



Health Fact Sheet

Digestion and Leaky Gut

Quick Guide to Good Digestion

First and foremost this means not eating on the run! When we are tense and stressed our body is not in 'rest and digest' mode, and will not cope well with anything you put into it. Take a few moments to calm down and take a few deep breaths, and relax.

Once you have got your body into the right state for healthy digestion you are ready to sit down and eat, and your body will be able to make the most of the nutrients you feed it.

Good digestion starts in the mouth – the process of chewing mixes the enzyme ptyalin with the food and begins to break it down. The more you chew, the better the start that is given to the digestion process. It also slows down the rate at which you eat food, and gives you time to focus in on what you are doing. It means as well that there is more time for the brain to send the stomach a satiety signal when it has had sufficient if you eat more slowly – an important point if you are trying to lose weight.

Once food has been swallowed it goes to the stomach where it is mixed with stomach acid and further enzymes to begin to break it down. It is mainly protein digestion that takes place here, and high levels of stomach acid are necessary to this task. High stomach acid levels are also important to ensure that molecular bonds of mineral nutrients can be broken open in order to be used. Low levels of stomach acid will not only impact protein and mineral digestion, but also contribute with problems further on down the digestive tract, as high acid levels trigger pancreatic enzyme secretions and prepare bile. Many of you may not consider this aspect of digestion at all, but it is the most common problem that underlies indigestion and digestive problems – low stomach acid.

Some minerals are absorbed through the stomach lining, as is aspirin, alcohol and some water. The vast majority of absorption takes place in the small intestine however.

Once food has been sufficiently digested in the stomach it is released into the upper part of the small intestine – the duodenum – where it is mixed with pancreatic enzymes and bile to neutralise out the high acid. The pancreatic enzymes deal mainly with the digestion of carbohydrates and fats, although a little protein digestion continues here.

As food passes through the coils of the small intestine nutrients are absorbed through the intestinal walls into the blood supply on the other side. From here they are taken to the liver, where the liver works its magic to package everything up and send it out through the general circulation to the cells for use.

Between the small intestine and the colon sits the ileo-cecal valve, which is a one-way valve allowing food to pass through into the colon or large intestine, and not re-enter the small intestine. From here

on it is primarily treated as waste, although the body will continue to reclaim water and any useful substances. The priority is to move it through the colon as quickly as possible and eliminate the waste efficiently.

Where it all goes wrong!

It all seems very straightforward doesn't it, but there are a number of ways in which the digestive processes go wrong, that then have a big impact on our health long term – and also our weight. So let's look at some of the common problems:

Low Stomach Acid

As has already been said, this causes problems with protein and mineral digestion as well as impacting further down the gut. Common signs of low stomach acid are heartburn, acid reflux, belching or burping, bloating after meals, feeling like food 'sits' in the stomach hours after a meal and undigested food in your stools. Simple ways to begin to change this are to take lemon juice or apple cider vinegar before a meal, use a digestive bitters formula to stimulate good bile and hydrochloric acid production and to take a digestive enzyme formula. In the odd instance where this fails to do the trick you need to see a nutritionist for additional help.

Bloating, Wind, Discomfort, Smelly Stools

These are all signs that food is not being properly digested, either in the stomach, or the small intestines, or both! It can also be a sign of gut dysbiosis, or poor levels of gut bacteria and a fungal/yeast infection called candida in the gut. Take the candida questionnaire to see if it is likely to be this. If so the book 'Yeast Free Forever' will lay out the regime you need to rid yourself of this pernicious and potentially chronic problem. This is available through the wakeuptohealth.org site.

If you are free of candida, the solution is simple – the digestive enzymes with your meal, and a multi-strain, potent probiotic supplement for several months to get the gut back into balance!

Constipation

Transit time through the gut should be no more than 24 hours maximum, from eating a meal. Many people have slow transit time even if they go to the loo every day, and are therefore constipated. How can you tell if you don't have hard, difficult to pass stools and go every day? Simple. You do the transit test. Eat either white sesame seeds or sweetcorn, and keep an eye out in the loo for when they appear in your stool – these foods are famous for not being digested! Time how long it takes for the bulk of these foods to show and that will give you your transit time.

If transit time is slow or you know you suffer from constipation (remember you should be going to the loo **at least** once a day – if your normal is every 2 – 3 days you're constipated!) then the number one thing to do is to drink more water. This is the biggest cause of constipation. If you are already drinking plenty of water, the second biggest cause is a lack of fibre in the diet. Taking a fibre supplement, or upping considerably your intake of fibre-rich foods such as fruit and vegetables will help with this (if you are following this eating plan properly you should be getting plenty!). Other potential issues are stress, lack of magnesium, intestinal inflammation, lack of muscle tone, depression, poor thyroid function and

some drugs such as codeine-based pain medications, some antidepressants, antihistamine, blood pressure and heart medications.

Improving transit time is important to overall health, and to cleansing the body efficiently – toxicity can and does contribute to weight issues as we shall see in Week 7.

Parasites

Most of us have these in some form or other, but are unaware of it. They can potentially have a big impact on health and cause a lot of 'niggly' health issues. It is wise to take some anti-parasitic herbs a couple of times a year – an essential if you have pets as you are far more likely to suffer this problem (travelling abroad can also put you at risk, as can eating pork meat...). See the Parasite Programme handout.

Leaky Gut

What is a leaky gut? This is where the cells which make up the lining of the small intestine begin to lose their integrity and food particles that are not fully digested or broken down, as well as pathogens, can begin to slip through the gut lining into the blood stream. Not only does the lining of the gut become inflamed and sore, but these 'invaders' can set up an immune response in your system, leading to potential food allergies and intolerances as well as other problems. So this has the ability to become quite serious.

Causes of leaky gut syndrome include:

Poorly digested foods	Use of antibiotic medications
heavy metal toxicity	Alcohol use
Birth control pills	Use of antacids
Chlorinated water	Painkillers
High homocysteine levels	Parasites
Food additives	Food allergies
Yeast infections	Constipated, toxic bowel
Gluten/wheat	

This condition will also impact the ability of the body to properly absorb the nutrients it needs and can lead to nutrient deficiency with all the knock-on effects that implies. Many health issues start here.

So what can you do? You need to soothe and heal the gut lining, improve digestion and bring things back into balance as quickly as possible. Herbs such as slippery elm and aloe vera can be very good here and the supplement powder l-glutamine needs to be taken. In addition a digestive enzyme should be taken with every meal, and Omega 3 and an antioxidant supplement taken to take down inflammation. A probiotic supplement to re-populate the bowel with good bacteria is also essential.

There are a variety of products that can be used on the market so explore your options.

Leaky Gut Regime

To be taken in addition to maintenance programme:

Aloe vera juice

L-glutamine

Probiotic

Digestive enzymes

Antioxidant formula

Mineral or trace mineral supplement

Vitamin D

Bovine colostrum can also be of great benefit in improving permeability of the gut quickly. There are one or two websites offering this.