Math – letes rule! Fit, healthy kids do better in school, especially math

The familiar saying that exercise is good for the body and mind may be especially true for children. Kids who are physically fit actually have differences that might allow them to do better in math, according to a new study.

Researchers put a small group of children ages 9 and 10 to the test both mentally, with standardized math and reading exams, and physically, testing their endurance on a treadmill. They also scanned their brains using MRI and found that the children who could run for longer periods of time on the treadmill had thinner sections of gray matter in the front of their brains, which actually signifies more brain maturation, than those with lower stamina. These children also ran laps around their less fit peers in the math test.

It’s part of natural processes that the brain goes through a period of thinning during adolescence as brain connections that are deemed not necessary are thinned out. (Fit) kids may be further along in this maturation process.

This part of the brain, also called the frontal cortex, could be especially key for academic performance because it is involved in working memory, which helps us figure out math problems, for example, and cognitive flexibility, or the ability to tune out distractions.

Earlier studies have linked physical fitness with changes in other regions of the brain, such as a larger hippocampus. A combination of areas in the brain, and connections between them, are probably important for scholarly tasks, and development of these areas may either spurred or stagnated depending on exercise.

Despite the large body of research suggesting that physical activity pays off in the classroom, many schools have cut back their physical education classes and recess time, according to a 2013 report by the institute of Medicine, a private nonprofit scientific organization.

The vast majority of schools were not serving kids in terms of their physical activity needs.

The report recommended that all children should be able to get an hour of moderate or vigorous activity every day in school, through physical education classes and recess. Achieving this goal will require participation from teachers and administration, as well as the use of school buildings and outdoor space, the report stated.
There are currently no federal requirements for the amount of physical activity that students receive every day, although there are government incentives for schools that promote exercise. Some states are also trying to tackle the problem. Texas for example, requires that children in prekindergarten through elementary school get at least a half-hour of physical activity a day.


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12 foods that sabotage sleep

The food you eat for dinner or shortly before bed can prevent you from getting some much-needed zzz’s. Here’s what to shun for up to several hours before tuning in if you want to sleep better and wake rested from tomatoes and chocolate to cheddar cheese.

Foods to avoid before bed: We all love food and sleep, but they don’t go hand in hand. Here are the worst foods to eat right before you sleep.

**Celery** - Steer clear of celery just before bed. Celery and other foods with high water content (cucumbers, watermelon, radishes and such) are natural diuretics that may cause you to wake in the middle of the night with a full bladder.

**Tomatoes** - Tomatoes are rich in tyramine, an amino acid that triggers the brain to release norepinephrine, a stimulant that boosts brain activity and delays sleep. Other tyramine-rich foods include eggplant, soy sauce, red wine and aged cheeses such as brie and Stilton.

**Cheese pizza** - Foods high in fat and fried foods take longer to digest and can cause discomfort that interferes with sleep. They can also reduce the effectiveness of some of the medications taken at night.

**Alcohol** - Although a nightcap or a glass of wine before bed may help you doze off quicker, it disrupts sleep later in the night and robs you of rapid eye movement (REM) sleep. Lack of REM sleep harms concentration, memory and motor skills.
**Black-bean chili** - This dish could be a disaster if you eat it close to bedtime. The body has a hard time digesting beans, so stomach-rumbling gas pain will keep you from a good night’s sleep.

**Dark Chocolate** - A small piece of dark chocolate each day helps keep your heart healthy – but don’t nibble it right before you go to bed. Dark chocolate (though not white chocolate), hot cocoa and tea all contain caffeine, and if you’re caffeine-sensitive, you may find yourself staring at the ceiling.

**Gumdrops** - a handful of gumdrops (or any candy) may cause your blood sugar levels to spike and then fall rapidly as the body releases insulin to bring them under control. You may fall asleep easily, but these fluctuations make it difficult to stay asleep.

**Tacos** - A taco liberally sprinkled with hot sauce may set your taste buds tingling, but eating it within a few hours of light-out can set you up for a bad case of heartburn and restless night. Ditto for other spicy foods.

**Steak** - Save the leftover slice of steak for lunch tomorrow. Foods high in protein and marbled fats such as steak and roast beef, are slow to digest. If your body is busy digesting food, there’s more of a chance that you’ll have a restless night.

**Carbonated soft drinks** - Caffeine, that sneak thief of sleep, can turn up in unexpected places, including root beer and lemon-lime soda. Added to a food or beverage, caffeine must be listed as an ingredient; if it occurs naturally (coffee, tea, and chocolate), it doesn’t. Check the label.

**Dagwood sandwich** - A heavy meal just before bed can rob you of the shut-eye you need. Allow at least three hours post-meal before you turn in so your body has a chance to digest the food and you don’t feel too uncomfortable to sleep.

**Broccoli** - Broccoli is a nutrition powerhouse, but its slow-to-digest fiber will keep your body working hard into the night. Broccoli and its relative’s cauliflower and Brussels sprouts also contain an indigestible sugar that will produce large amounts of gas.

**Is There a Cure for Diabetes?**

**What causes Diabetes?**

Scientists don’t know exactly what causes diabetes. They think type 1 diabetes is a disease in which your immune system attacks your own cells as if they were foreign invaders. This is called an autoimmune disease. In type 1 diabetes, your immune system attacks your pancreas cells and destroys their ability to make insulin.

Most scientists believe that an environmental factor such as a virus, triggers this process in your body. Your genes play a role as well. Certain people are more prone to develop diabetes.

Likewise, health experts don’t fully understand what causes type 2 diabetes. They do know that it is closely linked to obesity and it tends to run in families. Type 2 diabetes is the most common type of diabetes but you can prevent it in many cases. If you have type 2 diabetes you may be able to reverse or control high blood sugar through diet and exercise. However, you will always have diabetes and you will always need to manage it to prevent serious health problems.

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**Is there a Cure for diabetes?**

Both type 1 and type 2 diabetes are chronic, lifelong conditions. Currently there is no permanent cure for either type. However there is hope in research for a cure and in prevention. While you can’t prevent type 1 diabetes, you may be able to prevent type 2 diabetes. Maintaining a healthy weight, eating a healthy diet, and exercising regularly are all ways you can help prevent type 2 diabetes. The Centers for Disease Control and Prevention (CDC) reports that diabetes affects 25.6 million people in the United States (Source: CDC). Because it is such a big health issue, there’s a lot of research looking at how to cure diabetes. Researcher focuses on the autoimmune process in type 1 diabetes, genetic factors, and how to make new pancreas cells.
What Is the Current Research?

Scientists are conducting cutting-edge research into finding a cure. Current research includes:

- Artificial pancreas. This partially automated system uses a continuous glucose monitor and an insulin pump to deliver insulin based on your blood sugar readings. A computer coordinates the monitor and the pump. Someday, researchers hope to develop a fully automated system that would work just like your pancreas.

- Genetic manipulation, or transforming cells that usually don’t make insulin into ones that do.

- Islet cell transplantation. Islet cells are clusters of cells in your pancreas. Within the clusters are beta cells that make insulin. Islet cell transplantation takes cells from an organ donor and puts them in your pancreas.

- Pancreas transplantation takes an entire pancreas from an organ donor or part of a live person and puts it in your body.

- Resetting the immune system by inactivating it and transplanting new immune system cells

- Programming stem cells so that they can make insulin

- Vaccines to prevent your immune system from attacking the cells that make insulin

While these therapies are in the beginning stages of research and development, in the future they may act as stepping stones along the path for helping people with type 1 diabetes.

Type 2 diabetes is unique because your body becomes resistant to the effects of insulin. Researchers need to fully understand insulin resistance before these approaches can help with type 2 diabetes.

Source: [http://www.healthgrades.com/right-care/diabetes/is-there-a-cure-for-diabetes](http://www.healthgrades.com/right-care/diabetes/is-there-a-cure-for-diabetes)

Sexually Transmitted Infections

Sexually-transmitted infections are viruses and/or bacteria that cause major infections in our sex organs and may prevent fertility. You don’t have to actually have sexual intercourse to get infected by an STD or alike. You may just have oral sex with someone who is currently infected and has developed blisters or pus. However, not all symptoms are visible; i.e., you may not see them and not even know you have the infection.
There are many STI’s. Some are bacterial, others are viruses. The main bacterial ones are three: Chlamydia, Gonorrhea, and Syphilis and Chlamydia being the most common. The most updated statistics show El Paso with more than 5400 cases of Chlamydia, peaking with 15-24 year-olds. Gonorrhea infected more than 900 El Pasos in 2013. However, the rate of Gonorrhea is stable nationwide (no increase but no decrease as well). Syphilis’s cases in El Paso were about 17 in 2013. All three bacterial infections cause similar effects; in females, they cause Pelvic Inflammatory Disease (PID), ectopic pregnancy (embryo outside the uterus), and/or sterility. In males, they are as devastating. They infect the urethra, testicles, and can cause sterility and arthritis as well. Basically, up to 85% of women and 20% of men with bacterial STD’s show no symptoms; and those who do, exhibit very heavy symptoms such as discharge from the vagina or penis, pain while urinating, excessive vaginal bleeding, painful intercourse for women, abdominal pain, nausea, fever, and pain in the testicles among others. Treatment of the bacterial STD’s is usually done with antibiotics.

STI’s can also be viral. They are basically more dangerous than bacterial ones because they take over living cells. Their treatment could be with anti-viral drugs. The viral STD’s include HSV1 and 2; otherwise known as oral Herpes or vaginal Herpes. Approximately, one million new cases are diagnosed each year in the U.S. Blistery sores, and painful itchy rash show on and around the infected area, such as mouth, cervix, anus, buttocks show. Symptoms presented are swollen glands, fever, headache, run-down feeling. Generally, outbreaks reoccur caused by emotional, physical, or mental stressors. HPV, or Human Papilloma Virus, is usually associated with cancer of the cervix, vulva, or penis. HPV is very common, and more than 6 million Americans are infected with it each year. Most of the genital HPV infections are not visible and have no symptoms.

Another viral infection is HIV. Though it is not solely transmitted sexually, it is considered an STI. It is treatable but not curable. More than 115 cases of HIV occurred in 2013, and the rate keeps on rising in El Paso. Once HIV turns into a fully blown AIDS, then the disease becomes very hard to control.

Protection from these STI’s, whether they are viral or bacterial, is generic and basic; abstinence. However, it is hard to achieve, and sometimes very impractical. Therefore, it is always a safe bet and a good alternative, though not 100% sure, to wear condoms during sex. Other protective possibilities are masturbation, and monogamy. Of course, that requires some trust and honesty on the part of the partners. Above all, everyone, especially female and male adolescents and young adults need to be conscious of all the repercussions of STI’s, and be mature enough about their sexual behavior and relationships to be able to make smart decisions about their health and life.

Source: Souraya Hajjar, September, 2015