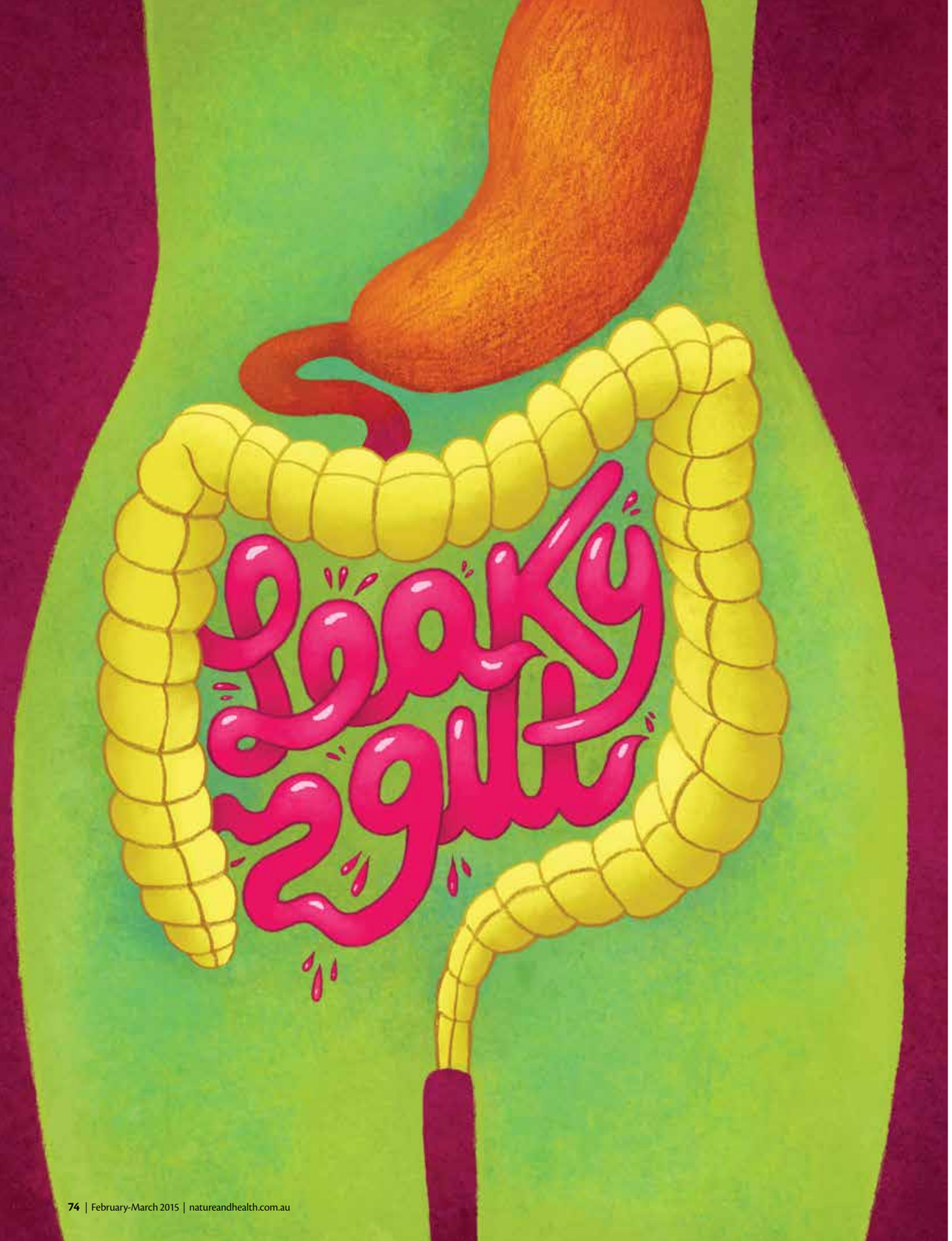


Digestive wellness

Naturopath Tania Flack explains how to strengthen the immune system and prevent disease through optimal gut health.

What if I told you that you have approximately two kilograms of bacteria, viruses, parasites, and micro-organisms in your body? And that these minute life forms actually outnumber your own cells by 100 to one? Most people would be horrified, but these hitch-hikers play a vital role. The primary home for this inner zoo is the digestive tract, where they ensure food is effectively broken down, the immune system is modulated, and a myriad of delicate checks and balances are performed daily.

The term 'microbiome' is used to describe this community of micro-organisms. Our knowledge of its importance has been steadily growing, but it wasn't until the release of the findings of the Human Microbiome Project in 2012 that we really began to understand the breadth of its impact on health. DNA sequencing of micro-organisms in the digestive tract demonstrated its incredible microbial diversity – in fact, the human digestive tract is by far the most diverse ecosystem on the planet! These may well mark a turning point in how we treat many diseases in the future, including those which you might not automatically associate with gut health. So, how can we harness this new understanding of the gut to improve our health?

1 in 10

The estimated number of Australians who have irritable bowel syndrome – although it is grossly under-reported, usually due to embarrassment.

Modern-day gut health

Many ancient cultures believed the key to health lay in good digestive function; however in today's world, very few people enjoy this. The onset of poor digestive function is insidious, and many people just become accustomed to bloating, irregular bowel function and other symptoms over time. Talking about bowel habits can make people feel uncomfortable so they often avoid seeking treatment until symptoms start to disrupt their lives. This is one reason that irritable bowel syndrome (IBS) is under-reported, while more serious conditions like inflammatory bowel disease are on the rise.

The increase in gut problems in Australia could be associated with disruption to the gut microbiome. A common link between microbiome disruption, gut disorders and other health problems is a phenomenon called leaky gut. The gut microbiome is a delicately balanced ecosystem that is easily damaged by poor diet, chemicals, stress, toxins and some medications. Once the microbiome has been disrupted and colonies of beneficial bacteria have diminished, opportunistic bacteria can flourish; this is called dysbiosis, which is commonly explained as an imbalance between 'good'

Have you got a leaky gut?

- abdominal discomfort
- diarrhoea and/or constipation
- bloating
- cramping
- indigestion
- flatulence
- nausea
- headaches
- brain fog
- skin problems, e.g. eczema, acne
- fatigue
- food intolerances
- chemical sensitivities
- allergies
- nutritional deficiencies
- poor exercise tolerance
- hormonal problems
- lowered mood

Foods that harm, foods that heal

CHOOSE	LOSE
Organic, wherever possible	All processed foods
Lots of fresh vegetables	Gluten
Fish	Dairy
Slow cooked, grass-fed red meat	Sugar
Bone broth	Refined carbohydrates
Fermented foods	Alcohol
Berries	Caffeine
Healthy whole fats, e.g. avocado, nuts, seeds	Soy

and 'bad' bacteria that causes low-grade inflammation, which in turn irritates the delicate epithelial cells lining the gut.

In a healthy gut, nutrients are absorbed into the bloodstream through microscopic pores in the gut wall, called 'tight gap junctions'. However, when it's inflamed the gut becomes more porous, allowing the passage of a range of substances into the bloodstream, including microscopic particles of under-digested food and toxins from the gut. The immune system then reacts to these foreign invaders, causing further inflammation and perpetuating the leaky gut cycle. Food intolerances often develop as the immune system starts to recognise common foods as hostile invaders. Symptoms like acne, rashes, headaches and fatigue may be triggered by the auto-toxicity associated with the low-grade reabsorption of toxins from the bowel.

What causes a leaky gut?

Several factors may predispose people to be more susceptible. We inherit our bacteria from our mother during our passage through the birth canal, and to a lesser extent through breast-feeding. Babies born by Caesarean section who were not breast-fed may have less diversity in their microbiome. Our reliance on household disinfectants also decreases exposure to a variety of bacteria during childhood, leaving us with a depleted microbiome.

Stress also damages the microbiome and gut health in general. Long term, low grade stress affects the health of the gut wall, making it easier for opportunistic bacteria to thrive. A diet high in sugars and processed foods can negatively impact the microbiome. Chemical additives and traces of herbicides and pesticides commonly found in processed foods can cause significant problems, as do caffeine and alcohol. Food products that are produced to have a long shelf life will contain additives inhibit bacterial growth; imagine what these can do to your delicate microbiome?

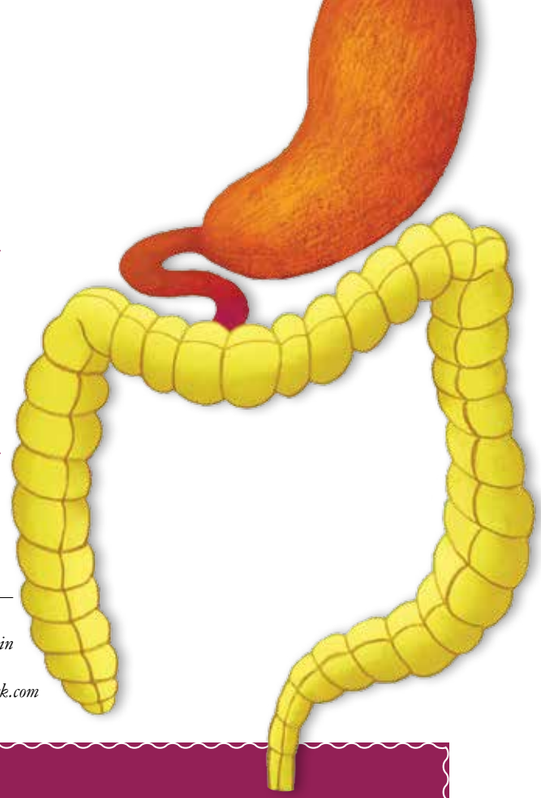
Medications, specifically antibiotics, play a significant role in a leaky gut. While they can be life-saving in certain circumstances, they can and do cause damage. More worrying are the antibiotics that you don't know you're taking. Antibiotics are commonly used in animal farming. Chickens, for example, are fed antibiotics every day of their short lives before making it to your plate. And while the agriculture industry generally uses different antibiotics from those used for humans in order to reduce the risk of bacteria developing a resistance to antibiotics, what they do use still makes its way into the food chain and may damage human microbiome health.

Other offenders

Symptoms of leaky gut include bloating and abdominal distension, caused by excess fermentation and gas production in the bowel, along with cramping, pain, and irregular bowel movements due to low-grade inflammation and anxiety. As the bowel becomes less effective as an organ of elimination, symptoms associated with auto-toxicity may appear, notably brain fog, fatigue, low mood, skin eruptions, headaches, and a general feeling of malaise. If left unchecked for the long term, symptoms become far more wide-ranging than bowel problems: the inflammation and continuous immune system irritation of chronic leaky gut is thought to play a role in many autoimmune disorders, including ulcerative colitis, Crohn's disease, rheumatoid arthritis, multiple sclerosis, and diabetes. In fact, several bacteria species which have been identified as potential causes are currently being researched.

Not surprisingly, many symptoms of leaky gut look suspiciously like those of IBS. The cause of IBS is poorly understood. While disruption to the neuromuscular function of the gut plays a pivotal role, dysbiosis and leaky gut may also be a factor. Overgrowth of candida, a yeast commonly found in the digestive tract, is often blamed for gut disruption, but there are many opportunistic micro-organisms that can cause similar symptoms. True candida overgrowth is not common, and unless it has been specifically identified in pathology testing it is more likely that general dysbiosis and leaky gut are the culprits.

Parasitic gut infections have also increased significantly in Australia in the past decade. Once mainly associated with overseas holidays, parasites are now commonly found in people who have never travelled. Two that can cause significant gut disruption are Blastocystis hominis and Dientamoeba fragilis. Both are responsible for symptoms ranging from spectacular bloating and abdominal distension to constipation or diarrhoea, and they both cause major disruption to the microbiome and gut membranes. Unfortunately they can be very resistant to treatment with both natural and heavy-duty pharmaceutical medicines. So, if you are diagnosed with either of these parasites, seek specialist treatment from an experienced practitioner.



We are not alone in our own skin; rather, we can consider ourselves as being more like coral – that is, a community of cells and micro-organisms living symbiotically.

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The road to recovery

The term leaky gut describes two distinct phenomena: the overgrowth of opportunistic bacteria, or dysbiosis, and the subsequent irritation of the gut lining, causing an increase in gut permeability. Your healthcare practitioner can use several tests to investigate your gut health. DNA testing of the microbiome has recently been introduced to Australia. Dr Margie Smith, chief geneticist from SmartDNA says, "The information we can now gather from a stool test using DNA technology is staggering. Examining bacteria in the gut microbiome gives us a far greater understanding of many complex conditions and opens up a world of potential new treatment strategies." Functional pathology labs also offer comprehensive stool testing which can provide information on a range of gut markers, including information on bacterial balance; they also test gut permeability using a urine sample.

Once a leaky gut has been identified, your journey back to health can begin. There are several areas you need to address:

Diet

The foundation of gut healing lies in a whole food diet, and sometimes long-term dietary changes are needed to ensure a healthy microbiome is established and maintained. The bacteria in the gut play an important role in helping break down food, and different species specialise in different types of food fibres and starches. We need a range of wholefoods to encourage bacterial diversity. Remember - we are not just feeding ourselves; we are also feeding our inner zoo.

- Choose foods that are as close to their natural form as possible; if you can recognise it, then your bacteria will, too. Strictly avoid any processed and pre-packaged foods, as these will contain additives that will slow microbiome repair.
- Organic food is ideal; even going organic for one month will make a big difference, as it will reduce your exposure to herbicides and pesticides that damage the microbiome.
- A high vegetable intake will provide natural fibres to encourage bacterial growth and vitamins, minerals and antioxidants to promote gut healing. Aim for between six to nine cups of vegetables per day to really fast-track healing.
- Fermented foods like kimchi and sauerkraut can be introduced in small amounts initially, and increased over time to provide the gut with friendly bacteria.
- Avoid unhealthy fats, such as processed seed and vegetable oils, and stick to pure coconut, olive oil, and avocado.
- Lots of oily fish in the diet, such as salmon, sardines and mackerel, will provide powerful anti-inflammatory effects.
- Mineral-rich bone broth can be easily made at home and is an ideal food to promote gut healing.
- Avoid grains altogether for at least the first two weeks, and then keep them to a minimum in the diet. Only small amounts of whole grains should be used: brown rice, corn or some of the seed-based alternatives like quinoa, buckwheat, millet and amaranth are good choices. Avoid all grains containing gluten.

Nutritional and herbal support

Your health practitioner will be able to prescribe a targeted protocol to treat dysbiosis and promote gut healing. In some cases, antimicrobial herbs are used initially and these need to be professionally prescribed. A range of nutrients can support gut healing, including glutamine, zinc, and bioflavonoids. Fish oils are useful for their anti-inflammatory effects. Probiotics are essential and will help to recolonise the gut with healthy bacteria.

Eliminating food intolerances

It is important to identify reactive foods and remove them from the diet. This will help to minimise inflammation in the gut, which will in turn promote healing. You may have to avoid reactive foods for several months to ensure your gut has fully repaired. Ask your health practitioner to organise an IgG food intolerance test for you.