

## KIDS: GUT AND BRAIN HEALTH

*Understanding the connection between gastrointestinal health, its resident “microflora” (ie. the critters that live there) and the profound implications they have on brain development and function.*

**For Parents, Teachers, Educational Assistants and Health Care Practitioners of children with a diagnosed or apparent cognitive-behavioural disorder** such as: ADHD, dyslexia, anxiety, depression, OCD, Autism or Asperger's syndrome who are struggling to find the underlying causes of these ailments and discover treatment solutions that honour their child's individual health without resorting to drug prescriptions as a first line or sole form of treatment.

### The Problem:

- **Pressure on kids:** academic, physical, emotional and social expectations.
- **Pressure on teachers and E.As:** too many kids per class and not enough resources to help children with c/b disorders who can be “difficult to manage” and disturb the class.
- **Parents are pressured to get their child treated and fast!** The usual implication is a prescription drug such as: Concerta or Ritalin (side effects include: stomach pain, reduced appetite, weight loss, headaches, restlessness, aggression, nervous feeling, insomnia and heart problems).
- **A child with c/b ailments may become socially ostracized and develop poor self-esteem.**
- **A BIG Problem! - 1 child in 3 is diagnosed with ADHD per Canadian classroom!**

**Symptoms of ADHD:** restless, fidgety, impulsive – no forethought for consequences of actions, unfocused, distracted, forgetful, unable to plan or complete tasks without aid, unable to regulate one's emotions and behaviours such as repetitive chatter and/or pestering.

### WHAT IS GOING ON?

**Understanding part of the underlying cause of cognitive-behavioural disorders:**

- New research: gut health and microflora (MF) are key to this understanding.
- Neuroscientists now understand that there is a direct and highly significant link between the gastrointestinal tract (GIT or “gut”) & the brain.



- Billions of nerve connections exist between the gut and brain.
- Neurotransmitters and hormones permit constant “communication” between the gut, the critters that live there, and the brain.

### WHAT IS MICROFLORA (MF)?

- **MF:** refers to specific types of bacteria, viruses, and yeast that naturally live in the GIT.
- A “symbiotic” (mutually beneficial) relationship exists between the body and these critters.

### **Did You Know?!...**

- There are more cells and genetic material in our GITs than in our entire body!
- The average adult contains approximately 4-6 lbs of microorganisms in their gut!

### WHAT DO THESE CRITTERS (HEALTHY MF) DO FOR OUR HEALTH?

**Protect & Detoxify:** Healthy MF is our #1 barrier to all infections and toxins.

- Prevent pathogenic (“bad guys”) microorganisms from flourishing in the GIT.
- Bind carcinogens & heavy metals, such as lead and mercury – excrete in stool.
- Protect the gut wall = layer of mucous and cells, which inhibit toxins from entering the blood.
- Provide 84% of immunity! *Healthy MF is the “right hand man” of the body’s immune system.*

### **Digest & Absorb:**

- Break down food particles to their smallest form for absorption.

### **Transport & Produce:**

- Transport essential vitamins & minerals into the blood.
- Produce key nutrients as a result of their natural metabolism.

- MF manufacture: omega- 3 fats: EPA, DHA & GLA and Vitamins A, B(s) - including B12 and vitamin K!

### **WHAT HAPPENS WHEN HEALTHY MF IS REDUCED AND (PATHOGENIC MICRO-ORGANISMS) “BAD GUYS” OVERGROW?**

*Pathogenic microorganism overgrowth reverses the benefits of healthy MF.*

- **Leaky Gut Syndrome (LGS):** The gut wall becomes damaged = gaps develop in the mucus membrane layer. This is known as Leaky Gut Syndrome.
- **Toxins enter the blood:** carcinogens, heavy metals and undigested food particles.
- **Nutrient deficiencies develop**

**“A source of nourishment becomes a source of toxicity!” Immunity, Digestion and Brain function suffer!**

**Sicker Kids:** Frequent colds & upper respiratory tract infections (URTI), recurrent ear infections, chronic stuffy or runny nose, asthma, eczema & allergies to foods and environment (dust, pollen, animal dander/fur, chemicals in air and household) develop or increase.

**Digestive Disturbance:** Kids complain more often of tummy aches, suffer from bouts of constipation and diarrhea, bloating and gas, experience painful passing of stools and develop worms, parasitic or yeast infections.

**Cognitive/Behavioural Ailments:** Children become moodier, restless and fidgety, unfocused and distracted, impulsive, forgetful and find it hard to “reel in” their emotions or behaviours such as repetitive and obsessive chatter and/or pestering - *no matter how excellent the parenting and teaching style!*

- The child doesn’t feel well inside and they are not pleased with their behaviour either!
- They just can’t help it. Their nervous system and brain tissue is *agitated, irritated, toxic, congested*

*and just plain unhappy!*

- A child displaying these patterns is not yet able to choose their behaviour; their behaviour is primarily the result of the internal, imbalanced biology in their gut, blood and brain.
- It may not even be “his natural temperament”, just because “he is a boy”.

***Research and clinical experience with c/b kids show that most of them also experience signs and symptoms of immune and digestive disturbance.***

## **WHY ARE CHILDREN (AND ADULTS) SUFFERING PROBLEMS FROM GUT FLORA IMBALANCES (“DYSBIOSIS”) IN OUR DAY & AGE?**

**Modern Drugs significantly alter & destroy healthy MF:**

- Anti-biotics, anti-virals, oral contraceptive pills, prednisone/steroids, chemotherapy and radiation, anti-histamines and many other pharmaceuticals destroy or alter gut flora balance.

**Industrial Age:**

- Pollution in air, water & food contain substances that harm healthy MF.
- A high level of environmental pollution means that we have an increased need for healthy MF to deal with the toxic load of every day life.
- Decreased intake of fermented foods that supply beneficial MF.
- Increased intake of processed foods, sugar and alcohol, which promote the growth of harmful microorganisms such as: candida albicans (yeast) in the gut and elsewhere.

**Chronic Stress** alters MF balance and promotes unhealthy microorganism overgrowth.

**Women giving birth to babies where:**

- Mom herself has “dysbiosis” = imbalanced microflora in her gut and therefore in her birth canal.
- C-sections: baby does not pass through the birth canal (where it naturally swallows its first mouthfuls of healthy MF - such as: lactobacillus acidophilus).
- Human breast milk supports healthy MF in infant’s GI tract, while formulas do not.

## **SOLUTIONS FOR CHILDREN WITH COGNITIVE-BEHAVIOURAL (immune & digestive) DISORDERS:**

**\*\*Visit a REGISTERED DOCTOR OF NATUROPATHIC MEDICINE!\*\***

***FOR A SAFE AND EFFECTIVE OUTCOME FOR YOUR CHILD!***

- Re-establishing health in these kids is a process that needs to be monitored by an ND in order for it to be safe and effective.
- Parents also need to be educated and supported each step of the way.

## **NATUROPATHIC TREATMENT APPROACH:**

**Re-establish Healthy Microflora!**

- Prescribe a high quality, broad-spectrum probiotic.
- Introducing probiotics can create a “die off” effect = harmful organisms in the gut release toxins as they “die off.” This may result in a worsening of symptoms if not well managed.
- Registered ND's know how to minimize the die off effect by choosing the right probiotic and the correct dosage, while supporting your child's detoxification systems.

## Removing substances from the diet that are creating toxicity when the gut is damaged.

- Avoiding: Processed foods (preservatives, dyes, artificial sweetener, MSG) and simple sugars.
- Limiting: many types of cow's dairy products and glutinous grains until the gut heals.
- Casein (milk protein) and gluten are notorious for improper break down in a damaged gut. They escape the leaky gut as large particles, resulting in immune deficiency (frequent infections) and/or hypersensitivity (increased allergies) and brain toxicity (cognitive-behavioural disturbance).

## Food & Environmental Testing.

- At HFNC we use Electro Dermal Sensitivity Testing (EDT).
- This type of testing has many benefits:  
Affordable & comprehensive test panels offered. No needles blood or pain.
- EDT measures the energy flow (Chi flow) of a person against "the energy" of a food or substance.
- Poor energy flow means a "stressful" food or substance for your child.
- Sufficient energy flow means the food is healthy and balancing for your child.

## Nutritional Deficiencies will be addressed using high quality supplements and foods such as:

- Cod Liver Oil containing vitamin A, D and omega 3 (EPA & DHA) – supports immunity and brain function.
- Dietary Recommendations Include: lots of veggies, some fruit, healthy proteins and fats from goat & sheep milk products, coconut products, nuts and seeds, eggs, organic meats, wild game

and some types of soy and fermented cow's dairy products are also suggested.

## Individual Treatment – Addressing the Cause- Natural Medicine - Collaboration

- ND's provide individual treatment; perform a thorough health history, physical exam and laboratory work up.
- ND's treat the underlying causes of disease and employ safe, effective natural treatments to stimulate the body's innate healing properties.
- ND's collaborate with other allied health care practitioners such as: MD's, NP's, RMTs, osteopathic and chiropractic doctors, physiotherapists, psychiatrists and psychotherapists.

**Visit our website** for more information on how you can help your child succeed physically, mentally, emotionally and socially this school year.

[www.healingfoundations.ca](http://www.healingfoundations.ca)



Dr. Heidi McGill (B.Sc, N.D.) holds a nutrition degree from the University of Guelph (1996) and graduated from the Canadian College of Naturopathic Medicine in 2004. She is the founder of Healing Foundations Naturopathic Clinic. Dr. McGill specializes in the treatment of chronic stress related illness, including

anxiety, depression and hormonal imbalance. She dedicates her passion for teaching healthy living through the use of articles and seminars related to topics that concern you. Heidi has treated dozens of children and adults using the "food as medicine" principal, in order to safely and effectively establish better health and wellness in the body and mind.

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