly increase the risk of early death, little is known about how adiposity affects overall health and wellbeing among those who survive to older ages.

To address this issue, researchers in the United States investigated the theory that being overweight in mid life is associated with a reduced probability of maintaining optimal health among those who survive to older ages.

Their findings are based on comprehensive two yearly monitoring of more than 17,000 middle-aged women in the United States as part of the Nurses Health Study.

Healthy survival referred to participants who survived to age 70 years or older, were free of major chronic diseases, and had good cognitive, physical and mental health. Usual survival referred to participants who survived to age 70 years or older but did not meet these criteria.

After adjusting for several factors, increased body mass index at the start of the study was significantly associated with reduced odds of healthy survival. Every one unit increase of body mass index was associated with a 12% reduction in the odds of healthy survival.

Similarly, in comparison to women of stable weight, weight gain since the age of 18 was significantly associated with reduced odds of healthy survival. For every one kilogram increase of weight gain since age 18 years, the odds of healthy survival decreased by 5%.

The worst odds of healthy survival were found among women who were overweight at 18 and gained 10kg or more by middle age.

But even among women who were lean at 18, relative to those who kept a stable weight, women who gained more than 10kg by middle age were 59% less likely to achieve healthy survival.

These data provide evidence that adiposity in mid life is strongly related to a reduced probability of healthy survival among women who live to older ages, and stress the importance of maintaining a healthy weight from early adulthood, say the authors.

"Given that more and more Americans are surviving to older ages and, at the same time, gaining weight, our results may be particularly important with respect to clinical or public health policies and deserve further investigation and confirmation in additional studies," they conclude.

Public release date: 30-Sep-2009

Can strep throat cause OCD, Tourette syndrome?

ST. PAUL, Minn. – New research shows that streptococcal infection does not appear to cause or trigger Tourette syndrome or obsessive-compulsive disorder (OCD). The research is published in the September 30, 2009, online issue of *Neurology*®, the medical journal of the American Academy of Neurology.

"These results do not confirm other, smaller studies done in the US, which found an association between strep infection and these brain disorders," said study author Anette Schrag, MD, of the University College London in the United Kingdom. "Streptococcal infection has previously also been linked to other, much rarer neuropsychiatric disorders."

OCD is an anxiety disorder characterized by unwanted thoughts or obsessions and repetitive behaviors. Tourette syndrome is a neurologic disorder characterized by repetitive, involuntary sounds and movements called tics.

The study involved 255 people between the ages of two and 25 from a large, unselective population in the United Kingdom. Of those, 129 were diagnosed with OCD and 126 with Tourette syndrome or tics. Scientists compared the two groups with 4,519 people of similar ages without these disorders.

In the group with OCD, 15 percent had been exposed to a possible strep infection within two years of diagnosis. There was a similar rate among the comparative group of people without OCD. In the group with Tourette syndrome or other tic disorders, 10 percent had been exposed to a possible strep infection within two years of diagnosis, similar to people without the disorder. Researchers also looked at possible strep infections within five years of diagnosis of a strep infection.

The researchers found that people with OCD or Tourette syndrome and tics were no more likely to have had possible strep infections compared to people without these disorders at two years and five years

Public release date: 1-Oct-2009

Antidepressant and placebo are equally effective in child pain relief

Bethesda, MD (Oct. 1, 2009) — When used "off-label," the antidepressant amitriptyline works just as well as placebo in treating pain-predominant gastrointestinal disorders in children, according to a new study in *Gastroenterology*, the official journal of the American Gastroenterological Association (AGA) Institute. To view this article's video abstract, go to the AGA's YouTube Channel at www.youtube.com/AmerGastroAssn.

"Many pharmaceutical products are prescribed for off-label use in children due to the lack of clinical trials testing the efficacy of the drugs in children and adolescents. Therefore, the pediatric gastroenterologist frequently has to make treatment decisions without the evidence of how drugs work in children," said Miguel Saps, MD, of Children's Memorial Hospital and lead author of the study. "The high placebo effect we identified in this study suggests that further studies of the use of certain antidepressants in children with functional bowel disorders are needed. While several trials have demonstrated a beneficial effect of antidepressants, including amitriptyline, for the treatment of irritable bowel syndrome (IBS) in adults, more research is needed to determine how effective this drug is, if at all, in children."

Amitriptyline (Elavil®) is used to treat symptoms of depression, however, it is often times prescribed to children for pain relief from pain-predominant functional gastrointestinal disorders (FGIDs). Pain-predominant FGIDs are among the most common causes for medical consultation in children. Such disorders include three common conditions: IBS, functional dyspepsia and functional abdominal pain.

Doctors designed a large prospective, multicenter, randomized placebo-controlled trial in which children, ages eight to 17, with IBS, functional abdominal pain or functional dyspepsia were randomized to four weeks of placebo or amitriptyline.

Of the 83 children who completed the study, 63 percent of those who took amitriptyline reported feeling better, while 5 percent reported feeling worse. Of the patients who were given a placebo, 57.5 percent felt better, while 2.5 percent felt worse. Pain relief was excellent (7 percent), good (38 percent) in children on placebo and excellent (15 percent), good (35 percent) in children on amitriptyline. Both amitriptyline and placebo were associated with excellent therapeutic response, although patients with mild to moderate intensity of pain responded better to treatment. There was no significant difference between amitriptyline and placebo after four weeks of treatment.

In children, the use of drugs to treat pain-predominant FGIDs is mostly empirical and based on adult data. There have been only a few small randomized clinical trials evaluating the efficacy of drugs for the treatment of pain-predominant FGIDs in children.

Public release date: 1-Oct-2009

Over 65s should take high dose vitamin D to prevent falls, say researchers

Research: Fall prevention with supplemental and active forms of vitamin D: a meta-analysis of randomized controlled trials

A daily supplement of vitamin D at a dose of 700-1000 IU reduces the risk of falling among older people by 19% according to a study published on bmj.com today. But a dose of less than 700 IU per day has no effect.

IU is an international unit of measurement for vitamins and other biologically active substances.

Each year, one in three people aged 65 and older experience at least one fall, with around 6% resulting in a fracture. Fall prevention has therefore become a public health goal especially as the older segment of the population grows.

Several trials have shown that vitamin D improves strength and balance among older people, while others have found no significant effect on the risk of falling.

So an international team of researchers analysed the results of eight fall prevention trials to assess the effectiveness of vitamin D in preventing falls among older individuals (aged 65 or more). Differences in study design and quality were taken into account to minimise bias.

The pooled results showed that benefit from supplemental vitamin D on fall prevention depended on treatment dose.

Supplemental vitamin D2 and Vitamin D3 were investigated. 700-1000 IU supplemental vitamin D per day (vitamin D2 or vitamin D3) reduced falls by 19% and up to 26% with vitamin D3.

This effect was independent of age, type of dwelling or additional calcium supplementation. The effect was significant within two to five months of starting treatment and extended beyond 12 months.

Supplemental vitamin D did not reduce falls at a dose of less than 700 IU per day.

The use of active forms of vitamin D did not appear to be more effective than 700-1000 IU supplemental vitamin D. Active forms of vitamin D also cost more and are associated with a higher risk for hypercalcaemia (elevated calcium levels in the blood) than standard supplemental vitamin D.

To reduce the risk of falling, a daily intake of at least 700-1000 IU supplemental vitamin D is warranted in all individuals aged 65 and older, say the authors.

Higher doses may be even more effective and should be explored in future research to optimise the fall prevention benefit with vitamin D, they conclude.

Public release date: 1-Oct-2009

Oxidized form of a common vitamin may bring relief for ulcerative colitis

New research published in the Journal of Leukocyte Biology finds retinoic acid may alleviate ulcerative colitis and similar irritable bowel diseases

Here's another reason why you should take your vitamins. A new research report appearing in the October 2009 print issue of the Journal of Leukocyte Biology (<http://www.jleukbio.org>) suggests that retinoic acid, the oxidized form of vitamin A, could be a beneficial treatment for people suffering from ulcerative colitis and other irritable bowel diseases. Specifically they found that retinoic acid helps suppress out-of-control inflammation, which is a hallmark of active ulcerative colitis.

"Pharmaceutical strategies based on this research may offer a promising alternative to our current approaches of managing immune diseases including, IBD, arthritis, multiple sclerosis, and so on," Aiping Bai, a researcher involved in the work from Nanchang University in Nanchang City, China.

To make this discovery, Bai and colleagues conducted in vitro studies with human tissue and in vivo studies in mice. Both studies ultimately found that treatment with retinoic acid reduced the inflammation in the colon by increasing the expression of FOXP3, a gene involved with immune system responses, as well as decreasing the expression of IL-17, a cytokine believed to cause inflammation. Because many experts believe that IL-17 directly relates to the uncontrolled inflammation seen in ulcerative colitis and irritable bowel disease, the discovery that retinoic acid reduces IL-17's ability to cause inflammation could accelerate the development of treatments for these chronic diseases.

"Runaway inflammation is serious problem, no matter where it occurs in the body, but in many instances, the root cause is a mystery," said John Wherry, Ph.D., Deputy Editor of the Journal of Leukocyte Biology. "This research helps scientists better understand what causes and controls inflammation in the colon, which in turn, helps lay the groundwork for new classes of drugs to treat this devastating condition."

Public release date: 1-Oct-2009

LSUHSC RESEARCH SHOWS FISH OIL MAY PROTECT AGAINST STROKE FROM RUPTURED CAROTID ARTERY PLAQUES

New Orleans, LA – Research led by Hernan A. Bazan, MD, Assistant Professor of Surgery, Section of Vascular Surgery, at LSU Health Sciences Center New Orleans School of Medicine, has found that unstable carotid artery plaques – those in danger of rupturing and leading to a stroke – contain more inflammation and significantly less omega-3 fatty acids than asymptomatic plaques. This suggests that increasing the levels of omega-3 fatty acids in carotid artery plaques could either prevent strokes or improve the safety of treatment. This may be accomplished by increasing dietary intake of foods rich in omega-3 fatty acids. The study is an Article in Press in the journal, Vascular Pharmacology, currently online.

Our bodies produce only a small amount of omega-3 fatty acids, so most of what we need has to come from eating omega-3 fatty acid-rich foods like fish (salmon, tuna, trout, herring, etc.) or from supplements. Omega-3 fatty acids have been shown to protect against cardiovascular disease, particularly heart attack and sudden cardiac death. Dr. Bazan's team wanted to determine what the association might be with plaques in the carotid arteries, a common cause of strokes. Vulnerable plaques which can rupture in the carotid arteries may lead to transient ischemic attacks (TIAs), strokes, or vision loss by affecting the artery to the retina. The mechanisms leading to plaque rupture are still not fully understood but inflammation within the plaque is beginning to be recognized as an important cause of plaque rupture.

Dr. Bazan, an LSUHSC vascular/endovascular surgeon, in collaboration with researchers at Yale University and others at LSUHSC, analyzed plaques from 41 patients who underwent carotid endarterectomy (CEA) to remove plaque buildup in their arteries. Twenty-four patients were asymptomatic and 17 were symptomatic, having had neurological symptoms. All of the fats in the plaques were assessed with mass spectrometry, in collaboration with Dr. Song Hong at LSUHSC. The team was measuring the amounts of docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA) – the components of long-chain omega-3 polyunsaturated fatty acids. The plaques of asymptomatic patients contained more than twice as much DHA as the symptomatic patients, and about one and a half times as much EPA. Significantly less inflammation was also seen in the carotid atherosclerotic plaques from asymptomatic patients. “In the future, a study to address whether supplementation with dietary omega-3 polyunsaturated fatty acids prevents carotid-related events in patients with moderate or high-grade carotid stenosis will help answer whether this is a formidable therapeutic target for the prevention of stroke,” says Dr. Bazan.

According to the Centers for Disease Control and Prevention, stroke is the third leading cause of death in the United States, as well as a leading cause of serious long-term disability. About 795,000 strokes occur in the US each year and about 610,000 of these are first, or new, strokes. About 185,000 occur in people who have already had a stroke. Nearly 25% of strokes occur in people under the age of 65. Of all ischemic strokes occurring, carotid artery atherosclerotic plaques account for over a third of them. It has been noted for several decades that the southeastern United States has the highest stroke mortality in the country. It is not completely clear what factors might contribute to the higher incidence and mortality from stroke in this region.

The research was supported by the National Institutes of Health-National Center for Research Resources, an LSUHSC Cardiovascular Center Grant (“Mentoring in Cardiovascular Biology”), and the American Vascular Association.

Aspirin Misuse May Have Made 1918 Flu Pandemic Worse

The devastation of the 1918-1919 influenza pandemic is well known, but a new article suggests a surprising factor in the high death toll: the misuse of aspirin. Appearing in the November 1 issue of *Clinical Infectious Diseases* and available online now, the article sounds a cautionary note as present day concerns about the novel H1N1 virus run high.

High aspirin dosing levels used to treat patients during the 1918-1919 pandemic are now known to cause, in some cases, toxicity and a dangerous build up of fluid in the lungs, which may have contributed to the incidence and severity of symptoms, bacterial infections, and mortality. Additionally, autopsy reports from 1918 are consistent with what we know today about the dangers of aspirin toxicity, as well as the expected viral causes of death.

The motivation behind the improper use of aspirin is a cautionary tale, said author Karen Starko, MD. In 1918, physicians did not fully understand either the dosing or pharmacology of aspirin, yet they were willing to recommend it. Its use was promoted by the drug industry, endorsed by doctors wanting to “do something,” and accepted by families and institutions desperate for hope.

“Understanding these natural forces is important when considering choices in the future,” Dr. Starko said. “Interventions cut both ways. Medicines can save and improve our lives. Yet we must be ever mindful of the importance of dose, of balancing benefits and risks, and of the limitations of our studies.”

[PRESS RELEASE 2 October 2009] A derivative of cholesterol is necessary for the formation of brain cells, according to a study from the Swedish medical university Karolinska Institutet. The results, which are published in the journal *Cell Stem Cell*, can help scientists to cultivate dopamine-producing cells outside the body.

Ernest Arenas the formation of dopamine-producing neurons during brain development in mice is dependent on the activation of a specific receptor in the brain by an oxidised form of cholesterol called oxysterol. Dopamine-producing nerve cells play an important part in many brain functions and processes, from motor skills to reward systems and dependency. They are also the type of cell that dies in Parkinson's disease.

The scientists have also shown that embryonic stem cells cultivated in the laboratory, form more dopamine-producing nerve cells if they are treated with oxidised cholesterol. The same treatment also reduced the tendency of the stem cells to show uncontrolled growth.

"Oxysterol contributes to a safer and better cultivation of dopamine-producing cells, which is a great advancement since it increases the possibility of developing new treatments for Parkinson's disease," says Professor Arenas.

It is hoped that one day it will be possible to replace dead cells in the brains of Parkinson's patients with transplanted cultivated dopamine-producing cells. Such cells can also be used to test new Parkinson's drugs.

Public release date: 1-Oct-2009

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Public release date: 1-Oct-2009

Where’s the Science? The Sorry State of Psychotherapy

The prevalence of mental health disorders in this country has nearly doubled in the past 20 years. Who is treating all of these patients? Clinical psychologists and therapists are charged with the task, but many are falling short by using methods that are out of date and lack scientific rigor. This is in part because many of the training programs—especially some Doctorate of Psychology (PsyD) programs and for-profit training centers—are not grounded in science.

A new report in *Psychological Science in the Public Interest*, a journal of the Association for Psychological Science, by a panel of distinguished clinical scientists—Timothy Baker (University of Wisconsin-Madison), Richard McFall (Indiana University), and Varda Shoham (University of Arizona)—calls for the reform of clinical psychology training programs and appeals for a new accreditation system to ensure that mental health clinicians are trained to use the most effective and current research to treat their patients.

There are multiple practices in clinical psychology that are grounded in science and proven to work, but in the absence of standardized science-based training, those treatments go unused.

For example, cognitive-behavioral therapy (CBT) has been shown to be the most effective treatment for PTSD and has the fewest side-effects, yet many psychologists do not use this method. Baker and colleagues cite one study in which only 30 percent of psychologists were trained to perform CBT for PTSD and only half of those psychologists elected to use it. That means that six of every seven sufferers were not getting the best care available from their clinicians. Furthermore, CBT shows both long-term and immediate benefits as a treatment for PTSD; whereas medications such as Paxil have shown 25 to 50 percent relapse rates.

The report suggests that the escalating cost of mental health care treatment has reduced the use of psychological treatments and shifted care to general health care facilities. The authors also stress the importance of coupling psychosocial interventions with medicine because many behavioral therapies have been shown to reduce costs and provide longer term benefits for the client.

Baker and colleagues conclude that a new accreditation system is the key to reforming training in clinical psychology. This new system is already under development: the Psychological Clinical Science Accreditation System (PCSAS www.pcsas.org).

Public release date: 4-Oct-2009

Curcumin may inhibit nicotine-induced activation of head and neck cancers

New research released at world's largest ENT meeting

San Diego, CA – Curcumin, the compound that gives curry powder its yellow/orange color, may inhibit the adverse effects of nicotine in patients with head and neck cancer who continue to smoke.

In a paper presented at the 2009 American Academy of Otolaryngology – Head and Neck Surgery Foundation (AAO-HNSF) Annual Meeting & OTO EXPO in San Diego, researchers examined the effects of curcumin on head and neck squamous cell carcinoma (HNSCC) growths. The study used an in vitro model of a variety of head and neck cancer cell lines. To mimic the clinical situation, HNSCC cells were pre-treated with curcumin and then nicotine was introduced. The results of the studies showed that the curcumin was able to block the nicotine from activating cancer causing cells.

Annually there are approximately 40,000 new cases of head and neck cancers and 13,000 deaths in the U.S. and 500,000 new cases worldwide. Recurrence of these cancers are high because many patients continue to smoke after successful treatment. Also, former smokers often use nicotine replacement therapy as an aid for successful tobacco cessation.

Although nicotine itself has not been shown to be carcinogenic, it has been shown to

encourage the cancer-forming process. The researchers sought a safe, bioactive food compound that could be used not only as a chemopreventive agent but could also block the harmful effects of nicotine.

The results may help to discover additional therapies for cancer prevention and treatment.

Public release date: 5-Oct-2009

Higher folates, not antioxidants, can reduce hearing loss risk in men

New research released at world's largest ENT meeting

San Diego, CA – Increased intakes of antioxidant vitamins have no bearing on whether or not a man will develop hearing loss, but higher folate intake can decrease his risk by 20 percent, according to new research presented at the 2009 American Academy of Otolaryngology-Head and Neck Surgery Foundation (AAO-HNSF) Annual Meeting & OTO EXPO, in San Diego, CA.

The study, which identified 3,559 cases of men with hearing loss, found that there was no beneficial association with increased intakes of antioxidant vitamins such as C, E, and beta carotene. However, the authors found that men over the age of 60 who have a high intake of foods and supplement high in folates have a 20 percent decrease in risk of developing hearing loss.

Hearing loss is the most common sensory disorder in the United States, affecting more than 36 million people. High folate foods include leafy vegetables such as spinach, asparagus, turnip greens, lettuces, dried or fresh beans and peas, fortified cereal products, sunflower seeds and certain other fruits and vegetables are rich sources of folate. Baker's yeast, liver and liver products also contain high amounts of folate.

The authors believe this is the largest study to delve prospectively into the relation between dietary intake and hearing loss. They used the most recent figures from the Health Professionals Follow-up Study cohort from years 1986 to 2004, a group consisting of 51,529 male health professionals. They were first enrolled into this study in 1986 and filled out detailed health and diet questionnaires every other year. The authors believe their findings can allow greater education, prevention, and screening efforts.

Public release date: 5-Oct-2009

Antidepressant use during pregnancy associated with some adverse outcomes in newborns

Exposure to a certain class of antidepressant medications during pregnancy may be associated with an increased risk of preterm birth, a low five-minute Apgar score (a measure of overall health of the baby) and admission to the neonatal intensive care unit, according to a report in the October issue of Archives of Pediatrics & Adolescent

Medicine, one of the JAMA/Archives journals.

More than one in ten pregnant women are estimated to have depression, comparable in frequency and severity to postpartum depression, according to background information in the article. "Depression, antidepressants and lifestyle factors associated with depression may influence pregnancy outcomes and newborn health," the authors write. "The safety profile of antidepressant medication in pregnancy is undetermined, but depression during pregnancy can be serious and has been associated with an increased maternal mortality." A class of antidepressants known as selective serotonin reuptake inhibitors (SSRIs) have been used during pregnancy since the early 1990s and are recommended as the first choice for pregnant women in many countries.

Najaaraq Lund, M.D., of the Bandim Health Project, Indepth Network, Bissau, Guinea-Bissau, and Aarhus University, Aarhus, Denmark, and colleagues studied women receiving prenatal care from 1989 to 2006. They compared birth outcomes including gestational age, birth weight and Apgar score among babies born to 329 women who were treated with SSRIs, 4,902 who had a history of psychiatric illness but were not treated with SSRIs and 51,770 who had no history of psychiatric illness.

Women who took SSRIs during pregnancy gave birth an average of five days earlier and had twice the risk of preterm delivery as women with no history of psychiatric illness. Infants exposed to the medications in utero were significantly more likely than the two groups not exposed to have a five-minute Apgar score of seven or below (seven is a general indicator of good infant health) or to be admitted to the neonatal intensive care unit (NICU). Head circumference and birth weight did not differ between the three groups.

SSRIs have been shown to readily cross the placenta and appear in the umbilical cord blood of infants whose mothers took them, the authors note. Several previous observations have described withdrawal symptoms in infants born after exposure to the medications. In this study, exposed infants admitted to the NICU experienced symptoms that could be due to withdrawal from or adverse effects of SSRIs, including jitteriness, seizures, respiratory problems, infections and jaundice.

"The study justifies increased awareness to the possible effects of intrauterine exposure to antidepressants," the authors conclude. "However, treatment of depression during pregnancy may be warranted and future studies need to distinguish between individual SSRIs to find the safest medication."

Public release date: 6-Oct-2009

Future diabetes treatment may use resveratrol to target the brain

Chevy Chase, MD—Resveratrol, a molecule found in red grapes, has been shown to improve diabetes when delivered orally to rodents. Until now, however, little has been known about how these beneficial changes are mediated in the body. A new study

accepted for publication in *Endocrinology*, a journal of The Endocrine Society, shows that the brain plays a key role in mediating resveratrol's anti-diabetic actions, potentially paving the way for future orally-delivered diabetes medications that target the brain.

Resveratrol activates sirtuins, a class of proteins that are thought to underlie many of the beneficial effects of calorie restriction. Previous studies in mice have provided compelling evidence that when sirtuins are activated by resveratrol, diabetes is improved. Sirtuin activators are now being tested in humans as anti-diabetic compounds.

Sirtuins are expressed virtually everywhere throughout the body and until now, little has been known about what tissues mediate resveratrol's beneficial effects. Knowing where in the body the beneficial effects of activated sirtuins are mediated could help in the development of more effective targeted diabetes medications.

"We know that sirtuins are expressed in parts of the brain known to govern glucose metabolism, so we hypothesized that the brain could be mediating resveratrol's anti-diabetic actions," said Roberto Coppari, PhD, of the University of Texas Southwestern Medical Center and co-author of the study. "To test the hypothesis, we assessed the metabolic consequences of delivering resveratrol directly into the brain of diabetic mice. We found that resveratrol did activate sirtuins in the brain of these mice which resulted in improving their high levels of blood sugar and insulin."

"These findings may lead to new strategies in the fight against type 2 diabetes," said Coppari. "By knowing that the brain mediates resveratrol's anti-diabetic actions, industry can now focus on developing sirtuin activators that directly target the brain. When orally-delivered, these drugs will likely improve diabetes without affecting the other organs in which activation of sirtuins may not always be beneficial."

Public release date: 6-Oct-2009

Bell's palsy: Study calls for rethink of cause and treatment

Drugs widely prescribed to treat facial paralysis in Bell's palsy are ineffective and are based on false notions of the cause of the condition, according to Cochrane Researchers. They say research must now focus on discovering other potential causes and treatments.

Between 11 and 40 people in every 100,000 are affected by the condition, which causes paralysis on one side of the face. Paralysis is usually temporary, but a third of people suffer ongoing problems including facial disfigurement, pain and psychological difficulties.

Antiviral medications are widely prescribed to treat the condition, because studies have indicated that Bell's palsy may be associated with the same virus that causes cold sores (herpes simplex). Previous Cochrane Systematic Reviews did not find sufficient evidence to determine whether or not antiviral medications are effective.

In the current review, the researchers considered data from seven trials that together include 1,987 people. Antivirals were no more effective than placebo. Antivirals were also significantly less effective than steroid drugs called corticosteroids which will be the subject of another Cochrane Review in progress.

"The evidence from this review shows that antivirals used for herpes simplex offer no benefit for people with Bell's palsy. These results cast doubt on research that suggests herpes simplex causes the condition," said Pauline Lockhart, who is based at the Centre for Primary Care and Population Research at the University of Dundee. "In view of this, further research should be aimed at discovering alternative causes and treatments."

"It is worth pointing out that a 10 day course of the antivirals often prescribed for Bell's palsy can cost in excess of £10 in the UK. Obviously widespread prescription of drugs that we know do not work is a waste of resources."

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Eating liquorice in pregnancy may affect a child's IQ and behavior

Expectant mothers who eat excessive quantities of liquorice during pregnancy could adversely affect their child's intelligence and behavior, a study has shown. Expectant mothers who eat excessive quantities of liquorice during pregnancy could adversely affect their child's intelligence and behaviour, a study has shown.

A study of eight year old children whose mothers ate large amounts of liquorice when pregnant found they did not perform as well as other youngsters in cognitive tests.

They were also more likely to have poor attention spans and show disruptive behaviour such as ADHD (attention deficit hyperactivity disorder).

It is thought that a component in liquorice called glycyrrhizin may impair the placenta, allowing stress hormones to cross from the mother to the baby.

High levels of such hormones, known as glucocorticoids, are thought to affect fetal brain development and have been linked to behavioural disorders in children.

The results of the study are published in the American Journal of Epidemiology. Eight year olds whose mothers had been monitored for liquorice consumption during pregnancy were tested on a range of cognitive functions including vocabulary, memory and spatial awareness.

Behaviour was assessed using an in-depth questionnaire completed by the mother, which is also used by clinicians to evaluate children's behaviour.

The study, carried out by the University of Helsinki and the University of Edinburgh, looked at children born in Finland, where consumption of liquorice among young women is common.

Professor Jonathan Seckl, from the University of Edinburgh's Centre for Cardiovascular Science, said: "This shows that eating liquorice during pregnancy may affect a child's behaviour or IQ and suggests the importance of the placenta in preventing stress hormones that may affect cognitive development getting through to the baby."

Women who ate more than 500mg of glycyrrhizin per week – found in the equivalent of 100g of pure liquorice – were more likely to have children with lower intelligence levels and more behavioural problems.

"Expectant mothers should avoid eating excessive amounts of liquorice", said Professor Katri Räikkönen, from the University of Helsinki's Department of Psychology.

Of the children who took part in the study, 64 were exposed to high levels of glycyrrhizin in liquorice, 46 to moderate levels and 211 to low levels.

The research followed on from a study which showed that liquorice consumption was also linked to shorter pregnancies. Laboratory studies have also shown a link between the placenta not working to prevent stress hormones from passing through to the fetus, as well as a link to cardiac and metabolic disorders and behavioural problems in later life

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Unnatural selection: Birth control pills may alter choice of partners

There is no doubt that modern contraception has enabled women to have unprecedented control over their own fertility. However, is it possible that the use of oral contraceptives is interfering with a woman's ability to choose, compete for and retain her preferred mate? A new paper published by Cell Press in the October issue of the journal Trends in Ecology and Evolution reviews emerging evidence suggesting that contraceptive methods which alter a woman's natural hormonal cycles may have an underappreciated impact on choice of partners for both women and men and, possibly, reproductive success.

Human females are only fertile for a brief period during their menstrual cycle, just prior to ovulation. Many scientific studies have established that partner preferences of both women and men vary significantly according to predictable hormonal fluctuations associated with the natural menstrual cycle. Ovulation is associated with a profound shift in some female physical characteristics, behaviors and perceptions related to mate attraction.

Ovulating women exhibit a preference for more masculine male features, are particularly attracted to men showing dominance and male-male competitiveness and prefer partners that are genetically dissimilar to themselves. This is significant because there is evidence suggesting that genetic similarity between couples might be linked with infertility. Further, some studies have suggested that men detect women's fertility status, preferring ovulating women in situations where they can compare the attractiveness of different women.

The oral contraceptive pill alters the hormonal fluctuations associated with the menstrual cycle and essentially mimics the more steady hormonal conditions associated with pregnancy. "Although mate choice studies in humans have routinely recorded pill use during the last decade to control for its confounding effects, little effort has been invested in understanding the consequences of such effects of the pill," offers study author Dr. Alexandra Alvergne from the Department of Animal and Plant Sciences at the University of Sheffield.

Dr. Alverne and colleague Dr. Virpi Lummaa reviewed and discussed new research supporting the conclusion that use of the pill by women disrupted their variation in mate preferences across their menstrual cycle. **The authors also speculate that the use of oral contraceptives may influence a woman's ability to attract a mate by reducing attractiveness to men, thereby disrupting her ability to compete with normally cycling women for access to mate.**

Of particular interest is the fact that women taking the pill do not exhibit the ovulation-specific attraction to genetically dissimilar partners. "The ultimate outstanding evolutionary question concerns whether the use of oral contraceptives when making mating decisions can have long-term consequences on the ability of couples to reproduce," suggests Dr. Lummaa.

Taken together, an increasing number of studies suggest that the pill is likely to have an impact on human mating decisions and subsequent reproduction. "If this is the case, pill use will have implications for both current and future generations, and we hope that our review will stimulate further research on this question," concludes Dr. Lummaa.

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Women with breast cancer have low vitamin D levels

High-dose supplements needed to boost levels, decrease fracture risk

Women with breast cancer should be given high doses of vitamin D because a majority of them are likely to have low levels of vitamin D, which could contribute to decreased bone mass and greater risk of fractures, according to scientists at the University of Rochester Medical Center.

In a study of 166 women undergoing treatment for breast cancer, nearly 70 percent had low levels of vitamin D in their blood, according to a study being presented Thursday, Oct. 8, at the American Society of Clinical Oncology's Breast Cancer Symposium in San Francisco. The analysis showed women with late-stage disease and non-Caucasian women had even lower levels.

"Vitamin D is essential to maintaining bone health, and women with breast cancer have accelerated bone loss due to the nature of hormone therapy and chemotherapy. It's important for women and their doctors to work together to boost their vitamin D intake," said Luke Peppone, Ph.D., research assistant professor of Radiation Oncology, at Rochester's James P. Wilmot Cancer Center. He is a member of the National Cancer Institute's Community Clinical Oncology Program research base in Rochester.

Scientists funded by the NCI analyzed vitamin D levels in each woman, and the average level was 27 nanograms per milliliter; more than two-thirds of the women had vitamin deficiency. Weekly supplementation with high doses of vitamin D -- 50,000 international

units or more -- improved the levels, according to Peppone's study.

The U.S. Institute of Medicine suggests that blood levels nearing 32 nanograms per milliliter are adequate.

This problem is not unexpected, Peppone said, because previous studies have shown that nearly half of all men and women are deficient in the nutrient, with vitamin D levels below 32 nanograms per milliliter. Vitamin D, obtained from milk, fortified cereals and exposure to sunlight, is well known to play an essential role in cell growth, in boosting the body's immune system and in strengthening bones.

Public release date: 12-Oct-2009

No such thing as 'junk RNA,' say Pitt researchers

PITTSBURGH, Oct. 12 – Tiny strands of RNA previously dismissed as cellular junk are actually very stable molecules that may play significant roles in cellular processes, according to researchers at the University of Pittsburgh School of Medicine and the University of Pittsburgh Cancer Institute (UPCI). The findings, published last week in the online version of the *Journal of Virology*, represent the first examination of very small RNA products termed unusually small RNAs (usRNAs). Further study of these usRNAs, which are present in the thousands but until now have been neglected, could lead to new types of biomarkers for diagnosis and prognosis, and new therapeutic targets.

In recent years, scientists have recognized the importance of small RNAs that generally contain more than 20 molecular units called nucleotides, said senior author Bino John, Ph.D., assistant professor, Department of Computational Biology, Pitt School of Medicine.

"But until we did our experiments, we didn't realize that RNAs as small as 15 nucleotides, which we thought were simply cell waste, are surprisingly stable, and are repeatedly, reproducibly, and accurately produced across different tissue types." Dr. John said. "We have dubbed these as usRNAs, and we have identified thousands of them, present in a diversity that far exceeds all other longer RNAs found in our study."

The team's experiments began with the observation that the Kaposi sarcoma-associated herpesvirus produces a usRNA that can control the production of a human protein. Detailed studies using both computational and experimental tools revealed a surprisingly large world of approximately 15 nucleotide-long usRNAs with intriguing characteristics. Many usRNAs interact with proteins already known to be involved in small RNA regulatory pathways. Some also share highly specific nucleotide patterns at one end. The researchers wrote that the existence of several different patterns in usRNAs reflects the diverse pathways in which the RNAs participate.

"These findings suggest that usRNAs are involved in biological processes, and we should investigate them further," Dr. John noted. "They may be valuable tools to diagnose

diseases, or perhaps they could present new drug targets."

In addition to exploring biomarker potential, he and his colleagues plan to better characterize the various subclasses of usRNAs, identify their protein partners and study how they are made in the cell.

These reports are done with the appreciation of all the Doctors, Scientist, and other Medical Researchers who sacrificed their time and effort. In order to give people the ability to empower themselves. Without the base aspirations for fame, or fortune. Just honorable people, doing honorable things.