

News & Announcements

STR in the Community

In November, STR met twice with peer tutors and international student advisors at Claremont Secondary for workshops in tutoring and memory techniques.

30 - 45 minute talks for peer tutors are offered free of charge as a community service to support students, tutors and schools..

Workshops

STR runs workshops for middle school and high school level students, parents and teachers.

Workshop Topics Include:

- ▶ Study Skills
- ▶ Exam Preparation
- ▶ Memory Techniques
- ▶ Oceanography

Please contact us for rates and information.

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.

Winter Break

Our tutors keep tutoring through the holidays, but our writer takes a break. *"The Smart Connection"* will be back with an issue in February.

Best wishes for a happy holiday season & a peaceful new year!

Brain Health, Part Two: Building Flexibility and Memory

by Dahlia Miller

The brain is a machine unlike any other. The full extent of its abilities has not yet been measured. There is much that we don't know about the human brain (like exactly where and how the brain stores and retrieves information). But, we do know some things about the brain, and what we know is pretty darned interesting.

This article is the second in our brain series. Here we'll explore a few different aspects of brain health and offer some exercises to help boost memory and creativity.

Just like the body, our brain needs regular exercise to stay fit and healthy. Our brain has five main cognitive functions: attention, memory, language, visual and spatial acuity, and reasoning. We can improve the ease and speed of these cognitive skills by stimulating our brain as often as possible.

Neuroplasticity

Plastic can be flexible or inflexible; the term neuroplasticity generally refers to the degree to which our brains can flex.

How flexible is your brain? How quickly can you answer skill-testing questions, learn new skills, draw connections between seemingly-unconnected topics, and think outside the box? This is the neuroplasticity of your brain.

We know that the brain is full of neurons and that when the brain thinks, neurons communicate in some kind of electro-chemical process. So, thinking is sort of like a text or email sent between people. To put it simply, the more different connections that are made between neurons, the more neuroplasticity your brain will have.

The brain thrives on stimulation and novelty. Our brains love new things and become bored and complacent by what they are familiar with. The brain easily falls into ruts and doesn't expand unless it's made to. This is habituation and it is death to creativity and memory – it actually leads to a stiffening of neuronal connections.

To exercise your brain:

- ▶ do short worksheets of rapid calculations (fast, easy math problems or Suduko games, for example). There is more blood flow to the brain when it is working vigorously.
- ▶ read aloud to stimulate the brain across both hemispheres
- ▶ challenge yourself to learn new skills, languages, or musical instruments
- ▶ write a list of 50-100 questions that you have about your life and the world around you, look at the major themes in your questions, choose one or two, then go find some answers for yourself. Really investigate.

Flexibility

Shuffling and re-organizing things that are already stored in our memory keeps them fresher and more alive (then we can have them at our fingertips and use them in innovative ways). Breaking down what we know and putting it together again in new ways, we counteract the tendency to become complacent about our surroundings.

- ▶ group and re-group what you already know. For example, how many words do you know that start with "re-", "contra-" or "de-", or that end in "-diction" or "-ject"?

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

Contact Us

Director/Owner

Registration

Dahlia Miller

250-544-1588

dahlia@SmartTutorReferrals.com

School Liaison

Jeremy Hackett

jeremy@SmartTutorReferrals.com

Mailing Address:

2011 Courser Drive

Sidney, BC

V8L 2N5

www.SmartTutorReferrals.com

▶ write facts or vocabulary on index cards then throw the index cards in the air and see how they land on the floor. Can you create new connections between ideas with this new arrangement?

▶ investigate what is around you to see how things are connected (emotionally, physically, historically, economically, socially, etc.).

Attention and Working Memory

So many things are flashing before our senses in every moment. It would be impossible to pay attention to all of them, or even most of them. So, our brains select some of the sensory input to attend to. What we focus on largely depends on how we have conditioned our brains – this is like how happy people see and remember sunshine and depressed people see and remember puddles.

Anyway, the point is twofold. First, we can expand our ability to notice our environment through practice. Second, in order for something to even have a chance of making it into our long term memory, we need first to pay attention to it.

To boost attention & working memory:

▶ study a list of random words for 1 minute then write down as many as you can remember

▶ look through a randomly-shuffled deck of cards and remember the order of as many cards as you can in 5 minutes

▶ stop and notice what you see, hear, smell, and feel

▶ record your observations about the world

▶ close your eyes and create a mental image of what is around you right now. Be as specific as possible about colours, shapes, textures, spatial relationships. Can you “zoom in” in your mind on something that is around you and see it in greater detail (like a leaf on a tree outside your window)?

▶ Stroop tests, like the one below, challenge us to increase our attention and processing speed. Time yourself and read off the colours of the words below (not the words).

BLUE RED YELLOW GREEN
ORANGE PURPLE YELLOW BLUE
RED GREEN PURPLE RED BLUE
YELLOW GREEN ORANGE RED

Exercise the Spine

The spinal canal carries nutrients to your brain and neuronal impulses from your brain. Keeping the spine flexible allows this information highway to flow smoothly and effectively.

To promote brain and spine health:

▶ do exercises that balance both sides of the body to stimulate both brain hemispheres

▶ practice raising one knee and balancing on one foot

▶ do Qi Gong or Tai Chi to boost spinal flexibility and promote calm

Relax

Stress and nervousness stimulate fight-or-flight responses from the body. This inhibits higher cognitive function (and the immune system). Basically, if you are stressed out, you won't be able to access all of your brain power. (*Note:* This is of particular importance to students. If you are too nervous, you won't physically be able to do well on tests that involve higher cognitive functioning.) If stress-related hormones (i.e. cortisol) are activated very regularly, they begin to cause neuron damage.

To relax:

▶ practice controlled breathing exercises

▶ meditate or do yoga

▶ use biofeedback techniques to help reduce stress levels and to increase the brain's ability to pay attention

▶ Play music or sing with others. Music enhances the brain's receptivity to learning and helps to strengthen and maintain cognitive skills.