Effective Learning and Nutrition

How Diet and Nutrition Impact a Child's Learning Ability

https://www.publicschoolreview.com/blog/how-diet-and-nutrition-impact-a-childs-learning-ability

While the intake of food is vital for proper performance, many of the widely available and popular foods in schools today actually *hinder a* child's ability to learn. Loaded with sugars, caffeine, chemicals, and sodium, many popular menu items are leaving kids tired, unfocused, jittery, and sick—which not only impact students' grades and performance, but also influences their behaviour and moods. These things go on to make it difficult to develop healthy lifelong habits over time

Lack of Energy and Focus

According to the Society for Neuroscience, studies reveal that diets with high levels of saturated fats impair learning and memory. Unfortunately, foods with saturated fats are often the most affordable and widely available. French fries, sugary desserts, cheeseburgers, chicken nuggets, and other cheap staples are filling children with food that lower their brain power. Without solid parenting from a young age, poor dietary habits will continue to affect children negatively throughout their lives.

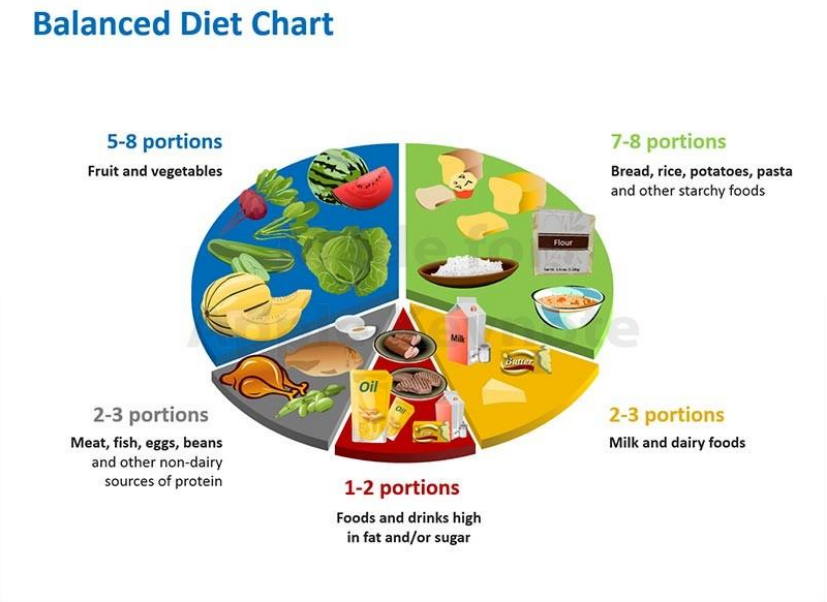
One of the theories that explains the link between saturated fats and brain power is the effects of glucose and sugars in the higher-fat foods. Essentially, glucose comes from carbohydrates, and while glucose is vital for energy, foods that are too high in glucose cause energy levels to drop in the body. As glucose is ingested, the body releases insulin to process the newly acquired foods. Normally, after a healthy meal, glucose levels should rise slightly, and a body should feel energized after taking in nutrition.

Today, however, children and adults with high-glucose diets experience a post-food "crash," where the glucose intake is so high that the body begins to shut down as it processes the food.

Low quality foods such as white and refined breads, fried foods, sugary sweets and sodas all cause an incredible drop in energy; leading to a terrible drop in focus and successful mental performance. Even worse, a regular sugary diet can result in damage to kidneys, eyes, blood vessels, and nerves. And while these side effects are serious, high glucose also causes irritability, lethargy, and a lack of focus. This is why effective nutrition is so important for children; to ensure they are set up for success both at school and home when it comes to learning.

A Plan at Home

To promote healthy eating and brain function outside of school, parents should provide children with smaller meals and snacks every three to four hours. Reports reveal that after just thirty minutes, feelings of fatigue and stress drop after a nutritious snack or meal. Providing children with an intake of healthy food boosts their energy and improves their focus.



Healthy meals and snacks should consist of natural fruits and vegetables, whole grains, and lean proteins, such as chicken, fish, nuts, and eggs. Also, specific vitamins can be incorporated to target definite functions. For example, to improve memory, eat foods rich in lecithin, such as peanuts, soy beans, and wheat germ. Potassium aids brain functioning and can be derived from oranges, bananas, apricots, avocados, melons, peaches, and nectarines.

Avoiding processed foods, and incorporating more natural, healthy foods into a daily diet will ultimately promote a healthier body, positive behaviour, and increased brain power.

3 Ways Nutrition Influences Student Learning Potential and School Performance

http://articles.extension.org/pages/68774/3-ways-nutrition-influences-student-learning-potential-and-school-performance

Advocates of child health have always experimented with trying to find the most effective diets for our children. Studies generally focus on benefits of improving the health of students and it is know that improved nutrition has the potential to positively influence students' academic performance and behaviour.

Though researchers are still working to definitively prove the link, existing data suggests that with better nutrition, students are better able to learn, students have fewer absences from school, and behaviour improves, causing fewer disruptions to learning in the classroom.

1. **Improve Nutrition to Increase Brain Function**

Studies show that nutritional status can directly affect mental capacity among school-aged children. For example, iron deficiency, even in early stages, can decrease dopamine transmission, thus negatively impacting cognition. Deficiencies in other vitamins and minerals, specifically thiamine, vitamin E, vitamin B, iodine, and zinc, are shown to inhibit cognitive abilities and mental concentration. Additionally, amino acid and carbohydrate supplementation can improve perception, intuition, and reasoning. There are also a number of studies that show that improvements in nutrient intake can influence the cognitive ability and intelligence levels of school-aged children.

2. **Provide a Balanced Diet for Better Behaviours and Learning Environments**

Good nutrition helps students go to school prepared to learn. As improvements in nutrition make children healthier, children are likely to have fewer absences and attend class more frequently.

Studies show that malnutrition leads to behaviour problems and that sugar has a negative impact on child behaviour. However, these effects can be counteracted when children consume a balanced diet that includes protein, fat, complex carbohydrates, and fibre. Thus, children will have more time in class and fewer interruptions in learning over the course of the school year. Additionally, children's behaviour may improve and cause fewer disruptions in the classroom, creating a better learning environment for each student in the class.

3. **Promote Diet Quality for Positive School Outcomes**

Sociologists and economists have looked more closely at the impact of a child's diet and nutrition on academic and behavioural outcomes. Researchers generally find that a higher quality diet is associated with better performance in tests and exams and that a healthy diet can affect modest improvements in children's academic test scores. Other studies find that improving the quality of the diet leads to children being on task more often, increases math test scores, possibly increases reading test scores, and increases attendance.

Every student has the potential to do well in school. Failing to provide good nutrition puts them at risk for missing out on meeting that potential. Taking action today to provide healthier choices can help to set a child up for a successful future full of possibilities.

Maximize Learning with Powerful Foods

Food for Energy

When we think of the purpose of eating good food, none is more important giving us energy to carry out our daily lives. However, many people might easily overlook one of the most powerful "foods" we can consume – water.

With so much focus on special drinks and proteins in much of today's energy food marketing, water can be relegated to a less important role related to energy. The reality is that our bodies are made up of between 60-70% water, so we can survive up to six weeks without food, but only three to five days without water!

Electrolytes are minerals in your body that have an electric charge. They are in your blood, urine and body fluids. Maintaining the right balance of electrolytes helps your body's blood chemistry, muscle action and other processes. Many people who drink less than the recommended amount of water per day experience mild but noticeable symptoms; such as fatigue and lack of energy. ***Dehydration affects learning too.***

Water is stored in our brain cells in tiny balloon-like structures called vacuoles. By the time a person feels thirsty, there may have been a loss of body weight up to 2% from water loss and a 10% cognitive decline. In fact, studies suggest that ***children's memory can be improved by drinking the right amount of water throughout the day***.

Bottom Line: Drink more water and less sugary drinks! The brain will work optimally when it's well hydrated, as will your body!

Dietary choice and ADHD

Multiple studies have been conducted and have brought good news to those raising and teaching ADHD and ADD affected children. Simples changes in diet can dramatically help manage the symptoms.

Researcher, David Schab of the Columbia University Medical Centre, performed an analysis of all previous studies connecting food additives and symptoms. His work revealed that artificial food colours had a significant negative effect on focus and concentration and drove hyperactivity behaviour in many children/teens. Another study from the University of South Hampton revealed that children without ADHD were impacted and made hyperactive by food additives. There was a clear "pharmacological" side effect – hyperactivity – associated with these additives.

To give children the best chance of avoiding these negative and harmful effects, here are a few important action steps;

Eliminate food additives: The preservative sodium benzoate appears to be the most critical one to avoid.

Consider a diet that eliminates dairy and gluten products for three weeks: After that time, reintroduce foods while observing behaviour to determine potential drivers of ADHD in the child.

Use vitamin and mineral supplements to raise the level of micronutrients: While there is no one path that works for everyone, symptoms of ADHD can be affected through diet, providing a non-medicated treatment option.

Food for Overall Brain Health

Because we are living, breathing human beings, we will all have a by-product in our brains called free radicals. Free radical can really affect the brain negatively in so many ways. Imagine how much they can affect a young child's brain that is developing.

Make sure you eat plenty of foods rich in antioxidants which are found in vegetables and fruit. The foods highest in antioxidants are: cranberries, blueberries, blackberries, strawberries, spinach, broccoli, beans, artichokes and Russet potatoes, dark chocolate, black and green tea, heated tomatoes, and other colourful fruits and vegetables. Pecans, walnuts, and hazelnuts are ranked the highest in the nut category. Usually, the more colourful the fruit or vegetable (berries are bright in colour), the better they are for you.

Food for Good Moods

There is a significant amount of research that has shown a clear link between food and mood. The reason is simple – diet impacts the brain both chemically and physiologically, and that leads to changes in behaviour. There are other factors, that combined with food, affect the way we feel. Many of these factors, such as weather, hormones, stress levels, amount of sleep, and other people are less controllable than food, so here are a few tips to ensure diet maximizes your mood.

Breakfast has an amazing impact on mood. It is the most important meal of the day, as the brain can never regain the positive effects that breakfast leaves on it. A good breakfast includes high-fibre, low-fat, low-sugar carbohydrates, along with some protein. Many of the typical “breakfast” foods, such as sweet cereals and baked goods, are loaded with sugar. Within 30-60 minutes, blood sugar will drop quickly, leaving the individual with less energy, and more easily frustrated. Conversely, eating a good breakfast improves cognitive performance and the ability to handle complex tasks. Boys and girls showed enhanced spatial memory and girls showed improved short-term memory after consuming oatmeal, which provides a slower and more sustained energy source and consequently may result in cognitive enhancement compared to low-fibre, high sugar ready-to-eat cereal.

Foods for Memory

What do you think of when you see Omega-3? If you have followed basic guidelines of food and nutritional supplements, you likely have heard about the connection between Omega-3 and the brain. Specifically, Omega-3 is a fatty acid that has been found to provide the brain with lots of positive benefits.

Omega-3 fatty acids come in more than one form. The types found in fish, called DHA and EPA, seem to have the strongest health benefits. Another form known as ALA is found in vegetable oils, flaxseed, walnuts, and dark leafy vegetables such as spinach. The best sources of DHA include salmon, walnuts, and flaxseed. Flaxseed, in particular, is highly versatile, and can be added to nearly any baked item that includes flour – helping to get the valuable DHA unobtrusively into the diet.