The Good Gut Report

Good Life Letter

Natural health, vitality & wellness

Gut Report

INTRODUCTION

This report has been drawn together from several years of research and a whole lifetime of experience. My name is Ray Collins and I am the writer and researcher for The Good Life Letter, a popular online newsletter which deals with health issues and the natural ways we can all improve the way our bodies work.

My mailbox is full every week with readers asking for more information about a whole series of health-related topics but none more so than those involving the digestive tract and its many functions.

That last line might have confused a few of you because I wrote 'its many functions' and I can well understand if you think of the gut only as a way to extract nutrition from our food – well if this report does nothing else I hope to show you that whilst the principle role of the tract is to give us the goodness we need, there is a whole lot more to it than that.

Read on and you will discover:

- The critical link between your gut and your immune system
- Why the digestive tract is often called the second brain
- How we fundamentally rely upon billions of gut microbes to survive
- The reason bad skin might be due to poor gut function
- When bad breath can signify a major health crisis
- Why commonly taken medications can spell real danger for your gut health... including some that you can buy from your local petrol station

The gut really is a major player in good health and so many people, including those in the medical profession, don't understand just how important this collection of tubes, bags and various organs are.

Hopefully by drawing together the information in this report you will know much more about this vitally important system, and maybe can glean the information you need to make a really positive difference to your health.

OVERVIEW

Beginning at the mouth and ending at the anus the digestive system (more commonly described as the gut) is a continuous tube which contains everything that we eat and drink and is primarily concerned with breaking these down to derive the nutritional elements that we need to survive.

This is a really important function as the food we eat contains a variety of nutrients, which are used for building new body tissues and repairing those which may become damaged. These nutrients are also critical for life as they are our only source of chemical energy. As consumed, however, most food cannot be used directly for these functions and must be broken down into molecules or fractions which are small enough to enter the body cells. This is the process involved with digestion and ultimately absorption.

During the passage of food and drink along the gut tubes, it is subject to physical and chemical processes which ensure that all the available nutrition within is made available, and ultimately any waste remaining is deposited in the toilet bowl.

But there is one really important concept that you need to consider which is that the contents of the gut are outside of the body rather than inside it – which might seem at odds with how you view your digestive system but if you think about the gut as being a tube running through the body which is closed at the top by the lips and teeth and at the end by the anal sphincter, it makes sense.

By acknowledging that this is the case it will help you understand why the walls of the gut are so important to our health as they effectively keep any nasties outside of the body and only allow the things we want to enter our cells to do so... or at least they do as long as everything is healthy. Many problems with the gut are caused by factors which break down this protection system, and as you will discover elsewhere in this report, taking steps to look after the barriers to attack are key to a long and healthy life.

HOW YOUR GUT WORKS

The gut is a muscular tube that constantly pulses with waves of contractions that keeps the food moving along it at a steady pace, but the muscles achieve much more than simply mobility, they also squash the food together too.

Effectively the digestive system is designed to break down the food we eat, so it has elements that physically and chemically assault it – beginning in the mouth where the teeth and tongue mash the food into a pulp and create a bolus which passes down into the stomach, as well as mixing it with saliva which contains an enzyme which turns complex sugars into simple ones.

Here, acid, which is stronger than that found in car batteries, attacks the fibrous carbohydrates and thick meaty proteins and continues to churn the food into a thick paste known as chyme. Again, the stomach has its enzymes working which begin to break down proteins even further.

This chyme now enters the beginning of the small intestine, an area known as the duodenum, where more chemical catalysts called enzymes begin their work. These are produced in the pancreas and include one to continue protein breakdown (Trypsin), another to work further on the carbohydrates (Amylase) and the last to fracture complex fats (Lipase) which have been emulsified by bile produced in the gall bladder.

Now the chyme enters the small intestine proper, called the ilium, where the walls are very convoluted and have finger like processes (villi) sticking out from them and it is here that the body starts to absorb the nutrients it needs either directly to the blood stream or in the case of fats and lipids into the lymphatic system.

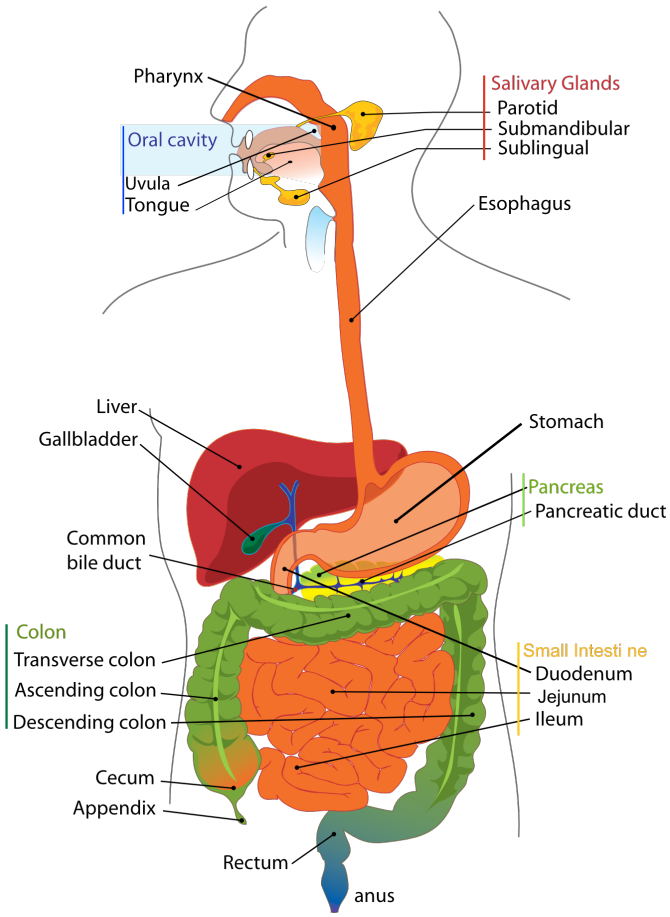

Figure 1 – The Digestive System

Travelling along the length of the small intestine most of the goodness in the food is extracted before the remaining fraction enters the large bowel in the lower right quadrant of the abdomen – where the appendix is located.

In the large bowel, water is reabsorbed and other waste products from the body such as salts are added back into the contents.

On arriving at the last stage of the large bowel, the rectum, the waste matter is compressed and formed into stools or faeces which is then passed through the anus and into the toilet bowl.
On this journey the food that we eat is broken down completely, selectively absorbed into the body and then any waste material discarded safely and effectively – a truly amazing system...
...but there is so much more to the digestive tract than purely dealing with food.

WHY A HEALTHY GUT MEANS A HEALTHY BODY

In the previous chapter I explained the general workings of the gut in respect of breaking down our food and extracting the nutrients that our bodies need.

Clearly without this vital function we won't survive for long, but the role of the digestive system and its associated organs doesn't end with the comparatively simple process of getting the good stuff that we need from food.

In considering why a healthy gut is important to us, we have to be aware that we are not alone inside this body of ours.

Living inside our gut are approximately 41 trillion other creatures (give or take the odd billion or so!). Now please don't be alarmed – they are supposed to be there and we couldn't live without them. You see these industrious beings help digest our food (especially the fibrous stuff that we can't manage on our own), build essential vitamins (especially vitamins B & D) that we can't get from anywhere else in a form our body can use, and fight potential bacterial invaders and teach our immune cells how to recognise them in the future.

This colony of symbiotic organisms is what is referred to as the Microbiome...
...and you will discover that this is the key to health and happiness... really!

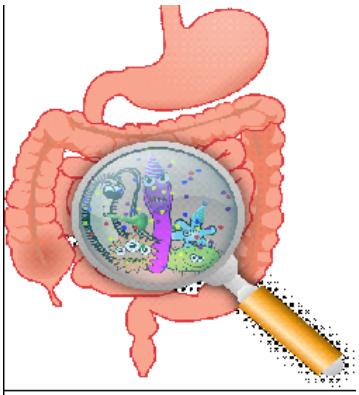

Figure 2 - The ongoing study of the microbiome — the community of microorganisms living inside your body — could well be the most compelling frontier of health science.

These microbes play a critical role in shaping your appetite, allergies, metabolism, and neurological function.

In fact, scientists have found that gut bacteria produce neurotransmitters, such as serotonin, dopamine, and GABA, all of which play a key role in determining your mood.

The interaction between the gut and the neural network is one that we shall return to in the very near future, so please keep reading.

Failure in the function of the Microbiome can lead to pretty serious and long-term conditions developing, with recent studies suggesting that your gut microbiota may factor into your risk of developing neuropsychiatric illnesses like schizophrenia, ADHD, obsessive-compulsive disorder, and chronic fatigue syndrome.

In other words, the bacteria living in your gut have a huge impact on the way you feel, they way you live and how healthy you really are.

Of course, not all the inhabitants of the gut are 'good guys' who are trying to help us, there are a few that we could do without.

But if we maintain a healthy population of the supportive and helpful types these tend to ensure that those who would otherwise do us harm are kept in check.

Unfortunately, when we cause a disturbance in this delicate balance by changing what we eat or through taking antibiotic medication we can allow the 'nasties' to grow in strength and they can cause all sorts of problems, ranging from upset tummies to a full-scale immune system breakdown. Learning how to keep the gut operating optimally is something that takes us a long while to achieve, in some cases a lifetime, and there are no quick fixes either.

Many of the big companies who manufacture and sell yoghurt drinks and so called 'probiotic' foods would have you believe that keeping a healthy population of good bacteria in the gut is a simple matter of slurping one of their products once a day...

...but in fact you'll just be wasting your money.

Many of these products contain such a pitifully small number of bacteria of a shamefully few species that they have no effect at all on the complex ecosystem that lives inside us.

What helps the balance is unique to each of us but will be linked to good food, regular exercise and an avoidance of too much sugar.

Earlier, the role of the gut in conjunction with the neural system was mentioned and I am sure we are all familiar with the concept of 'gut feeling' to describe an emotional sensation around making a decision – well it appears this is more than just a saying.

Many neurologists refer to the gut as the second brain due to the number and variety of nerve cells found within it and how closely they link to both the somatic (nerves which enter the spinal cord and link to the brain giving us conscious control of movement and sensation) and autonomic (those which are involved with actions outside of conscious control like sweating and heart rate) nervous systems.

Closely associated with the gut walls are two intricate neural webs known as Auerbach's and Meissener's Plexuses. These link back to a network of nerves located around the base of the sternum of the ribcage called the solar plexus, and the whole lot together with its links to the somatic and autonomic systems is known as the Enteric Nervous System (ENS).

The number and complexity of connections in the ENS makes it the second most complex neural network to the biggest one in the body – the brain.

Many scientists now refer to the ENS as the second brain and many studies have identified how it operates independently of the main neural functions of the body but also how it influences them and can take control at times.

More and more psychologists are recognising how important the ENS is in many of their patients' presentations and why food is such a powerful emotional component of life.

For instance, have you ever stopped to think why we associate celebration with certain foods? Or why when we are feeling emotionally low there are only certain meals or snacks which we crave?

Knowing how strong the link is between the gut and the emotional state helps us realise that the workings of the digestive tract is surely much more complex than just a simple tube that allows us to break down and absorb food.

For this reason it is also clear to see that when the gut stops working properly there are many health conditions that can manifest as a result.

COMMON DIGESTIVE SYSTEM PROBLEMS

According to the most recent health reports from NHS England and charities involved with gut disorders, 69% of the population of the UK have experienced some form of gut problems in the last year, with the commonest symptoms of digestive upsets reported as follows:

- Bloating (32%)
- Constipation (26%)
- Flatulence (23%)
- Diarrhoea (22%)
- Indigestion (22%)
- Heartburn (20%)
- Persistent stomach pain (15%)

These symptoms can relate to a variety of underlying health problems, some of no great significance but others may indicate the presence of potentially life-threatening conditions.

Diagnoses of conditions such as Reflux, Irritable Bowel Syndrome, Inflammatory Bowel Disease (Crohn's and Ulcerative Colitis), Gallstones, Celiac Disease, Haemorrhoids, Diverticulitis, Bowel Cancer, Polyps, Anal Fissures and many others will all include many of the symptoms in the previous list, but it takes a skilled clinician to properly diagnose them.

The biggest problem that doctors face when seeing patients with serious bowel/gut issues is the fact that patients will often not present to clinics in the early stages of a problem as they are too embarrassed to discuss the symptoms they are suffering.

Blood in the stools, vomiting, diarrhoea and flatulence are somehow uncomfortable to discuss and many people ignore these vital early warning signs until it is too late.

But there are other signs that may not be so obvious. For instance, if you find that your skin is constantly itching, dry and patchy then this can indicate a problem with the gut.

We have several ways to get rid of waste from the body including the lungs (where we lose carbon dioxide and water), the kidneys (urea, ammonia and salt) and the gut where various salts, nitrogenous compounds and gases are excreted...

...in addition, our skin is an important route for waste products where we excrete them via our sweat.

If the gut is compromised in its function then the other channels of disposal have to carry the excess work, and this means irritating chemicals can be voided in sweat and hence the itchy skin.

For the same reason bad breath can also be an indicator of an unhealthy gut.

Additionally though, when your breath becomes smelly it can be an early sign of liver disruption so worth getting checked out.

Some health conditions only affect the gut itself and of the most common presentations here are a few to consider:

1. Gastroesophageal Reflux Disease (GORD)

When stomach acid backs up into the oesophagus – a condition called acid reflux – you may feel a burning pain in the middle of your chest. It often occurs after big meals or at night, especially after rich or spicy food has been eaten.

While it's common for people to experience acid reflux and heartburn once in a while, having symptoms that affect your daily life or occur at least twice each week could be a sign of GORD.

If you experience persistent heartburn, bad breath, tooth erosion, nausea, pain in your chest or upper part of your abdomen, or have trouble swallowing or breathing, see your doctor.

Most people find relief by avoiding the foods and beverages that trigger their symptoms and/or by taking over-the-counter antacids or other medications that reduce stomach acid production and inflammation of the oesophagus. But some cases of GORD require stronger treatment, such as medication or surgery.

2. Gallstones

Gallstones are hard deposits that form in your gallbladder – a small, pear-shaped sack that stores and secretes bile for digestion.

Gallstones can form when there's too much cholesterol or waste in the bile, or if your gallbladder doesn't empty properly.

When gallstones block the ducts leading from your gallbladder to your intestines, they can cause sharp pain in your upper-right abdomen. Medications sometimes dissolve gallstones, but if that doesn't work, the next step is surgery to remove the gallbladder.

3. Celiac Disease

Celiac disease is a serious sensitivity to gluten, which is a protein found in wheat, rye, and barley. Eat gluten and your immune system goes on the attack; it damages your villi, the finger-like protrusions in your small intestines that help you absorb nutrients from the foods you eat.

Symptoms of celiac disease in children include abdominal pain and bloating, diarrhoea, constipation, vomiting, and weight loss. Symptoms in adults can also include anaemia, fatigue, bone loss, depression, and seizures.

Yet some people may not have any symptoms. The only treatment for celiac disease is to completely avoid eating gluten. Common alternatives to gluten include brown rice, quinoa, lentils, soy flour, corn flour, and amaranth.

4. Crohn's Disease

Crohn's disease is part of a group of digestive conditions called inflammatory bowel disease (IBD). Crohn's most commonly affects the terminal ileum, which connects the end of the small bowel and the beginning of the colon, but it can affect any part of the digestive tract.

Doctors aren't sure what causes the disease, but it's thought that genetics and family history may play a part. The most common Crohn's symptoms are abdominal pain, diarrhoea, rectal bleeding, weight loss, and fever.

5. Ulcerative Colitis

Ulcerative colitis is another inflammatory bowel disease like Crohn's.

The symptoms of ulcerative colitis are very similar to those of Crohn's, but the part of the digestive tract affected is solely the large intestine, also known as the colon.

If the immune system mistakes food or other materials for invaders, sores or ulcers develop in the colon's lining. If you experience frequent and urgent bowel movements, pain with diarrhoea, blood in your stool, or abdominal cramps, visit your doctor.

Medication can suppress the inflammation and eliminating foods that cause discomfort may help as well. In severe cases, treatment for ulcerative colitis may involve surgery to remove the colon.

6. Irritable Bowel Syndrome

Is your digestive tract irritable? Do you have stomach pain or discomfort at least three times a month for several months? It could be irritable bowel syndrome (IBS), another common digestive condition. An estimated 10 to 15 percent of people worldwide suffer from irritable bowel syndrome and signs of IBS can vary widely. You can be constipated or have diarrhoea, or have hard, dry stools on one day and loose watery stools on another. Bloating is also a symptom of IBS.

What causes IBS isn't known, but treatment of symptoms centres largely on diet, such as eating low-fat, high-fibre meals or avoiding common trigger foods (dairy products, alcohol, caffeine, artificial sweeteners, and foods that produce gas).

Friendly bacteria, such as the probiotics found in live yogurt, may also help you feel better. Stress can trigger IBS symptoms, so some people find cognitive-behavioural therapy or low-dose antidepressants to be useful treatments as well.

7. Haemorrhoids

Bright red blood in the toilet bowl when you move your bowels could be a sign of haemorrhoids, which is a very common condition.

Haemorrhoids are an inflammation of the blood vessels at the end of your digestive tract. They can be painful and itchy. Causes include chronic constipation, diarrhoea, straining during bowel movements, and a lack of fibre in your diet.

Treat haemorrhoids by eating more fibre, drinking more water, and exercising. Over-the-counter creams and suppositories may provide temporary relief of haemorrhoid symptoms. See your doctor if at-home treatments don't help; sometimes a haemorrhoidectomy is needed to remove haemorrhoids surgically.

8. Diverticulitis

Small pouches called diverticula can form anywhere there are weak spots in the lining of your digestive system, but they are most commonly found in the colon.

If you have diverticula but no symptoms, the condition is called diverticulosis, which is quite common among older adults and rarely causes problems. But if the pouches become inflamed, it's called diverticulitis. Symptoms include fever and abdominal pain. Obesity is a major risk factor for diverticulitis.

Mild diverticulitis is treated with antibiotics and a clear liquid diet so your colon can heal. A low-fibre diet could be the cause of diverticulitis, so your doctor may direct you to eat a diet high in fibre – whole grains, legumes, vegetables – as part of your treatment.

If you have severe attacks that recur frequently, you may need surgery to remove the diseased part of your colon.

9. Anal Fissure

Anal fissures are tiny, oval-shaped tears in the lining of the very end of your digestive tract called your anus. The symptoms are similar to those of haemorrhoids, such as bleeding and pain after moving your bowels. Straining and hard bowel movements can cause fissures, but so can soft stools and diarrhoea.

A high-fibre diet that makes your stool well formed and bulky is often the best treatment for this common digestive condition. Medications to relax the anal sphincter muscles, as well as topical anaesthetics and sitz baths (a small plastic bowl that is placed over the toilet and can be filled with water), can relieve pain; however, chronic fissures may require surgery of the anal sphincter muscle.

What each of these nine common presentations show though is how significant the 'embarrassing' symptoms are and why you need to ensure that you speak to your GP should you experience problems that persist.

THE DANGERS OF BEING TOO EMBARRASSED

Doctors are often amazed that patients will regularly delay coming to see them with gut related problems due to embarrassment – remember that doctors have to go to the toilet too.

Another issue that baffles the medical profession is that unlike virtually any other presentation, women are more embarrassed to discuss their digestive system function than men are. In the 2018 Love Your Gut survey they found that 1 in 10 women felt uncomfortable discussing gut health compared with 1 in 20 men.

This means that the biggest threat to maintaining the healthy function of our inner workings is ourselves – and that means there is real danger in the embarrassment factor.
This has to stop!

If you experience any of the following symptoms for more than a few days or for no good reason then do contact your GP:

- Abdominal pain before or after meals
- Painful feelings of fullness, bloating or flatulence
- Nausea or vomiting
- Heartburn or regurgitation
- Pain or difficulty in swallowing
- Loss of appetite
- Continued unexplained weight loss
- Bleeding when you pass a stool or blood and mucus mixed in with the stool
- Indigestion developing for the first time or in mid or later life
- Diarrhoea, constipation or any persistent alteration in bowel habit
- The passage of black tarry stools
- Pain when you pass a stool
- Generally feeling tired, lethargic, feverish or generally unwell in association with any abdominal symptoms

Please don't feel embarrassed by your gut, it is no different from any other system of the body – for instance compare it to the respiratory system.

You breathe in air from the outside world then it passes along a series of tubes into the body cavities. A series of reactions happens that allows the body to take out of the air what it needs (oxygen) and dump out products that it doesn't want (carbon dioxide and water) and you vent the remnants out...

...think about it and that is what happens in your gut. You take in food that passes along a series of tubes. Inside the body the reactions extract what we need (carbohydrates, fats and proteins) and dump out what we don't need (salt, bile and water) and the remains are vented.

What you flush down the toilet is just the remains of the fish and chips you had for last night's dinner that your body doesn't need...

...now what is embarrassing about that?

KEEPING YOUR GUT HEALTHY

So, by now you should be developing an understanding of some of the anatomy and physiology of the gut – here's a recap:

- A muscular tube that passes from the mouth to the anus
- Has areas which physically and chemically break down food and allow the body to absorb what it needs
- Needs to be protective to stop bacteria, viruses, fungi and noxious chemicals getting into the bloodstream
- Allows the body to get rid of compounds it doesn't need
- Contains billions of helpful bacteria and other micro-organisms which improve digestion and manufacture compounds we need to live

Whenever the topic of a healthy digestive system comes up it is the last point which tends to get laboured, particularly by the companies who want us to buy their sweetened yoghurts which they call probiotics.

In reality, these milky drinks are not going to help us stay healthy at all – anymore than standard plain yoghurt would.

A 2014[1] study by researchers from University College London demonstrated how none of the most commonly bought probiotic yoghurt drinks had any beneficial effects on the bacterial population of the gut at all – with most of the bacterial content of the products being destroyed as they passed through the stomach.

The resulting surviving organisms were too few to make any contribution to the large bowel flora. In fact, where your natural biome has been depleted by antibiotics or chemotherapy the only sure way to recolonise it with good bacteria is to receive a faecal transplant from a healthy donor. This involves taking a sample of the bowel content from the donor and placing it into the recipient's bowel via the anal canal...

...not pleasant but this can be a lifesaving procedure.

One of the other aspects of good gut health is ensuring that the protective mucus that covers the walls of the system are intact as this is what prevents the potentially damaging bacteria and noxious chemicals from getting out of the gut tube and into the blood stream.

Unfortunately, many commonly taken painkillers can affect either the mucus itself or the mobility of the gut wall meaning that the contents stay in contact with the lining of the gut for longer than it should.

Drugs from the family known as Non-Steroidal Anti-Inflammatories (NSAIDs) which includes ibuprofen, naproxen and even aspirin reduce the amount of mucus produced and this can lead to ulceration of the stomach and severe indigestion.

By removing the mucus protection the risk is that undesirable organisms and chemicals can access the body – something which has been called a Leaky Gut Syndrome, and many scientists are now convinced that this might lie behind conditions such as Fibromyalgia, Myalgic Encephalomyelitis (ME) and may even contribute to some arthritic conditions.

Other painkillers (that fall into the class of opiods/opiates) such as co-codamol, morphine and fentanyl which can be given for moderate to severe pain, have the side effect of paralysing the smooth muscles of the gut wall leading to sickness, constipation and changes in gut flora.

1 Fredua-Agyeman, M., & Gaisford, S. (2014). Comparative survival of commercial probiotic formulations: tests in biorelevant gastric fluids and real-time measurements using microcalorimetry. Beneficial microbes, 6(1), 141-151.

THE GOOD LIFE GUIDE TO A GOOD GUT

In this report we have covered a lot of information about the gut and conditions that can affect it, but you also need to consider how you can keep your system working well, and for the most part the gut responds best to good food.

Plenty of fibre, good sources of energy and the right amount of minerals and trace elements such as silicon, magnesium and copper will ensure that your gut and the all-important microbes that live in it will thrive.

There are a number of supplements that are also sold as remedies or protectors of the gut, however, many of them rely on sugars or milk proteins as carriers which aren't necessarily a good thing. One of our favourite and most popular remedies is a product based upon clay.

Now this might seem a very odd thing to consider when it comes to a healthy gut, but clay is what virtually every wild creature uses for stomach upsets and as a way to protect themselves from potentially harmful foods.

Don't take our word for it, read what Science Direct says:

> *"Geophagy – the consumption of soil, ground-up rock, termite mound earth, clay, and dirt – is extremely common in mammals, birds, reptiles, and invertebrates. The habit is still found among many contemporary indigenous peoples, including the Aboriginal people of Australia and the traditional peoples of East Africa and China (Abrahams, 1996).*

> *"Geophagy is far more common in animals that rely predominantly on plant food and is more common in the tropics. Historically, the explanation for geophagy was that animals ate earth for the purpose of gaining minerals, such as salt (sodium chloride), lime (calcium carbonate), copper, iron, or zinc. Certainly, wild animals do seek minerals from natural deposits, but a need for minerals is by no means a universal explanation for geophagy. There are many cases in which the soils eaten are not rich in minerals; they sometimes even have lower levels of minerals than the surrounding topsoil. Recent geophagy research indicates that the small particle clay profile of soil is often the prime reason for geophagy.*

"In the body, clays can bind mycotoxins (fungal toxins), endotoxins (internal toxins), manmade toxic chemicals, and bacteria, and they can protect the gut lining from corrosion, acting as an antacid and curbing diarrhoea. In short, clay is an extremely useful medicine."

www.sciencedirect.com

So, it makes logical sense that clay should be a vital component of any gut remedy, yet so few utilise it. [Propargile] blends clay with Propolis and pollen to provide an effective relief from bloating, heartburn and stomach pains. http://www.thegoodlifeletter.com/promos/propargile942015/

Finally, if the information contained in this report has made you hungry to discover more about the gut and how to keep it healthy then there is more information contained within a very good book called The [Good Gut Guide] which covers an amazing array of information.
http://www.thegoodlifeletter.com/promos/good-gut-guide/

Lastly, please sign up for Ray's Good Life Letter where you will receive a twice-weekly newsletter by email that will keep you entertained and informed about the world of natural health.