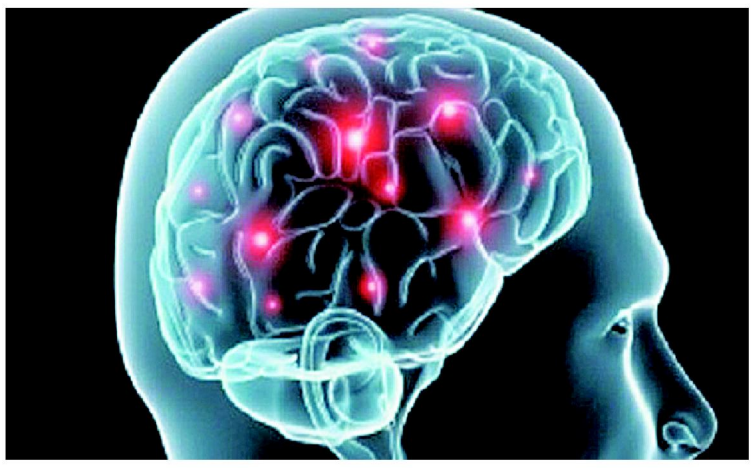
Rewiring The Brain To Crave Healthy Food

New studies have shown that it may be possible to train your brain to cease craving junk food and begin desiring healthy food. The study supports the idea that overindulging in unhealthy substances is like any other addiction and can ultimately be solved.

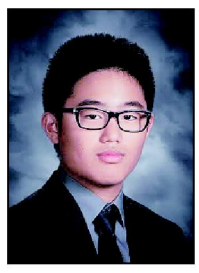
What causes this phenomenon? Experts state that years of devouring high-calorie and highly processed foods causes internal changes in the brain to consistently desire unhealthy foods, despite the understanding that there are countless healthier options. Experts long believed that once the brain changed, it was permanent; however, these new breakthrough studies have shown that it is possible to completely eliminate all mental and physical desires for unhealthy food, even as early as six months into the established program.



Susan Roberts, a senior scientist at the USDA Human Nutrition Research Center on Aging at Tufts University says, "Most of America has problems controlling their food." According to global surveys, America consistently ranks in the top tier for overall food consumption and obesity. The Tufts researchers sought to clarify whether a specific weight-loss program developed by Roberts actually worked due to instigating neurobiological changes in the brain. For their study, the scientists selected 13 overweight adults. Eight were enrolled in the program and five ate regularly, following typical American diets. Both groups underwent fMRI scans in the beginning and at the end to catalogue blood-flow activity in the brain's reward center.

During the first fMRI scan, both groups showed neurological activity when viewing images of high-calorie foods. Interestingly, after six months, the eight individuals in the weight-loss program displayed similar neurological excitement when viewing low-calorie foods, as well. The only scientific explanation for this is that after six months of healthy dieting, the brain's neurological preferences and circuitry had changed. It is worth noting that the individuals on the diet plan also lost an average of 14.1 pounds each, while the others in the regular diet gained about 5 pounds each.

If these studies can be replicated than it could very well change the landscape of the American nutrition and medical fields. It would be fairly easy and simple to convince an obese individual to substitute his dessert for a side of vegetables. Overall, this study reinforces the sheer difficulty of weight loss because it is influenced by as eries of factors: hormones, genetics, environment, and social preferences.



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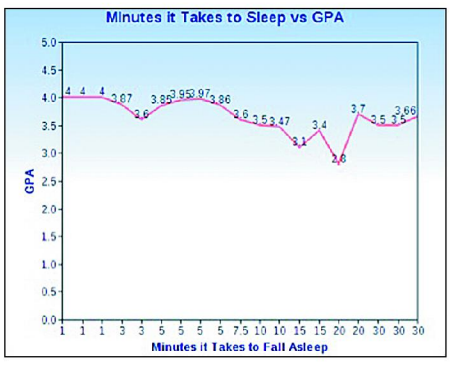
Sleep Deprivation Research



Amongst teenagers, sleep deprivation is prominent and universal. Invigorated by the mysteries surrounding the science of sleep, I set out to explore this subject by issuing a survey consisting of 60 questions regarding the physical, mental, and social performance of high school students. Several correlations were noted.

▲Minutes it Takes to Sleep vs GPA

Academic GPA drops in a downward trend the longer it takes for the student to fall asleep. There can be several reasons, although the primary one is insomnia. For students not suffering from insomnia, the widespread use of mobile devices can also prolong the amount of time it takes to sleep. The blue light that most mobile devices emit may keep an individual awake and alert for extended periods of time. The computer is also a large source of blue light that can keep the mind working longer than necessary. In addition, key stages of sleep, such as REM, are lost, which leads to less memory consolidation.

▲Listening to Music vs GPA

While certain types of music have been proven to help students focus better, the results prove that there is little correlation between those who listen to classical music (proven to assist with focus) and those who listen to other musical genres. Interestingly, students who listened to music right before bedtime typically had a higher GPA. While this research is preliminary, it demonstrates the potential positive correlation between music and academics.

▲Use of Sleeping Aids vs GPA

We see that those who use sleeping aids tend to have a lower GPA, but this can be explained by the fact that perhaps since their quality of sleep tends to be lower, their sleep is not as effective and does not restore them to maximum mental and physical efficiency. However, it was also shown that even those who did not use sleeping aids reported feeling just as tired throughout the school day. Additional research must be completed before any conclusive remarks regarding the efficacy of sleeping aids can be confidently documented.

▲Napping vs GPA

There was no significant difference in GPA between those who took naps and those who did not. This may be due to the fact that napping takes away possible studying time and alters normal sleeping schedules in adolescents. The data shows that individuals, who regularly nap, typically sleep around 12:00 AM to 1:00 AM, while others sleep around 10:00 PM to 11:00 PM.

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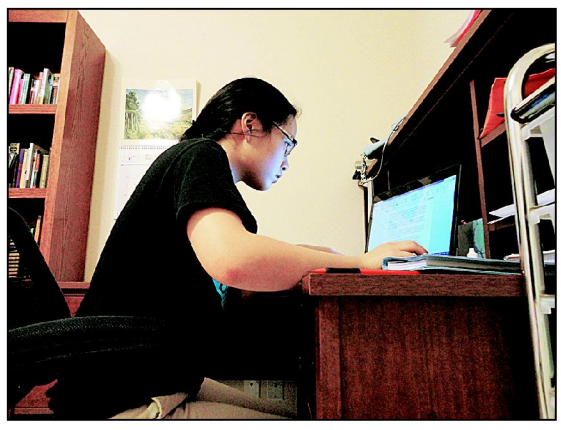
Sitting May Increase Risk Of Cancer



Watching TV, typing up a paper, taking notes in class, or entering records into a database - we are sitting. Modern technology has greatly reduced the number of jobs that require physical labor and increased the number of jobs that require hours of sitting in a desk. Sitting for long hours can increase a person's risk for type 2 diabetes, cardiovascular disease, and breast cancer. However, new research published in the Journal of the National Cancer Institute shows that sitting for too long may also increase the risk of developing certain cancers.

Daniela Schmid, Ph.D., M.Sc., and Michael F. Leitzmann, M.D., Dr.P.H.conducted 43 observational studies that included over four million individuals and 68,936 cases of cancer. Shmid and Leitzmann found a positive correlation between the number of hours spent sitting and the risk for certain cancers.

According to the study, sitting for an additional two hours a day can increase the risk of colon cancer by 8%, endometrial cancer by 10%, and lung cancer by 6%. Sitting in front of a TV had the most significant effect, since people usually drink unhealthy beverages and eat junk food while watching TV. However, the pattern did not hold true for rectal, ovary, and prostate cancers or non-Hodgkin's lymphoma.

Although a sedentary lifestyle may put a person at a higher risk for developing these cancers, sitting does not necessarily cause cancer. Many other factors such as alcoholism, smoking, obesity, and genetic predisposition can increase a person's risk of cancer.

People can take measures to eliminate some of these risk factors, such as drinking or smoking. To avoid sitting for long hours, one can turn off the TV, stand up while doing work, take short walks, or find any other opportunities to get up and move around during sedentary activity.

However, according to a study conducted by the National Institutes of Health (NIH) in 2012, just being physically active does not counteract the negative effects of sitting for too long. The study revealed that exercising for 150 minutes every week does not offset the detrimental consequences of sitting for long periods of time.

Lin Yang and Graham A. Colditz, M.D., Dr.P.H. believe that in order to prevent cancer, a combination of concrete evidence, political will, and a plan to fund and implement prevention programs is necessary.

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