

## News & Announcements

### Our 600<sup>th</sup> Student!

Since 2002, STR has been of assistance to over 600 students. How exciting to be of real support to so many families in our community.

*Thank you for continuing to support this local, values-based business.*

### Brain Health Resources

Graines, Nicola. Brain Foods for Kids. New York: Bantam Dell, 2004.

Sears, William and Sears, Peter. Dr. Sears' Lean Kids. Toronto: Penguin Books, 2003.

Bloom, Floyd E., et al, editors. The Dana Guide to Brain Health. Toronto: The Free Press, 2003.

Tribole, Evelyn. The Ultimate Omega-3 Diet. New York: McGraw Hill, 2007.

### Online Bookstore

STR is launching an online retail store for educational books and resources to support students, parents and teachers. We'll keep you posted about the launch date.

### STR in the Community

STR continues to offer talks and workshops for peer tutors, learning resource teachers, teachers, parents and students.

If you are interested in hosting a talk by Smart Tutor Referrals, please contact us for more information.

*30 - 45 minute talks for peer tutors are offered free of charge as a community service.*

## Brain Health, Part One: Proper Feeding & Care

by *Dahlia Miller*

Remember the scarecrow in the Wizard of Oz, and how obsessed he was with getting a brain? Sometimes I wonder what the scarecrow was like after he was told that he had a brain – I bet he was a real health nut: reading labels and exercising, and I bet he stretched his brain a lot to expand its flexibility.

The human brain is the finest machine in the universe. No computer comes anywhere close to its precision and potential. In fact, the number of possible neuronal connections in the human brain is 10 followed by a million zeros. (In comparison, the number of known particles in the universe is 10 followed by seventy-nine zeros.) The potential we have inside us is amazing!

If we're already in possession of the most intricate information-processor in the universe, let's find out how to use it and care for it.

Over the next two articles, we'll present a mini-owner's manual for the brain.

Next month we'll look at techniques for expanding creativity and memory. For now, we'll start with nutrition and health. After all, you've got only one brain to last your entire life. Let's look at how to keep it happy and healthy.

### A Few Facts about the Brain:

- ▶ The average adult brain weighs about 3 pounds.
- ▶ It is 70-75% water.
- ▶ It uses about 20-30% of the body's energy (when the body is at rest).
- ▶ An active, learning brain requires more energy than a physically passive one.
- ▶ The brain looks a lot like a walnut and has several areas and parts responsible for different things (like: senses, thought, movement, learning, balance,

and information processing, to name a few).

- ▶ The brain has a very limited ability to store energy. Energy (mostly in the form of glucose) is brought to the brain by the blood.
- ▶ The brain prefers to receive a steady supply of energy and responds poorly to fluctuations in blood-sugar.
- ▶ A constant supply of fresh oxygen is required by the brain to function and to maintain adequate levels of concentration.

### Some Well Documented Brain

#### Drainers:

- ▶ Sugar, junk foods, additives, caffeine, highly processed foods, artificial sweeteners, pop, artificial colours, alcohol (which kills brain cells), and nicotine (which constricts the capillaries thereby limiting the supply of blood/oxygen to the brain)

**Breakfast** is well-known to be the most important meal of the day. It replenishes brain nutrients and blood sugar levels that are lost during the night. Since the brain prefers to maintain a steady supply of energy, skipping breakfast, or eating a fatty or sugary breakfast, has some very negative impacts on metabolism, concentration, memory, and mood.

Two studies proving the importance of breakfast:

- ▶ Elementary students improved academic performance and had fewer behavioral problems after participating in a breakfast program.
- ▶ A doctor in Japan did some clinical research on the correlation between productivity and breakfast; he found that all the students in medical school who

## About Us

We provide **1-on-1, in-home tutorial support** throughout Victoria, Saanich and Sooke.

STR was established in Victoria, BC in 2002 and has built a solid reputation for creativity and professionalism.

**With over 50 tutors**, we are able to find the best match for each student. Our tutors are certified teachers and professionals. They are carefully screened and chosen specially to match the needs and learning styles of each student.

**Our goal is** to enhance students' skills and to cultivate learning confidence through support that is truly individualized: matched specifically to each student's needs, recognizing each student's unique talents and abilities.

*We support families in education.*

For more information and resources, visit us on-line at:

[www.SmartTutorReferrals.com](http://www.SmartTutorReferrals.com)

## Contact Us

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didn't do well academically and all the graduates who hadn't received licenses for medical practice did not have the habit of eating breakfast.

### Essential Fatty Acids:

Neurons in the brain carry messages through an electro-chemical process. These neurons have a very high concentration of omega-3 fats. Even though the brain needs lots of water, fat, oxygen and other nutrients, it doesn't produce any of them itself (in fact the body doesn't either). So the health of our bodies and brains are completely dependent on what we feed them (as well as how much exercise and sleep we get, and the attitudes we focus on).

When there are enough omega-3 fats in the diet, the brain is fluid and flexible. Without enough omega-3s, or with too many omega-6 fats or too much cholesterol, the cell membranes in our brain become stiff and hard, making it hard for us to concentrate, to memorize and to even remain calm, happy, and open to new things.

Some sources of Omega-3 oils:

- ▶ Walnuts, eggs, pumpkin seeds, flax seeds, soybeans, fish. Perhaps the easiest way to be sure to get enough omega-3s is to add raw flaxseed oil to your smoothies, rice or veggies.

### Vitamins:

The brain needs fuel, the higher quality the better. As you know, the brain's only source for vitamins is the food you put into your mouth. Eating well and taking high-quality vitamin and mineral supplements is integral to good brain health. Eat a rainbow of foods (red raspberries, green broccoli, yellow bananas, blueberries, orange peaches, etc.) and you'll have a broader base of nutrients.

Whole, organic (vegetarian) foods are the highest quality fuels we can eat.

Our bodies don't easily process pesticides, additives, steroids, antibiotics, or artificial colours and flavours. Basically, the closer the food is to its original form, the easier it will be for your body to extract the nutrients it needs.

Some food sources of vitamins:

- ▶ Vegetables, fruits, nuts, grains, eggs, brown rice, tofu, beans, molasses, parsley, dairy, fish

### Water:

Since the brain is largely water, without water it doesn't think or concentrate easily. Did you know that by the time you feel thirsty, your body is already two cups depleted of water? Keep yourself hydrated and be wary of water stealers (diuretics) like caffeine. (By the way, headaches are often caused by water depletion.)

### Exercise:

Exercise promotes blood flow to the brain, supplying nerve cells with more oxygen and nutrients. Regular aerobic exercise also helps you sleep better and reduces stress, both of which have positive impacts on the brain's ability to function.

One study of 100 sedentary adults found that those who walked vigorously three times per week outperformed adults who only did stretching and toning exercises by 25% in computer tests of mental reaction times and accuracy. Just getting more blood to the brain seems to have a positive impact on the brain's functioning.

You can enhance brain function simply by eating well and developing healthy habits. What easier way could there be to get smarter, more creative and better able to concentrate?

*"Oh God, that men should put an enemy in their mouths to steal away their brains!"*

William Shakespeare