



శ్రీ వేపచేదు విద్యా పీఠము

VEPACHEDU EDUCATIONAL FOUNDATION

The Telangana Science Journal
Health and Nutrition

TIACS-subscribe@yahoo.com (The Indian American Chemical Society)

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Vitamin D

Type 2 diabetes is generally associated with depression and pain. Researchers in a new study tested the efficacy of weekly vitamin D2 supplementation (50,000 IUs) for six months on depression in women with type 2 diabetes. Depression significantly improved following supplementation. Additionally, researchers found a significant decrease in neuropathic and sensory pain at the three and six month mark following vitamin D2 supplementation. <http://www.sciencedaily.com/releases/2013/12/131202152033.htm>

Another study suggests that a diet low in vitamin D causes damage to the brain. In addition to being essential for maintaining bone health, vitamin D serves important roles in other organs and tissues, including the brain. Published in *Free Radical Biology and Medicine*, the study showed that middle-aged

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rats that were fed a diet low in vitamin D for several months developed free radical damage to the brain along with damage to many different brain proteins. The same rats also showed a significant decrease in cognitive performance on tests of learning and memory. Low levels of vitamin D have previously been associated with Alzheimer's disease, and have also been linked to the development of certain cancers and heart disease. In both the developed world and in areas of economic hardship where food intake is not always the most nutritious, vitamin D levels in humans are often low, particularly in the elderly population. <http://www.sciencedaily.com/releases/2013/12/131202121101.htm>

Music

Learning to play an instrument can be a great outlet for a child's creativity, and the repeated practice can teach much-needed focus and discipline. Learning a new song or mastering a new chord gives often a boost of self-esteem. However, a Harvard study finds that studying music does not improve intelligence. The studies are described in a December 11 paper published in the open-access journal *PLOS ONE*. <http://medicalxpress.com/news/2013-12-contrary-popular-opinion-cognitive-benefits.html>

Olfactory Sense of Fear

Neuroscientists studying the olfactory system in mice have discovered that the fear reaction can occur at the sensory level, as opposed to after being processed by our brain. It can happen even before the brain has had the opportunity to interpret that the odor could mean trouble. In a new study published in *Science*, researchers report that neurons in the noses of laboratory animals reacted more strongly to threatening odors before the odor message was sent to the brain. In short, this means that the nervous system may become sensitive to threatening stimuli and that this 'fear learning' may affect the signals from the sensory organs to the brain. Researchers made this discovery by using light to observe activity in the brains of genetically engineered mice through a window in the mouse's skull. They found that those mice that received an electric shock simultaneously with a specific odor showed an enhanced response to the smell in the cells in the nose, before the message was delivered to the neurons in the brain. http://www.eurekalert.org/pub_releases/2013-12/ru-sod121213.php

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Exercise

A cross-sectional study by researchers has found that exercising in middle age is a protective factor against sarcopenia and is also effective in maintaining muscle strength and physical performance. Sarcopenia is a disease associated with the ageing process, resulting in loss of skeletal muscle mass and muscle strength and/or function in the elderly. The multiple adverse health outcomes include physical disability, poor quality of life and premature death. Analysis showed that good exercise habits in middle age were associated with a lower prevalence of sarcopenia in older age as well as with better grip strength, quicker gait speeds, and longer one-leg standing times after adjusting for age, sex and BMI. http://www.eurekalert.org/pub_releases/2013-12/iof-rei121213.php

Allergies

Children whose mothers ate more peanuts and tree nuts while pregnant were less likely to develop allergies to those foods, according to a study published in *JAMA Pediatrics*. The children of mothers without nut allergies who ate less than a serving a month of peanuts and tree nuts had a risk of nut allergies that was more than three times greater than that of children with mothers who ate five or more servings a week, according to the study. <http://www.bloomberg.com/news/2013-12-23/eating-nuts-while-pregnant-reduces-allergy-risk-to-child.html>

Obesity

According to a recent study, as men get fatter their bones and muscles get weaker. The study found that a 1.2 percent increase in BMI was driven by a 9 percent increase in body fat and resulted in a 0.9 percent

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drop in muscle mass along with a 1.6 percent drop in bone mass. While the changes in muscle and bone mass found in the study are relatively small compared to the increases in body fat, they foretell serious problems for the future as the population ages. <http://www.sciencealert.com.au/news/20131812-25114.html>

According to another study, parental stress can be linked to weight gain in children. The study found that children with parents who have higher levels of stress have a Body Mass Index (BMI) that's about 2 percent higher than that of children whose parents have lower levels of stress. Children with higher parental stress also gained weight at a rate that was higher than that of other children by 7 percent throughout the duration of the study. Although those figures sound fairly low, they are significant. Mainly because they are occurring in children whose bodies, and eating and exercise habits are still being developed. If that trend of weight gain were to continue and be compounded over a lifetime, it could potentially lead to very serious obesity and health issues.

<http://www.sciencedaily.com/releases/2013/12/131206111707.htm>

Weight Control

Obesity rates in the United States increased from 14.5% of the population between 1971-1974 to 35.9% of the population between 2009-2010. Research suggests that the ability to control our energy intake may be affected by the speed at which we eat, and that a high eating rate may impair the relationship between the sensory signals and processes that regulate how much we consume, per results published in the *Journal of the Academy of Nutrition and Dietetics*. http://www.eurekalert.org/pub_releases/2013-12/ehs-smr122613.php

Alcohol and Energy Drinks

According to a new study published in the current issue of the *Journal of Adolescent Health*, mixing energy drinks with alcohol adds additional risk to the risks associated with drinking alcohol. College students have a tendency to drink more heavily and to become more intoxicated when they consumed

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both alcohol and energy drinks. Despite the fact that the U.S. no longer permits manufacturers to pre-mix high-caffeine products with alcohol, mixed drinks such as vodka Red Bulls and Jäger bombs (A shot of Jägermeister liquor mixed into a glass of Red Bull) are becoming increasingly popular. The findings suggest that the use of energy drinks and alcohol together could lead to more serious alcohol-related problems. <http://www.sciencedaily.com/releases/2013/12/131202162158.htm>

Cannabis

Evidence from a recent study shows an intergenerational effect on the motivation of rats whose genetic forbears had been subjected to exposure to marijuana. Analysis by investigators showed numerous epigenetic changes brought on by exposure to the drug. Previously, the researchers showed that THC exposure during adolescence increased a later desire for heroin during adulthood. Now, they're attempting to explain the neurological repercussions of exposure to cannabis, while recreational drugs will become available from tomorrow (1 January 2014) in Colorado. <http://www.medicaldaily.com/cannabis-effects-passed-down-three-generations-rats-offspring-show-reduced-motivation-264094>

Gender Differences

A new brain connectivity study published in the *Proceedings of National Academy of Sciences* found striking differences in the neural wiring of men and women, reconfirming the earlier research on emotional intelligence and the differences between human males and females. The neural maps show a stark difference and complementarity in the architecture of the human brain. <http://www.sciencedaily.com/releases/2013/12/131202161935.htm>

Smart Phone Usage and Effects

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As cell phone usage continues to increase, it is worth considering whether usage of these devices is related to measurable outcomes important for student success, including academic performance, anxiety and happiness. Results of an analysis showed that cell phone usage was negatively related to GPA and positively related to anxiety. GPA was positively related to happiness while anxiety was negatively related to happiness. Thus, high frequency cell phone users tended to have lower GPAs, more anxiety, and lower satisfaction with life compared to their peers who used their cell phones less often.

<http://www.sciencedaily.com/releases/2013/12/131206124425.htm>

Photography

A new study suggests that museum-goers are less likely to remember the objects they photograph than the objects they simply observe. However, the researchers found that taking a zoomed-in photo of a specific part of a painting, mosaic, or statue could potentially help preserve memory of the entire piece.

<http://www.foxnews.com/health/2013/12/11/taking-pictures-may-impair-memories-study-shows/>

Source: The primary sources cited above, New York Times (NYT), Washington Post (WP), Mercury News, Bayarea.com, Chicago Tribune, USA Today, Intellihealthnews, Deccan Chronicle (DC), the Hindu, Hindustan Times, Times of India, AP, Reuters, AFP, womenfitness.net, about.com etc.

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Om! Asatoma Sadgamaya, Tamasoma Jyotirgamaya, Mrityorma Amritamgamaya, Om Shantih, Shantih, Shantih!

(Aum! Lead the world from wrong path to the right path, from ignorance to knowledge, from mortality to immortality, and peace!)

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