

# Leaky Gut Syndrome – A Modern Digestive Disorder

by Dawn Mellowship

Millions of people worldwide are afflicted with digestive problems; many may not even realize the strain their body is under. Often these problems can go undiagnosed, without investigation, be misdiagnosed, or even if they are investigated, modern medicine fails to find an answer to the illness, commonly treating the symptoms, not the cause.

Many people are completely unaware that 70% of our immune system is located around the digestive system.<sup>1</sup> If your stomach is unhealthy, the rest of your body can potentially suffer as well. Our modern lifestyles are frequently highly stressful, fast paced and can involve regularly eating salty, processed foods, convenience foods, excessive alcohol consumption, using recreational drugs and relying heavily on prescription and non-prescription drugs to rid us of our illnesses. All this can lead to a dysfunctional digestive system and thus an unhealthy body. If our food is not digested properly, our cells lack the nourishment they require for optimal functioning.

If your digestive system is persistently stressed, your body may start to attack itself, you may potentially develop Leaky Gut Syndrome. If you have arthritis, asthma, an autoimmune disease, Crohn's disease, coeliac disease, ulcerative colitis, chronic fatigue syndrome, digestive problems, allergies, there is a chance you may also have a 'leaky gut'!

## Function of the Gastrointestinal Tract

The digestive tract is basically an extended tube linking the mouth to the anus. See image overleaf. As we swallow our food, it travels through the oesophagus into the stomach. Enzymes and hydrochloric acid are then released to break down proteins in the food. Hydrochloric acid also destroys harmful bacteria. The churned up food enters the small intestine, which is around five metres long. The most vital function of the small intestine is allowing nutrient absorption to take place via tiny microvilli (finger-like projections), which create a vast surface area for absorption of nutrients such as glucose, amino acids and

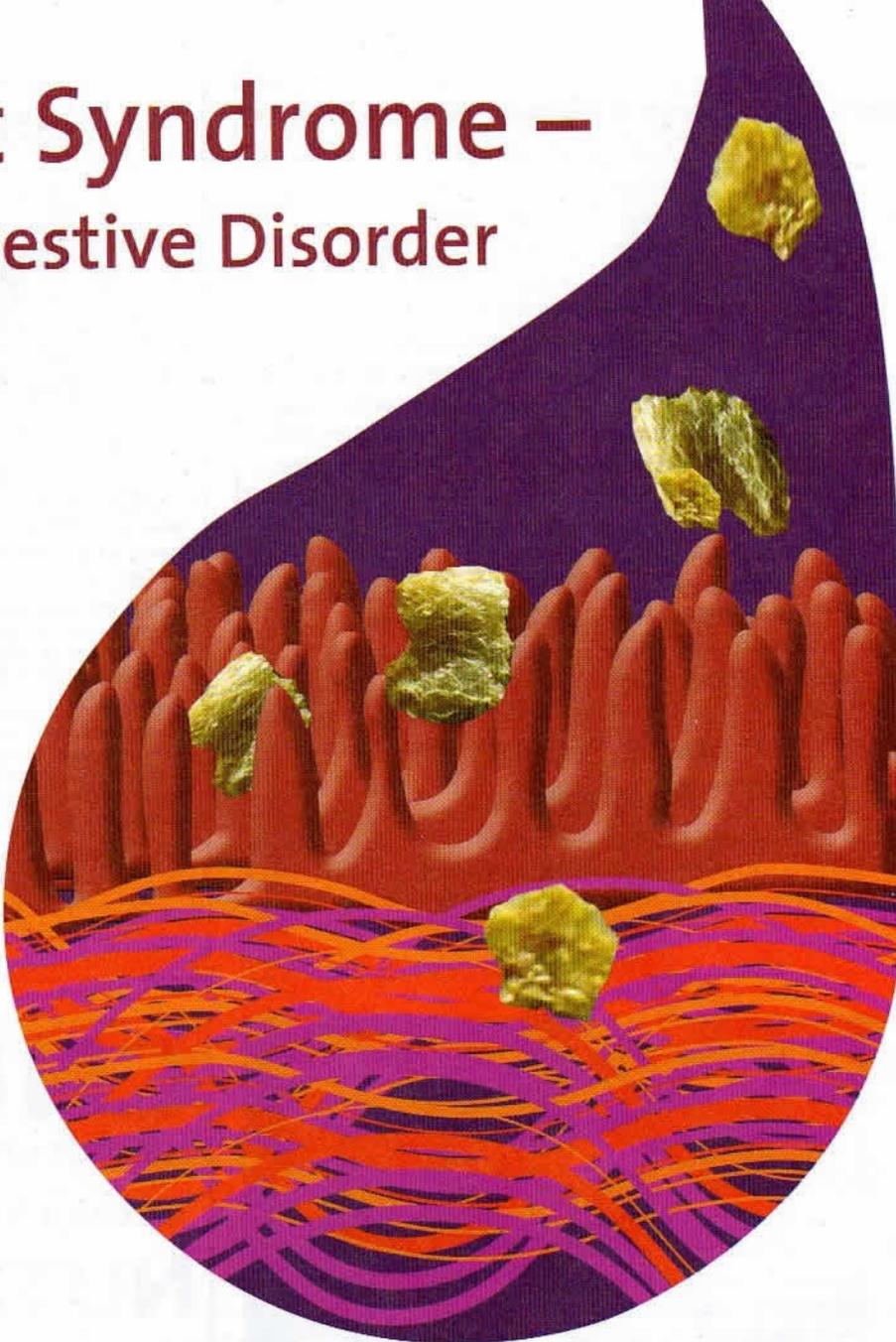
electrolytes. In the duodenum or upper small intestine, digestive juices from the pancreas are released through a duct to break down protein, fats and carbohydrates. Sodium bicarbonate is contained within the fluid to neutralize stomach acid. Bile is produced to help break down fats. The small intestine also serves as a barrier to prevent bacteria, tiny food particles and toxins from being re-absorbed into the bloodstream. Undigested food passes into the large intestine and after re-absorbing water used in digestion, expels undigested food and fibre. If your digestive system becomes compromised in any way, this can have repercussions for all your other bodily functions and organs.

## What is Leaky Gut Syndrome?

The official definition of Leaky Gut Syndrome is *an increase in permeability of the intestinal mucosa to luminal macromolecules, antigens, and toxins associated with inflammatory degenerative and/ or atrophic mucosa or lining.*

Described more simply, large spaces arise between the cells of the gut wall permitting bacteria, toxins and food to leak into the bloodstream, causing a range of destructive bodily reactions, which if left untreated, can result in chronic illnesses.

Leaky Gut Syndrome results in inflammation of the intestinal lining, and the microvilli (serving as a point of nutrient



absorption) become damaged. The damaged microvilli are then prevented from creating the appropriate enzymes and secretions needed for a healthy digestive system and effective nutrient absorption.<sup>2</sup>

Desmosomes lining the intestines are usually sealed, bonding adjoining cells together to create a structure strong enough to prevent large molecules from passing through. However, the inflammation weakens this structure, facilitating the passage of larger molecules. The immune system in response generates antibodies (a protein utilized by the immune system to locate and attack foreign objects) to fight the molecules, which it recognizes as foreign invaders or antigens (substances capable of triggering the production of antibodies).

In a naturally healthy individual the small intestine only allows the breakdown products of digestion into the bloodstream whilst excluding large molecules, microbes and toxins.<sup>3</sup> However, an over-worked immune system leads to the leakage of ever increasing amounts of toxic substances into the liver, exhausting the ability of the liver to detoxify the body.

When the liver can no longer cope with the level of toxins, it pushes them back into the bloodstream. The circulatory system responds by driving the toxins into the connective tissues and muscles where the body stores them in order to prevent extreme damage to the organs. Being so overworked, the liver doesn't get the chance to return and cleanse the tissues of these toxins.

As this process carries on over time, substances bigger than particle size such as undigested food, potentially toxic molecules and bacteria pass through the weakened cell membranes. When these move into the bloodstream they activate the antibodies to fight the foreign invaders (or antigens). Cytokines then act as messengers alerting the white blood cells to fight the particles that have managed to escape through the intestinal lining.

Human tissues possess antigenic sites resembling those on food, bacteria and other toxins. With Leaky Gut Syndrome, the antigens can enter numerous tissues and as a result of this process, toxic oxidants are produced, causing inflammation and allergic reactions through the entire body. Eventually, antibodies are continuously and automatically built up against the particular proteins in formerly harmless foods, and lie in wait to attack the antigens whenever they

enter our bodies, leading to the allergies and inflammation becoming chronic.

Leaky Gut Syndrome can lead to malnutrition, as the production of large quantities of toxic chemicals in the body inhibits the absorption of essential vitamins, minerals and amino acids. Bacterial translocation also takes place when the mucus layer coating the digestive tract that forms a barrier against foreign substances, becomes damaged. The bacteria originally residing in the intestine start to inhabit other parts of the body as well, due to the increased intestinal permeability. This can increase our risk of developing viruses and parasitic or Candida infections.

Leaky Gut Syndrome is an extremely chronic, debilitating condition that can have a wide range of causes and symptoms and has been linked with many conditions as you can see below:

#### Causes of Leaky Gut Syndrome

- Hypochlorhydria (deficiency in hydrochloric acid produced by the stomach)
- Candidiasis (Candida fungi infection)
- Dysbiosis (bacterial imbalance in the gut)
- Alcohol;
- Coeliac Disease; • Allergies
- Poor diet (especially eating of processed, convenience foods, artificial sweeteners, high sugar, salty foods)
- Stress
- Parasitic infection
- NSAIDS (Non steroidal anti-inflammatory drugs); • Steroids
- Cytotoxic drugs
- Hormones (such as birth control pills)
- Enzyme deficiencies

#### Symptoms of Leaky Gut/Intestinal Permeability:

- Abdominal pain
- Asthma
- Chronic joint pain
- Confusion; • Mood swings
- Fuzzy/foggy thinking
- Indigestion; • Bloating
- Poor immunity
- Recurrent vaginal infections
- Skin rashes;
- Diarrhoea;
- Poor memory
- Shortness of breath
- Insomnia;
- Fatigue;
- Anxiety
- Anaphylactoid reactions
- Brittle nails • Hair loss
- Constant hunger pains

Leaky Gut Syndrome has been associated with the following conditions:

- Autoimmune disease
- Coeliac disease; • Crohn's disease
- Environmental illness
- Hives; • Acne
- Allergies;
- Inflammatory joint disease / arthritis
- Intestinal infections • Giardia
- Pancreatic insufficiency
- Ulcerative colitis • IBS
- Chronic fatigue • Fibromyalgia
- Multiple Sclerosis
- Chemotherapy;
- Multiple Chemical Sensitivity
- Alcoholism;
- Food allergies and sensitivities
- Liver dysfunction;
- Rheumatoid arthritis
- Psoriasis • Eczema

#### My Leaky Gut Story

For many years I was afflicted with a problematic digestive system. One night in bed when I was twenty years old, I could feel my stomach persistently gurgling and vibrating and I had great difficulty getting off to sleep. After weeks of contemplating what could be causing this phenomenon, I became concerned and headed to my local doctor. The doctor briefly listened to my concerns and then without examination informed me that I had Irritable Bowel Syndrome and sent me away with a barely useful leaflet.

As the years went on my stomach pains worsened and I developed intolerances to certain foods. Unfortunately at the time I didn't relate my digestive disorder to my lifestyle, but with hindsight I can see that I sowed the seeds of an incredibly weakened immune system and sacrificed my health. I trained at the gym heavily at the time, spent years on faddy diets, periods taking so called 'safe' herbal diet pills, drinking too heavily at weekends, smoking and occasionally taking recreational drugs.

Eventually after many trips to the doctors with no suitable diagnosis, I took it upon myself to take a Reiki healing course to see if that could help with my stomach problems and also back problems I had developed from over exercising. The course dramatically changed my life physically, emotionally and spiritually and led to me becoming a Reiki healer and teacher myself. However, as much as the healing helped it became plainly apparent that all the healing in the world won't fix your body if you are putting the wrong substances inside it for fuel in the first place. I

contemplated the way I had treated my body in the past and realized that I needed to make dramatic lifestyle changes to get myself back to optimum health.

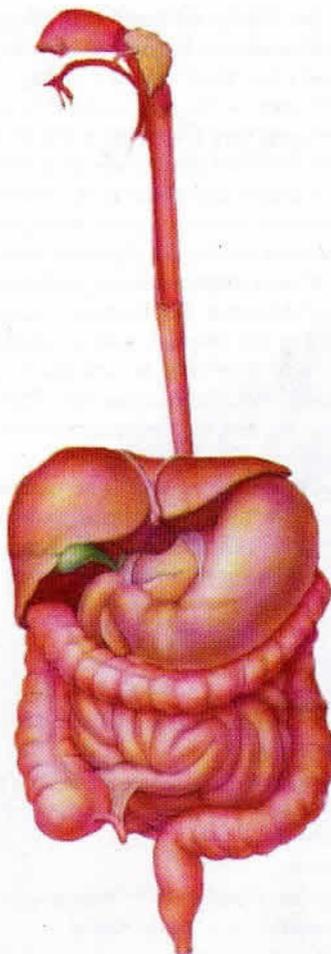
After learning Reiki I became vegan and put time and effort into researching what my condition could be. I found information through internet sites and after reading Gillian McKeith's *You Are What You Eat* I eventually visited a nutritionist in Harley Street who recommended I get tested for Leaky Gut Syndrome. Through reading books about Leaky Gut and after discovering that doctors currently have no way of diagnosing it, I discovered a medical lab where leaky gut tests are carried out and the results sent to your doctor. The test is called a PEG test. It is relatively inexpensive and involves drinking a solution with a known quantity of eleven different size glucose particles in it. Urine is collected for six hours after drinking the solution and is sent back to the lab. This gives them a measure of how much of each sized particle is leaking from the gut. The test confirmed that I did have leaky gut, meaning that food particles were passing through my gut wall and into my bloodstream contributing to allergic reactions in my body, chronic fatigue and joint and muscle pains.

#### Be Careful What You Eat!

My research had shown me that the main way to deal with leaky gut is through diet and that it is certainly not just an illness caused by stress or anxiety, though of course that very often makes it worse.

I am now on a purely organic and vegan diet. I drink plenty of fresh fruit and vegetable juices, which are easily assimilated by the body due to their molecular nature. I also avoid eating the foods that cause allergic reactions. There are of course many 'diets' that can be used but I am loathe to call them diets. If you have Leaky Gut you have to change your whole lifestyle to get better. There really are no easy answers or quick fixes. It takes determination and hard work.

People suffering with Leaky Gut Syndrome or any other digestive disorder should consider eating organic, mainly vegan foods and avoiding environmental toxins for prolonged periods. Some people have to avoid certain foods and toxins completely. You have to think about every aspect of your life. Computers give off EMF radiation as do other appliances, busy streets are polluted by traffic fumes, non-organic foods are seriously lacking in



nutrients because they are grown in mineral deficient artificial fertilizers then sprayed with pesticides, herbicides and fungicides. Bath and skin products contain potentially dangerous parabens and sodium lauryl and laureth sulphates that have been linked to cataracts and nitrate absorption (nitrates are carcinogens of cancer causing substances). Even some people can be very toxic to you and draw your energy away from you or offer nothing but negative responses; these sorts of people need to be avoided too while you are unwell. Having this kind of condition requires that you are conscious about every aspect of your life. This may seem incredibly hard and you may feel like you are making huge sacrifices. However once you have changed your diet and adopted a healthy, positive lifestyle that nourishes your body, mind and soul, you will never want to go back to your previous lifestyle and will feel that you have gained so much personal growth and knowledge, as well as a new healthy body of course!

It can take four-six months or even up to two years to get over Leaky Gut Syndrome, but there really is nothing

more important than your health and if that is not worth saving then what is?

You may find when you change your diet that you have mood swings and temper flare-ups temporarily, as the toxins depart from your body. It is reassuring though to know that you aren't going mad and that there is something you can do to cure yourself of chronic degenerative pain.

Of course, if you have any stomach disorder or illness you must consult a doctor and never self diagnose. Some doctors are very open-minded; mine is looking into Leaky Gut Syndrome and is always willing to listen and refer me for any tests I ask for. If you follow any dietary plan you should discuss it with your doctor first and see a registered nutritionist (BANT) or practitioner. A professional practitioner can make sure that your body is getting all the correct nutrients and the right balance of protein and carbohydrates, especially as you may have to cut out the foods causing allergies and intolerances. If you can find a practitioner who has been through Leaky Gut Syndrome themselves, it will be additionally helpful for you to talk to someone who has had similar experiences to you and knows exactly what they are dealing with. The most important thing to remember is that there are people out there who can help you and are willing to help you. You are not alone.

#### References

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#### About the Author

Dawn Mellowship is a Reiki practitioner/ teacher, freelance journalist and web designer who is a member of the Reiki Healers and Teacher's Society. Dawn suffered from digestive disorders and related problems for many years and has set up a website as a resource for fellow sufferers. She may be contacted on enquiries@thehealingco.com; www.leakygut.co.uk; www.thehealingco.comJane