

Leaky gut? This CANNOT be a good thing....

It was almost a decade ago that I came across the term “leaky gut”, whilst scavenging the internet to try and self-diagnose my symptoms (prior to studying nutritional medicine that is). It sounded disgusting. In fact it sounded exactly like what it turned out to be – a gut which leaked out stuff and led to me being unhappy and ill. However, it didn’t exactly sound like something which would be found in the medical literature so back then I was sceptical – even though I knew my gut was in trouble. How did I know this? Well, mostly from the cramping, spasms, bloating, constipation, and diarrhoea... it seemed logical that my digestive system was in some sort of trouble. As it turned out, it was in the medical literature but not as ‘leaky gut’ – instead it was referred to as ***increased gut permeability*** or ***intestinal hyper-permeability***.



So what is intestinal hyper-permeability (or leaky gut – let’s just go with leaky gut) and why do some people have it? Basically leaky gut occurs when the ***lining of the short intestine becomes more permeable*** (allowing material to pass through it) than it should be – this can be due to ***low-grade chronic inflammation*** which can be due to various possible causes, such as:

- A diet high in ***processed/refined foods, caffeine and alcohol***
- Ongoing exposure to ***GM (genetically modified) foods***
- Exposure to ***chemicals*** (ie. pesticides, cleaning products, beauty products etc)
- Exposure to ***pathogens*** (bacterial, fungal, viral or parasitic infections) in the GI tract

- Overuse of **medications** which affect the GI tract lining (eg. NSAID's)
- Long term use of the **oral contraceptive pill**
- Overuse of **antibiotics**
- Ongoing **stress and anxiety**

Medications (such as NSAID's - a common over the counter medication) can lead to **bleeding and holes in the intestinal lining** while the overuse of antibiotics can **reduce the levels of beneficial bacteria** and also introduce **antibiotic-resistant strained bacteria** in our gut microbiome which can lead to leaky gut. (1) This is due to the fact that our microbiome (colonized gut bacteria) plays an important role in maintaining the function of the intestinal barrier as well as our overall immunity. (2) More about the gut microbiome can be read in this article [here](#).

Let's look more at this gut barrier!

The gastro-intestinal tract (GIT) lining has two main parts to it – the **epithelium** (which is kept together by tight junctions) and the **mucous layer**, which provides the breeding ground and nutrients for the microflora in the gut. (3) These two parts of the intestinal tract work together to keep the intestines separated from the rest of the body. (3) When the intestinal lining becomes leaky (ie. due to an imbalanced gut microbiota leading to chronic inflammation and reduced immunity from pathogens etc) – the **tight junctions** in the epithelium become compromised and allow for **tiny gaps or holes** in the barrier between the intestines and our bloodstream. These tiny holes allow for things to **slip into the bloodstream** which normally wouldn't be there – such as pathogens or undigested food particles. The body recognises these substances as **foreign** and therefore the **immune system creates antibodies** to target these foreign substances – **causing systemic inflammation** which can eventually result in **disease**. (1)

When we are first born we have a leaky gut. Prior to birth, it is thought that the **infants GI tract is sterile** – hence the **importance of the mother's gut bacteria** which gets colonised in the infants gut during birth (if it's vaginal) and after birth (via breastfeeding). (3) The **colostrum** in the breast milk provides the **growth factors** required to close the tight junctions in the infants gut wall and thereby **build their immune system** (hence why breastfeeding is so important in the early stages of life). After birth, the immune system develops in conjunction with the gut microflora development which leads to a **life-long co-existence** between the host (infant) and the microflora. (3) The maturation of the immune

system involves both the innate system (inbuilt or pre-programmed immunity) and the adaptive immune system (as the name suggests – this system adapts to specific microbes or pathogens after exposure). (3) The importance of early-life gut health in infants and the connection with the mother's microbiome (before/during and after birth) is explored more heavily in this article [here](#).

One of the first signs you might have leaky gut is **multiple food sensitivities**. Food particles which get released into the bloodstream via a leaky gut can lead to a systemic reaction in which the body tries to deal with the foreign particles. The **difference between food sensitivities and food allergies** are the **type of antibodies produced** by the body during an immune reaction. Allergies release immunoglobulin E type antibodies (**IgE**) which cause an **immediate reaction** (anywhere between minutes to a few hours after exposure) with the release of histamine and chemicals to attack the foreign invader, while immunoglobulin G and A (**IgG and IgA**) have a **delayed reaction** and therefore is harder to pinpoint which foods or ingredients are causing a reaction. The symptoms garnered from a leaky gut don't just include digestive symptoms either (like I originally thought) – they can also include **skin rashes, joint pain, headaches, migraine, nausea, brain fog, depression, anxiety and many more**. Although it was initially due to my gut symptoms during and after a parasitic infection (followed by antibiotic overuse) which lead me to finding out about leaky gut, I realised soon after that I had been exhibiting symptoms well before these gut symptoms – such as skin rashes and foggy brain – and it was this discovery which made me realise just how **prevalent leaky gut is in our society**. If you can recognise these early signs and symptoms of a leaky gut and make the necessary changes to your diet and lifestyle, **it may be the most important thing to preventing disease further down the track**.

Chronic long-term leaky gut combined with the chronic over-activation of the immune system (leading to chronic inflammation) can eventually lead to biochemical changes in the body which **results in disease**. It is much easier to reduce the inflammation and heal the gut before disease sets in – which is why **prevention** is something this website focuses heavily on. However, once disease has set in – nutritional medicine works by looking at why this has occurred, which nutritional imbalances have resulted (or caused this to happen) and how it can be addressed through dietary, lifestyle and supplemental intervention. Some of the diseases now linked with an underlying leaky gut include **irritable bowel syndrome, inflammatory bowel disease, coeliac disease, chronic fatigue syndrome, multiple sclerosis, rheumatoid arthritis, grave's disease, Alzheimer's disease** and many more. (4) As mentioned earlier, the link between leaky gut and autoimmune disease is gaining more attention in the medical literature – which I have written more extensively about in this

article [here](#). In reference to where disease occurs depends on multiple factors – such as genetics, diet, lifestyle, exposure to environmental toxins and a person’s genetic predisposition – which is where the location of inflammation occurs in the body (ie. for rheumatoid arthritis the inflammation occurs in the joints) (1).

There are various ways to diagnose leaky gut. It can be done based off signs and symptoms in conjunction with a full health history by a doctor or natural medicine practitioner. A more certain way is to **get testing done** – with an intestinal permeability urine test (which is often used to monitor the success of a gluten-free diet amongst coeliacs) but can be ordered by any GP or registered natural health professional. To assess food allergies and sensitivities – there are allergy panels for IgE, IgG and IgA which can also be ordered (not all these tests are covered under medicare unfortunately). A **holistic practitioner** will also take into account all the reasons why leaky gut may have occurred – through diet, health history, stress factors, lifestyle and so forth and find ways to help restore the gut and immune system.

Other ways to **reduce your risk of leaky gut** can be the following:

- Eat plenty of daily fruit and vegetables
- Reduce your intake of highly processed or refined foods
- Reduce your intake of alcohol
- Daily movement or exercise
- Plenty of natural sunlight
- Reduce stress levels – meditation, breathing exercises, doing things you love, getting outside into the sun and nature, sleeping well, eating well etc.

Sources cited:

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Leanne is a registered clinical nutritionist who has created this website to aid those who are seeking ways to prevent disease. She also does one-on-one consultations with clients who have been clinically diagnosed with chronic disease or suffer from symptoms which may lead to chronic disease, as well as those who are just looking to be healthier. To make an appointment with Leanne or to contact her directly, you can go [here](#).