

Sharper Minds®

Think Better – Live Better!

The Mysterious Brain: *Overcoming its Challenges!*

Sharper Mind Centers, Inc.®
Beaverton, Clackamas, Salem, Vancouver

Introduction

We specialize in **evaluating** and **providing therapy** to children and adults who have mental processing issues such as

- Learning Disabilities (L.D.)
- ADD/ADHD
- Dyslexia
- Head trauma, and more.



- Member of the BBB
- Honor Roll Member since 1999.

Two Goals

Help you:

- Understand the **brain** and the Sharper Minds program
- Schedule an **Evaluation**

Participate

Q. What processing issues are your family members or friends struggling with?

Disclaimer

While all the stories and examples I will share with you tonight are TRUE, not everyone will experience the same level of improvement. While we have a high rate of success, as every child, family and situation is unique, no one can guarantee the techniques, methods and exercises will work for you.

True Examples

- Justin – 12 years old and could not read.
- Nick – a 15 year old. Ds & Fs. Very poor behavior.



ADD/ADHD, Learning Challenges

- 5 million children ages 3 to 17 are diagnosed with a L.D., 4 million with ADHD. Center for Disease Control & Prevention (CDC) report from their 2002 National Health Interview Survey, published in 2004.
- 2 to 3 million children are on medications such as Ritalin or Adderall.
- 10% to 4% ratio of boys to girls
- Precipitator is behavioral symptoms or poor academic performance



In conventional circles, the diagnosis and treatment of ADD is still considered uncertain

- “Doctors still don't know the best way to treat or even diagnose attention deficit disorder in children - even though more than a million children take powerful drugs to control their hyperactive behavior, according to the National Institutes of Health.
- “Yet defining precisely what constitutes ADD is difficult, said Dr. Mark Vonnegut, a pediatrician and panel member from Quincy, Mass. ‘The diagnosis is a mess,’ Vonnegut said, ‘but we all believe we are dealing with a serious core problem.’”

The Associated Press - Nov. 1998

Why is it a mystery?



- Researchers are:
- Looking for one neat box for nearly all situations.
 - Looking for a medicative solution.



Let's unravel that mystery.

There are Many Possible Causes of A.D.D. behavior

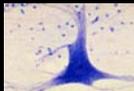
- | | |
|---|---|
| • Dietary related factors | Not Very Common |
| • Parenting styles | • Physical brain trauma. |
| • Emotional trauma | • Intestinal parasites. |
| • Poor behavior emulation | • Heavy metal toxicity - mercury, lead, |
| • Fetal Alcohol Syndrome | manganese, cadmium. |
| • Difficult delivery of baby (low oxygen during labor and delivery) | • Noxious gas exposure |
| | • Many more . . . |

Most Common: Brain “wiring” issues!

Brain's capacity is incredible

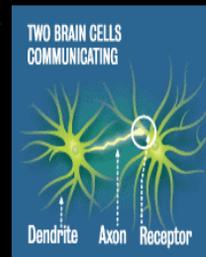
Brain cells (neurons) have over billion trillions of connections. Those connections constitute our

- Reflexes
- Skills
- Memories
- **Automaticity** in performing tasks
- The essence of who we are and what we do.



How do our brain cells communicate?

Messages travel through neurons as electricity. Neurons have threadlike fibers called axons that send messages and branches called dendrites that receive them. To make messages jump from cell to cell, your brain creates chemicals called neurotransmitters.

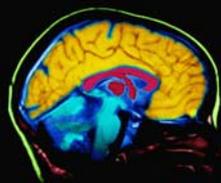


"Nerves that fire together, wire together!"

Dr. Marc Tessier-Lavigne

- A firing nerve engages the nerve adjacent to it and they fire together. Fire them together enough times and they form a thin cord.
- A fatty, white coating called myelin covers these corded axons; it helps messages move quickly, especially along the long axons that connect to muscles. It's like the insulation on the wire, or the guardrails on a bridge.

What happens when all the connections don't take place correctly?



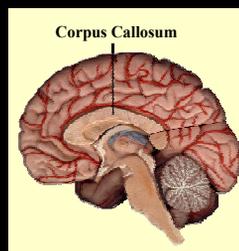
- Mental Illness
- Attention Deficit Disorder
- Dyslexia
- Learning Disabilities
- Addictive Behaviors

ADD/ADHD & Dyslexia are Mental Processing Deficiencies

- **ADD/ADHD** - Frontal Lobes
- **Dyslexia** - Left Temporal Lobe (7 types)
- **Lack of proper bilaterality** - Weak Right-Left Brain connectivity through Corpus Callosum
- **Poor Mind's Eye** or Mental Picture Process

Part of the brain isn't quite neurologically "wired" right

The bridge between the hemispheres



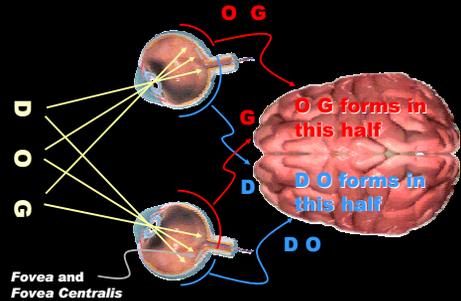
- The Corpus Callosum is a very thick bundle of ~200 million nerve fibers.
- Primary function is the rapid transfer of information between the two hemispheres

Often part of the problem is lack of right-left brain integration

- Eyes are just sensors - Seeing takes place in the brain
- Ears are just sensors - Hearing takes place in the brain
- The brain must correctly interpret the signals sent by eyes and ears for seeing and hearing to correctly take place.

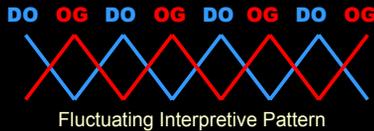


Nerves in each eye direct signals to each half of the brain depending on where in the eye the ray hits the retina



The Brain must integrate the incoming electrical signals

- Each brain half receives signals from each eye. Six signals total. Each half may only get part of a word.
- The brain as a whole must assemble the word and interpret it correctly.
- If it is unable to integrate it correctly, words may appear to move on a page.



Types of Dyslexia

1. **Dysnemkinesia** - reversal or directional dyslexia
2. **Dysecidesia** - visual dyslexia
3. **Dysphonesia** - auditory dyslexia
4. **Combinations of the above**

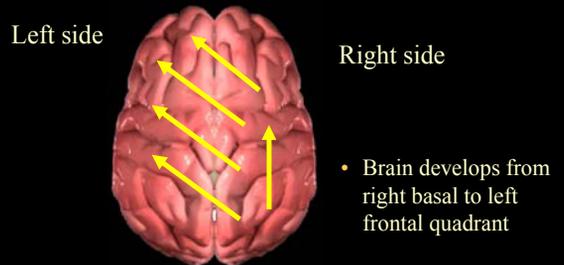
<http://www.dyslex.org/dyslex/c5.htm>

Characteristics of the two hemispheres

Hemisphere	Left	Right
Thinking	Abstract, linear, analytic	Concrete, holistic
Cognitive style	Rational, logical	Intuitive, artistic
Specialized functions	Reading, writing, arithmetic, sensory-motor skills	Music, rich dream imagery, good face and gestalt recognition (configuration or pattern of elements)
Language	Rich vocabulary, good grammar and syntax; pose	no grammar, syntax; prosody, poor vocabulary, metaphoric, verse
Executive capacity	Introspection, strong will and initiative, sense of self, focus on trees (details)	Low sense of self, low initiative, focus on forest (big picture - skimmer)
Time experience	Sequentially ordered, measured (plans ahead)	"Lived" time, primitive time sense (lives in the here and now; for the moment!)

Ehrenwald (1984:16)

Direction of Brain Development



- Brain develops from right basal to left frontal quadrant

Amazing Discovery! 1998



- "...new research has ... found that human brain cells regenerate – and do so throughout a person's lifetime!" **Neurogenesis!**

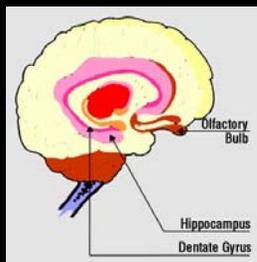
Scientists from the Salk Institute for Biological Studies in San Diego and the Sahlgrenska University Hospital in Sweden

Nerve Pathways grow on Demand

For robust nerve growth to take place, it requires a **PHYSICAL response** of the major muscle groups to a mental stimuli!



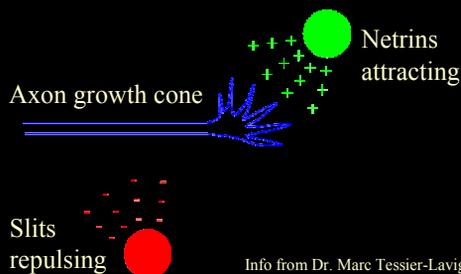
Where do Stem Cells come from?



Subventricular zone

- Olfactory Bulb
- Hippocampus
- Dentate Gyrus

Nerve growth is propelled by proteins (switching – bi-functional)



Info from Dr. Marc Tessier-Lavigne
V.P. Genetech, Paul Allen Brain Institute

Stress reduces new cell proliferation

- "A single exposure to stress can result in a significant reduction in the number of these proliferating cells. Our results suggest that . . . the rate of precursor cell proliferation can be affected by a stressful experience."

Source: National Centers for Biotechnology Information/National Institutes of Health
http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?holding=ppg&cmd=Retrieve&db=PubMed&list_uids=9501234&dopt=Abstract

Sharper Mind Centers specializes

- Accurate evaluations
- A premium mental training program

Evaluation ~ 3 hours

Over 35 different items screened or tested:

- History (both parents should be present)
- Learning Styles and Preferences
- Graphics (drawing) - motor skills
- Sounds - phoneme discrimination
- Pattern recognition and placement
- Symbol recall
- Memory, non-verbal learning disorders

Why an Evaluation?

- **Understanding!**
- Know why you or your child has been struggling. Develop a better relationship, more tolerance.
- You have to know the cause before you can administer a solution.
- Have more confidence when talking to school staff and health practitioners.
- Provides baseline against which progress can be measured.
- Meet staff and get a better feel for Sharper Mind Centers.
- Obtain some references you can call afterwards.
- Written report and recommendations.



Sharper Minds Program

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Neural-Cognitive Therapy

- Cognitive Therapy - to integrate the right and left brain hemispheres (physiotherapy)
- Motor-sensory integration
- Distractions - dealing with stress
- 28 Program Success Principles (also useful as skills for life)
- Authoritative Parenting Techniques (*Love and Logic*)

Results - Improvements in:

- Behavior
- Seeing and hearing
- Coordination improves
- Peripheral Eyesight and Awareness
- Fine motor skills
- Grades
- Relationships with others



A's & B's

Drug-Free/Complementary Solution

- 70% are able to discontinue or substantially reduce ADHD related meds within 8-12 weeks. 80-90% within 12 months (not guaranteed in every case).
- Results are "lasting"



Therapy Time Commitment

- Family does exercises at home for 5 days a week for 1 to 1½ hrs. a day
- For the guided program, the family meets either **once a week** or **twice a month** in our office with one of our Therapists (~50 minutes)

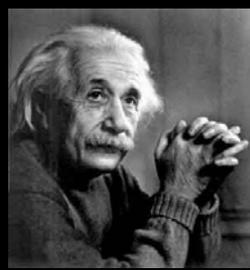
Cost Considerations

- It's not expensive. It's a number.
 - University: \$30,000/year x 5 years
 - Car: \$20,000 - \$30,000
 - Open heart surgery: \$100,000
 - Average house \$250,000
 - Braces: \$5,000
- It's an investment
 - The mind gains value with time – it becomes more productive.

Cost Considerations

- It costs much more to ignore it
 - Lost options, opportunities
 - Reduced income, under- or un-employed
 - Adults kids always moving back home
 - More likely to see your kids form addictions
 - Opportunity to raise your grandkids (do it again)
 - Your time, resources, emotional drain

Closing Thoughts



"Insanity: doing the same thing over and over again and expecting different results."
- Albert Einstein

Look a year down the road

- What will have changed a year from today?
- If you want to see a positive difference, then decide now and make this a year of hope!



Next Step

- **Gain Understanding:**
Schedule an evaluation appointment:
 - Tonight: \$___ discount
 - Tomorrow and next week: \$___ discount
 - Small deposit required



Questions, Answers & Demo

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