Improve Your Test Scores With Nutrition

Are you looking for an easy way to improve your test scores? Well, you can start by looking at your own plate. No, there are no magical foods that will give you the answers and food cannot do the studying for you. However, certain components found in food will help to improve brain function and your academic performance.

The Importance of Breakfast
Breakfast provides the brain with glucose, a key substrate used by the brain for cognitive activity. Since we are unable to eat while sleeping, carbohydrates from breakfast are needed to jumpstart the day. You may want to consider a plate of eggs. Choline, found in egg yolks, will improve memory development by sending a signal to the nerve cell in the hippocampus. Choline is also found in soy, beef, chicken, veal, turkey, liver and lettuce. Breakfast can improve the accuracy of responses and hasten the amount of time needed to complete cognitively demanding tasks, such as tests and quizzes. For the sake of variety, on some mornings you may want to consider a bowl of berries or citrus fruit, which contain antioxidants. Antioxidants increase the blood flow to the brain to help it work faster. In general, breakfast consumption has also been seen to improve a person’s mood. Breakfast will leave you feeling calm, which will improve your ability to think. Complex carbohydrates consumed from breakfast will provide your mind with energy until your next meal: lunch.

Carbohydrates: Simple v. Complex
Carbohydrates are made up of chains of glucose, which fuel the brain. When the chains are broken down by digestion, energy is released for the brain, liver and other tissues. There are two forms of carbohydrates: complex and simple. Complex carbohydrates eaten during breakfast were found to improve working memory and attention for a longer duration than a breakfast composed of simple carbohydrates. Complex carbohydrates are made up of longer chains of glucose, which take longer to break down than simple carbohydrates. So they’ll be more likely to last until your next meal. Complex carbohydrates include starch and fiber. Starches include some cereal, bread, potatoes, pasta, rice and legumes. Fiber is found in bran, whole-grain foods, raw vegetables and fruit (specifically the seeds and skins), legumes, nuts, seeds and popcorn. Simple carbohydrates contain only one or two glucose molecules per chain so they break down a lot faster. The brain becomes over-stimulated by the rush of glucose and then crashes, making it difficult to concentrate. Simple carbohydrates are found in donuts, cakes, pies, candy and soft drinks.

Mind Your Omega-3’s
DHA and EPA are common forms of omega-3 fatty acids and have been found to increase brain function by contributing to the prevention of cognitive decline, the optimization of cognitive performance and cognitive development. They can also improve your mood. Our bodies cannot make DHA and EPA, so they must come from outside sources. Omega-3 fatty acids are most abundant in fish. Oily fish such as salmon, trout, and mackerel are rich in omega-3 fatty acids. Omega-3’s are also found in flaxseed, canola oil and walnuts. DHA and EPA are important to structural components of neural cell membranes. High DHA intake has recently been associated with a change in the functional activity of the prefrontal cortex, which does not fully develop until the late twenties. During its period of maturation, the brain will develop the basis for a higher order of cognitive thinking. Results from a recent study on the impact of fish consumption on the cognitive ability of adolescent students show that when students consume the recommended 450mg of EPA and DHA, their vocabulary and grades increased. However, students who consumed more than the recommended amount had lower vocabulary and academic achievement scores.
So when you are preparing for your exams do not forget to use your diet to take care of your brain. In the morning, pour a bowl of Cheerios and have blueberries as a mid-morning snack. In the afternoon, create an egg salad sandwich on whole-wheat toast and grab a bag of popcorn for an afterschool snack. A dinner option could include salmon, potatoes and walnuts on a bed of lettuce. Try to limit your sweets. Do not forget lots of studying and a good night’s sleep. Good luck!

A collaboration between Douglas Brower, NA Food Services, and Laura Venanzi, registered dietetic technician

About Laura Venanzi:
Laura Venanzi is a registered Dietetic Technician. She earned her BS in Food and Nutrition from the College of Saint Elizabeth and is pursuing a master’s degree in the Science of Nutrition. Laura is a Dietetic Assistant at St. Mary’s Medical Center in Langhorne, PA where she corrects patients’ meal orders to align with their diets. She is working with NA’s Food Services program as a Nutrition Consultant. She hopes to share her knowledge of nutrition to help you make better food choices in your school dining room as well as in your daily life.