

CONSCIOUS CARE & SUPPORT



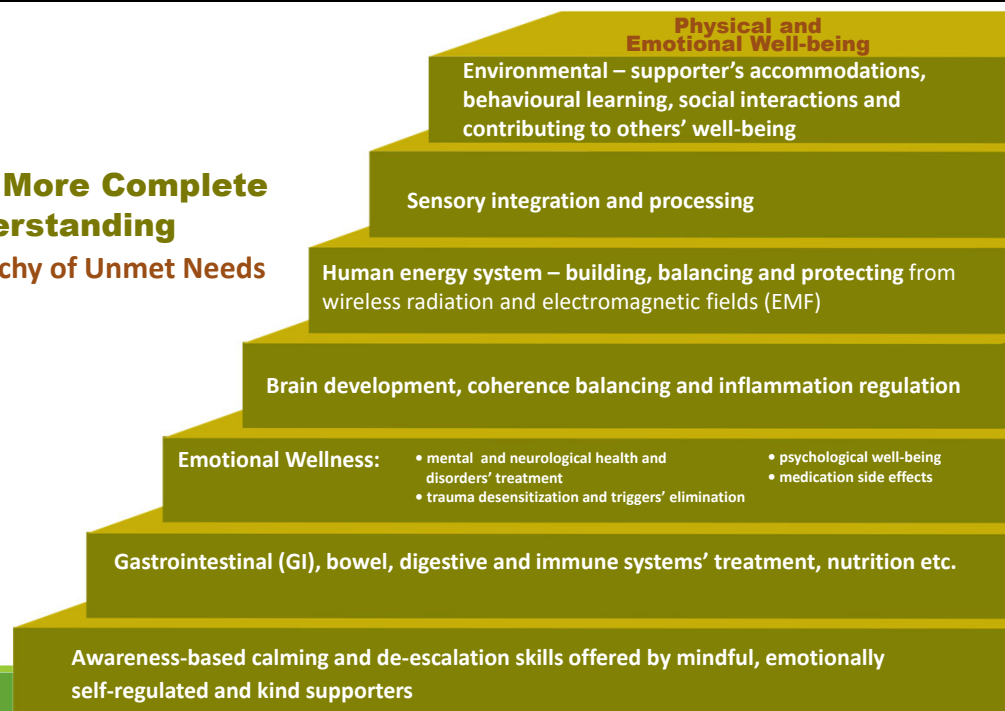
Week Two

GI, Bowel & Digestive Systems Treatment and Management

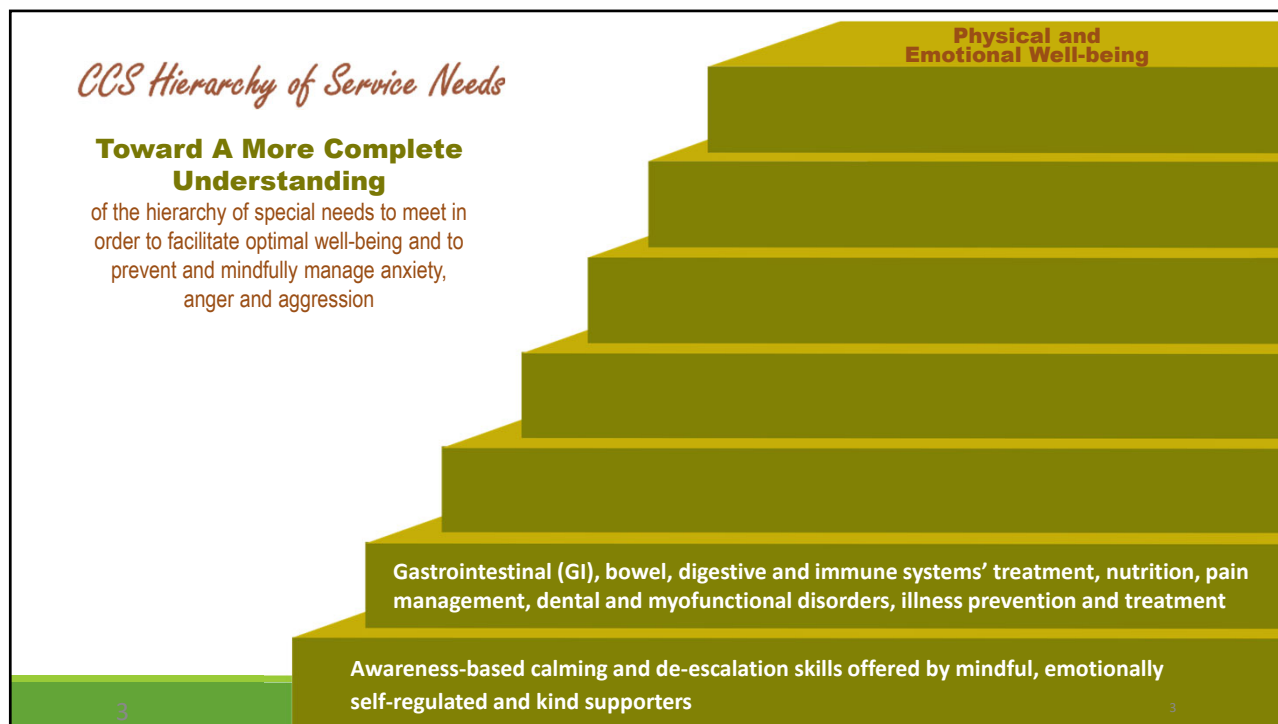


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Toward A More Complete Understanding of the Hierarchy of Unmet Needs



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Gastrointestinal (GI), Bowel and Digestive Wellness

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**GI, BOWEL AND
DIGESTIVE HEALTH**



**IS THE FOUNDATION
FOR A**



HEALTHY MIND

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Needs for GI and Bowel Management and Holistic Treatment

- Distressed Gut Microbes – produce Mind/Body Agitation, Pain and Anxiety which often leads to aggression.



1% Human
99 % Bacterial and Fungal

- Some Microbes found in the gut of individuals with Autism, when introduced into healthy rodents, create numerous Autistic like symptoms.
e.g.
 - Repetitive behaviours
 - Social aversion
 - Easy to startle

Reference: MacFabe, D. (2015), The Kilee Patchell-Evans Institute for Autism Research.

Yong, E. (2014) - *I Contain Multitudes*, 69-70)

Finegold, (2015; 2002)- *World Journal of Gastroenterology*, 21 (1): 102-111

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Chronic Anxiety

Chronic anxiety means ongoing excessive toxic cortisol in the body. To neutralize this toxin, the body uses up basic building blocks like amino acids needed to:

- Build the immune system
- Digest food
- Develop neurotransmitters

Depletion of these vital amino acids significantly compromises these systems causing illnesses that can be treated with antibiotics, which in turn can cause greater distressed gut flora.

Reference: Bluestone, (2005). *The Fabric of Autism*, 130

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Examples of Symptoms of Unmet GI, Bowel and Digestion Needs (all of these are reactionary and cognitively unintended):

- To create situations or take advantage of situations to become agitated, angry and aggressive; this distracts from physical and/or emotional pain;
- To eat soothing but addictive and toxic “junk” foods;
- To withdraw;

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- To reduce the preoccupation with pain in for example the bowel, the individual may harm themselves so that they will have a stronger, self-induced physical pain from, for example, biting or cutting;
- To escape into rage or OCD;
- To self-induce vomiting to relieve the stomach pain.

Why Are Those We Support Vulnerable to an Unhealthy GI?



Why Vulnerable?

- **Poor Diet** (e.g. refined foods, sugar etc.) inevitably leads to poor GI health.

The area of the brain that controls attention, motor impulses and the capacity to inhibit impulses (for individuals with ASD) was discovered to be metabolizing sugar at the rate of 10-12 percent slower than that of a neurotypical person. The brain needs energy to keep the mind and body focused. Without that energy, thoughts and actions spin out of control.

Reference:

Ratey J., (1998). *Shadow Syndrome*, p. 196

Zametkin, A. *numerous studies with National Institute of Mental Health*

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- **Chewing Problems** - Good balanced meals do not necessarily result in good gut nutrition.

Proper chewing is essential to:

- break down food for the gut to process
- activate flow of specific digestive enzyme
- facilitate pain free swallowing

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- **Inflammation in the gut and brain** can be caused by toxins, food sensitivities or bad bacteria or yeast in the gut. This can cause pain that affects behaviour – such as self-injurious behaviour; eye poking, and head banging can all be signs of pain.

(reference John Hopkins Hospital research 2014 re: ASD brain inflammation)

- When **detoxification is poor** as is common with individuals with ASD/DD, toxins from food and the environment can build up and act like ‘bad’ drugs on the brain, (causing irritability, aggression, brain/cellular damage).

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- When **digestion is poor** and the gut is too permeable (leaky gut), the nutrients that are supposed to get through cannot absorb properly. This leads to nutrient deficiencies, which can affect all cellular function including poor brain function.
- **Opiates can be created** from inadequate breakdown of gluten, casein, and soy leading to symptoms of opiate excess – foggy thinking, insensitivity to pain, opiate addiction and withdrawal, and irritability.
- **Yeast** - when there is yeast overgrowth in the GI tract, toxins enter the bloodstream and make their way to the brain where they can cause symptoms ranging from spaciness, foggy thinking, and aggressive behaviour.

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- **Enzymes.** In this study, the researchers found that levels of 3 enzymes responsible for breaking down sugars are significantly lower in the small intestines of children with autism.

More than 90% of these children have deficiencies in at least 2 of the 3 enzymes and 73% in all three.

According to Dr. Derrick MacFabe, Director of The Kilee Patchell-Evans Autism Research Group at the University of Western Ontario “this study is consistent with data showing disruption of the gut microbiomes as a key factor in autism. It also provides indirect evidence of **carbohydrate rich meals** increasing ASD/DD gut symptoms and behaviour worsens.”

Reference: Williams, B.L, (2011). *PLoS One* 6(9)

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Solutions to Improve GI, Bowel and Digestion Health



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Note: as with all other needs described in the Hierarchy Needs Model, the following information is presented to help develop the family and support professionals to become well informed, effective advocates to search and find competent community functional medicine professionals e.g. Naturopathic Doctor, Registered Nutritionist to assess and implement the comprehensive support plan.

All assessment tests and treatment services will be directed by the community professionals and as applicable authorized by the primary care physician e.g. Organic Acid Test, Hair Analysis Test and Urine, Blood and Stool testing.

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1. Reduction and elimination of unhealthy foods and toxins

- sugar (maximum 50 gm. per day for adults) e.g. soft drinks, power drinks, juice, bars and candy
- grains/gluten – especially white and refined grain carbohydrates
- dairy – a high percentage of all Canadians have a dairy intolerance
- deep fried foods
- artificial sweeteners
- preservatives, e.g. MSG, artificial food dyes
- processed meats and cheese
- hydrated or heated fats, e.g. Crisco and Mazola oil, and margarine
- toxic minerals, e.g. lead and mercury

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2. Facilitate assessment and testing as indicated

- Food intolerances, e.g. gluten, casein, egg, nuts
- Nutrient deficiencies and imbalances
 - minerals and metals, e.g. copper, zinc, magnesium, calcium, iron, mercury, lead, sulphur, PCB
 - vitamins, e.g. B12, B3, B6, D, C, E, Omega 3, Folate
 - glutathione
- Bowel x-ray (for constipation)
- Celiac Disease and non-celiac gluten intolerances
- Urine and stool sample for infections, e.g. yeast, staph and clostridium.

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3. A Nutritious Diet

The Whole Foods Transition and Approach

We know now that the additives used in food production and processing are a hidden cause of all sorts of problematic behaviours and cognitive deficits. Our goal then, is to move away from processed foods as much as possible, and towards a diet of transitional, or ideally whole, foods. The following chart shows the healthy alternatives.

PROCESSED FOOD PRODUCTS	TRANSITIONAL FOODS	WHOLE FOODS
PROTEINS • processed meat, deli meat, eggbeaters, protein powders • bouillon cubes	• natural meats, fish, poultry, eggs • seeds and nuts • broth powders with natural ingredients	• organic, free-range, grass fed, or wild meat, fish, poultry, eggs • homemade bone or vegetable broths

(Reference www.thecenterfordiscovery.org)

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PROCESSED FOOD PRODUCTS	TRANSITIONAL FOODS	WHOLE FOODS
<u>PROTEIN/CARBS</u> - any soy substitute - powdered milk, non-dairy creamer, aseptic UHT milk, processed cheese foods	natural dairy products, real cheeses, commercial yogurt	- soaked, home-cooked beans, traditional fermented soy foods-tempeh, miso - organic, grass-fed milk, organic plain yogurt, artisan cheese
<u>CARBOHYDRATES</u> <u>Beverages</u> - sodas, diet sodas, - sweetened juices - energy drinks, coffee	100% juice, spritzer, tea, - seltzer, - SWP decaf coffee	- herbal tea, water - fresh, organically-grown fruit in season
<u>Sweeteners</u> white sugar, turbinado sugar brown sugar, molasses, corn syrup, high-fructose corn syrup, aspartame, saccharin	barley malt, rice syrup, maple syrup, honey, organic brown sugar, fresh fruit	

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PROCESSED FOOD PRODUCTS	TRANSITIONAL FOODS	WHOLE FOODS
<u>Grains</u> - white rice, white pasta, corn-baked goods - refined flour cereals sweetened w/white sugar, corn syrup etc.	100% whole grain bread and flours - organic, whole grain cereal with natural sweeteners	soaked, cooked whole grains
<u>Starchy Vegetables</u> instant potatoes, canned vegetables w/preservatives, frozen dinners, French fries, creamed corn	real potatoes, frozen vegetables	organic and locally grown root vegetables in season
<u>Non-starchy Vegetables:</u> no vegetables, TV dinners, canned vegetables w/preservatives	frozen vegetables w/veg ingredients only, fresh precut vegetables	fresh, organic and locally grown vegetables in season

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PROCESSED FOOD PRODUCTS	TRANSITIONAL FOODS	WHOLE FOODS
<u>FATS</u> • margarine, Crisco, Mazola oil — any hydrogenated fat • any fat brought to very high temperatures (fried) or heat extracted oils – virtually all commercial oils	• plain vegetable oils	• monounsaturated or saturated fats for cooking (butter, pure lard) • cold-pressed, polyunsaturated oils for salad or flavour drizzle • unrefined oils

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4. Examples of herbal, vitamin and mineral supplements that could be recommended by a functional medicine professional

- methyl B12 and folate (B9) to keep mitochondria (the cells engine) tuned up to drive methylation (the cells production process)
- N-Acetyl Cystine (NAC)*, milk thistle, selenium to enhance glutathione** levels
- carnitine
- vitamins D, E, & C, Magnesium, Calcium, Iron, Mercury, Lead
- Calming herbs such as Kava and to help with production of neurotransmitters, e.g. GABA, and serotonin
- zinc (to balance copper)
- probiotics and prebiotics

**Stanford University (2013) NAC reduced irritation in individuals with Autism by 72%*

***Hyman, M. (2010) Glutathione is the 'mother' of all antioxidants. It is essential to prevent Brain Inflammation*

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Optimizing Glutathione Levels:

- **Consume sulfur-rich foods.** The main ones in the diet are garlic, onions and the cruciferous vegetables (broccoli, kale, collards, cabbage, cauliflower, watercress).
- **Bioactive whey protein.** This is a great source of cysteine and the amino acid building blocks for glutathione synthesis. The whey protein **MUST** be bioactive and made from non-denatured proteins ("denaturing" refers to the breakdown of the normal protein structure). Choose non-pasteurized and non-industrially produced milk that contains no pesticides, hormones, or antibiotics.
- **Exercise boosts your glutathione levels** and thereby helps boost your immune system, improve detoxification and enhance your body's own antioxidant defenses.

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5. Addressing Constipation/ Diarrhea

Possibly no other symptom is more indicative of the individual's pain, discomfort and health risks than the quality of their BM/stools.

Included is the Bristol Stool Chart. If stools are not generally Type 3 and Type 4 and daily (as a minimum) the individual must be referred to a qualified bowel management specialist to treat their condition holistically (i.e. nutrition, supplements and pharmacological treatments, as required).

Bristol Stool Chart

Type 1		Separate hard lumps, like nuts (hard to pass)
Type 2		Sausage-shaped but lumpy
Type 3		Like a sausage but with cracks on the surface
Type 4		Like a sausage or snake, smooth and soft
Type 5		Soft blobs with clear-cut edges
Type 6		Fluffy pieces with ragged edges, a mushy stool
Type 7		Watery, no solid pieces. Entirely Liquid

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GI, Bowel and Digestion Conclusions

1. Continued GI, bowel and digestive problems will **100%** ensure ongoing risk for anxiety, agitation, anger and aggression.
2. GI, bowel and digestive health will likely need ongoing effective support, not unlike diabetes. This is not a quick fix but a deep fix.
3. GI, bowel and digestive health will impact all other important parts of the individual's wellbeing and quality of life, e.g. impulse control, emotional self-regulation, communications and socialization, etc. Ideally recruit a GP who is qualified and willing to consult with GI specialists, if necessary.
4. A member of the support team must manage this vital need as their number one priority.
5. The team must have zero tolerance for making conditions worse.

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