



# The Enteric Nervous System

With Greer Dearle, Naturopath

Many people are unaware of the enormous role of the enteric nervous system (ENS) also known as “the second brain”. We know that the central nervous system (CNS) contains millions of neurons (nerve cells) all firing in patterns, which allows for movement and life in our body. What many people don’t know is that the enteric nervous system has equally as important function.

The ENS is our ‘brain in the gut’. There is a nerve called the vagus nerve, which runs from the brain stem to the abdomen, connecting the CNS (the brain and the spinal cord) and the ENS (the gut). Even though the two nervous systems are connected by the vagus nerve, the enteric nervous system can still function if this connection is severed.

Not only does the ‘gut brain’ include different neurons for reflex actions such as peristalsis (intestinal motion) and enzyme secretion, it also produces 30 neurotransmitters. For example, 90% of the body’s serotonin and 50% of the body’s dopamine is produced in the gut! Adequate levels of these neurotransmitters ensure a bright outlook and ability to focus on, whereas tasks deficiency results in conditions such as anxiety and depression. It makes sense then that if we want to treat such issues as these, we need to look at the gastrointestinal system. Clinical evidence suggests emotional imbalances may be resolved simply from cleaning up and healing their gastrointestinal system.

Today’s average diet is not only increasing cases of obesity, heart disease, cancer, and mental health problems but it’s also having a very large impact on the physical and mental health of our children. Behavioural issues, ADD, ADHD, autism, dyslexia and anxiety are just some of the issues our youth are facing and it’s vital we learn how to rectify these problems in order to optimize the wellbeing of children and their families but also for our society as a whole.

## HOW CAN YOU TELL THERE IS AN ISSUE WITH YOUR ENS?

So how do you know if you or your child falls into this category?

Here are a list of symptoms and conditions that all improve when following a program designed to heal the gastrointestinal tract;

- Autism
- ADD/ADHD
- Dyslexia
- Focus and concentration problems
- Anxiety and depression
- Fatigue and stamina issues
- Diarrhoea, constipation, IBS
- Constant “sore tummy’s”
- Headaches and migraines
- Eczema, dermatitis and other skin conditions

# What can you do about it

To have your ENS functioning at an optimum level there are 2 important parts to the story;



1. The lining of the alimentary canal (your gut) needs to be in excellent health. The alimentary canal starts in the mouth and ends in the anus. The majority of absorption of your nutrients happens in the small intestine (predominantly the duodenum and the jejunum). Here we find tiny villi which are lined with cells called 'enterocytes'.

Enterocytes are the cells which absorb nutrients to feed our bodies.

2. The balance of the 'good' and 'not-so-good' bugs living in our gut needs to be tipping in favour of the good bacteria. We are full of bacteria! There is approximately 2kg of bacteria in each of us. These bacteria are responsible for the health of the enterocytes on which they live. When the healthy bacteria are not there and instead the enterocytes are lined with pathogenic bacteria, absorption of nutrients cannot happen.



Introduce sugar, gluten and stress and we are introducing food for the pathogenic bacteria, and damage to the villi and the enterocytes. Throw in a dash of glutamates, nitrates, sulphates and salicylates (common added and naturally occurring chemicals in food) and we are adding confusion and mixed signals to the 'computer' part of our second brain.

# How should we be eating?

We need to avoid foods that cause damage to the villi and enterocytes, foods that feed the pathogenic bacteria and foods which can sit in the gut and ferment (creating food for the pathogenic bacteria).

For a period of 6 weeks follow this healthy food plan for adults or this plan for kids.

*\*\*Please note if you are dealing with moderate to severe cases of learning difficulties, skin problems or anxiety the plan will need to be modified to include no grains at all and no sweeteners other than small doses of stevia.*

Along side a healthy diet it is helpful to add certain detoxifying and balancing supplements to the system to help re-establish the integrity of the gastrointestinal lining. Your Wellness Coach will discuss with you your individual needs for supportive supplements such as detox homoeopathics, glutamine, probiotics, antimicrobials, magnesium and saccharomyces boulardii.

If you are unsure of where to start with a program like this I encourage you to read blogs and books from some of the following health coaches to find new and delicious recipes;

(Please be aware..... some of the recipes suggested by these people will not follow this plan precisely but there are many, many recipes that do!)

[www.wellnourished.com.au](http://www.wellnourished.com.au)  
[www.superchargedfood.com](http://www.superchargedfood.com)  
[www.wholefoodcooking.com.au](http://www.wholefoodcooking.com.au)  
[www.quirkycooking.com.au](http://www.quirkycooking.com.au)  
[www.changinghabits.com.au](http://www.changinghabits.com.au)  
[www.liveitdoit.com.au](http://www.liveitdoit.com.au)

Should you be confronted by the program, especially mums and dads trying to get their children to eat different foods, please be aware that working on the health and integrity of the gut will bring phenomenal results in a relatively short time.

