

THE GROWING MIND

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BUILDING A BETTER BRAIN THROUGH FOOD

For years, we have heard about the benefits of fueling our brains with healthy food. Now more than ever, there is research to support this theory.

Most of us recognize the dynamic nature of the mind-body connection. Our physical state affects our mind, such as the mental fuzziness or short-temper we can acquire if we don't get enough sleep. We also know that the reverse is true: our mental state can affect our bodies. Who hasn't felt an upset stomach or tightness in the chest when nervous or worried?

Our everyday experiences are a product of an interrelated system in which our bodies help us understand what we're thinking and feeling, and our thoughts and feelings come out of our physical condition. Wellness is a two-way street.

The research that links nutrition with academic achievement comes as no surprise. After all, food is the most potent substance we put in our bodies. And there

is quite a lot that we have learned about the ways that a high-quality diet sets kids up to achieve their best in school.

STARTING WITH BREAKFAST

Numerous peer-reviewed studies on the effects of eating breakfast point to several findings about students who skip breakfast: they have more difficulty recalling previous learning and forming new memories; have lower scores on standardized tests and other academic assessments; show a decreased ability to maintain attention and concentration; miss more days of school; are more likely to be hyperactive; and have more difficulty maintaining positive relationships with peers and teachers.

In short, before-school nutrition has powerful effects on brain function, improving both learning and social behaviour.

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In the words of Dr. J.M. Murphy, Associate Professor of Psychology at the Harvard Medical School and staff psychologist at the Massachusetts General Hospital, skipping breakfast has “quantifiable negative consequences for academic, cognitive, health, and mental health functioning.”

It’s a simple message, even if it can be difficult to apply in our busy lives: to be the best learner and classmate possible, kids need to eat a breakfast of nutrient-rich foods. That sugary breakfast cereal sets kids up to crash soon after the learning begins.

ALL DAY LONG

Unhealthy eating patterns throughout the day are also associated with unfavourable school performance. Low-quality, nutrient-poor foods (those high in sugar, trans fats, processing or chemical additives) create a greater risk for learning and behaviour difficulties. Nutrient-dense foods (vegetables, fruit, meat, fish, dairy and eggs) provide the best sustenance for a brain working hard to build knowledge and create understanding.

Dr. Philippa Norman, a nutrition consultant who treats hyperactivity, depression and anxiety, explains why the brain needs quality nutrition: “The brain is dynamic, responsive and efficient: new neural connections will be made to record and integrate new information learned. Old, unused connections will be pruned away... The raw material for building and pruning these connections comes from the food we eat.”

The evidence supports a brain’s need for the healthy foods that promote optimal learning. In one study, improvements in food offered to students in an elementary school led to an increase in test scores and



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a decrease in referrals to nursing, counseling and disciplinary support. In another study, increased consumption of fruits and vegetables among adolescents led to higher academic achievement in their high school classes.

School food and nutrition programs have been shown to have a positive impact on child and adolescent health and learning. In one high school study, a combination of better-quality school food and an improved dining space led to greater learning after lunch. In an elementary study, the presence of a school garden increased food knowledge among grade 2 students and led to a greater preference for and higher consumption of fruits and vegetables.

WHAT ABOUT MENTAL HEALTH?

Researchers now recognize that nutrient-dense foods play a role in achieving and maintaining mental health, which The Canadian Mental Health Association defines as “a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community.”

Some mental health conditions that have responded positively to an improved diet include depression, schizophrenia, anxiety, attention deficit hyperactivity disorder and Alzheimer’s disease.

Feelings of self-worth in teens have also been the focus of research. In one mental health study, adolescents who ate low-quality foods expressed increased negative evaluations of themselves: they felt that people didn’t like them and that they were not capable. When those same teens were put on an improved diet, they showed

greater self-esteem, viewing themselves as more worthy and competent.

Other studies have found connections between depression and an iron-deficient diet. Low iron levels lead to decreased dopamine, which interferes with neuro-cognitive functions such as memory, attention and problem-solving. In addition, low levels of dopamine can also lead to a lack of energy, lack of motivation and depressive symptoms. Depression has also been associated with low intake of fish and folate, which is a B vitamin.

HEALTHY BRAIN FOOD

Every week, there is another news story about a micronutrient, fruit or some other “super” food that we just have to eat. Sometimes, it seems impossible to know what’s best. What should we feed our kids so that they can learn, socialize positively, and develop into their best selves?

It doesn’t have to be complicated. All of the good things kids need (like iron and folate) are found in foods we eat in their original state: meat, fish, eggs, vegetables, fruits and whole grains. The fresher the food, the better. Home-cooked is superior to take-out, frozen or pre-processed. And supermarket baked goods, cereals, crackers – and pretty much anything prepared in a factory – is most likely nutrient-poor.

Basically, if the food on your child’s plate has been hunted or gathered, it’s likely nutrient rich, especially if it is locally-sourced and seasonal.

Fresh, daily-prepared food helps kids learn. They experience fewer school absences, better focus and attention, less disruptive and anti-social behaviour, and higher academic achievement. Kids really can learn to appreciate fresh, well-prepared food and eat it every day. ■

HOW MUCH SUGAR IS HEALTHY?



Did you know that world sugar consumption has tripled over the past 50 years while the population has only doubled? It’s likely that you’ve heard some talk about sugar intake, mainly because researchers have drawn strong links between the growing consumption of sugar and the increase over the same period of time in various diseases, such as diabetes, cancer, stroke, heart disease and Alzheimer’s.

The sugar issue isn’t just about excess calories and weight. Research has revealed that even slim and fit people who drink sugary beverages and eat sugary foods have an increased chance of developing these diseases. Though you can’t see it, consuming sugar increases the visceral fat around your heart and in your vital organs. This invisible fat is the most dangerous to our health.

How much sugar should we be consuming?

The World Health Organization (WHO) released guidelines in 2003 stating that no more than 10% of an adult’s daily calories should come from sugar. That amounts to about 12 teaspoons per day. The WHO further suggested in 2014 that 5% of daily calories from sugar (6 teaspoons) would improve health even further.

The Canadian Heart & Stroke Foundation agrees, stating that “an individual’s total intake of free sugars not exceed 10% of total daily calorie (energy) intake, and ideally less than 5%.” Similarly, the American Heart Association (AHA) suggests that men consume no more than 9 teaspoons of sugar a day and women no more than 6 teaspoons.

What do these amounts look like? A can of pop has about 10 teaspoons of sugar. A “Healthy Choice” Pineapple Chicken microwave dinner has 5.5 teaspoons. A cup of Honey Nut Cheerios contains 3 teaspoons. One tablespoon of ketchup contains 1 teaspoon of sugar. Because approximately 80% of the packaged foods we buy at the supermarket have added sugar, it’s hard to avoid. Sugar is added to bread, soup, salad dressing, spaghetti sauce, hotdogs.... foods that we don’t necessarily associate with “sweet.”

According to Statistics Canada, Canadians consume about 26 teaspoons of sugar per day – quite a bit more than recommended amounts. That’s 40 kilograms over a year, which is 20 standard bags of sugar.

Health organizations are especially concerned about what they call SSBs – sugar-sweetened beverages. One extended health study followed 88,000 women for 24 years and found that women who consumed two or more sugar-sweetened beverages in a day had a 35% greater risk of developing coronary heart disease compared with women who consumed less than one SSB per month. Not surprisingly, the consumption of SSBs has also been connected to the rise in childhood obesity and diabetes.

Lowering our sugar intake means limiting sugar-sweetened beverages and processed foods and consuming more water and freshly-prepared meals. Health advocates agree that this shift will boost our performance and improve our overall health. ■

– Dr. Karen Sumner