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## IMPORTANCE OF THE DIGESTIVE PROCESS

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**H**ave you ever wondered why so many people these days are having ongoing issues with their food and digestion? A lot of this has to do with the amount of processing our foods are now subjected to, the average Western diet has moved far away from a natural wholefood approach. If we want to live a long and healthy life we have to provide the right fuel to support our optimal functioning. Food is vital for life because it's the source of energy that drives every reaction that occurs in the cells of our bodies and is needed to build, repair and regenerate body tissue. We all want to feel vibrant and energised as we age and it all comes down to how we choose to nourish our body through the right nutrition.

*What if you eat organic foods with minimal processing and you still experience digestive issues?*

This is where it gets interesting. To get the most out of a nutritious diet the function of the digestive system needs to be considered. The gastrointestinal (GI) tract is a continuous tube that extends from the mouth to the anus. Organs of the GI tract include the mouth, oesophagus, stomach, small intestine and large intestine. The accessory organs of the digestive system include the teeth, tongue, salivary glands, liver, gall bladder and pancreas. There is a complex and long chain of events that contribute to how food is digested,

absorbed and eliminated. If the functioning of any organ within the GI tract is compromised the whole process becomes less efficient. Contributing factors could include a history of poor dietary choices, illness, medications or lifestyle factors such as alcohol consumption and smoking.

The following are the some basic functions of the digestive system and tips on how you can support each function to ensure optimal digestion.

## 1. INGESTION

This is the process of taking food and liquids into the mouth. Before we even start eating, the sight and smell of the food has stimulated saliva to be released. This moistens our mouth ready to start the digestive process. Our body needs to be in a parasympathetic state to digest our food, this means we need to stop, sit, chew and relax while eating.

## 2. SECRETION AND DIGESTION

Cells within the walls of the GI tract and the accessory organs secrete many litres of water, acids, buffers and enzymes every day to aid in digestion. Saliva begins the breakdown of carbohydrates and fats within the mouth. The stomach secretes gastric juice which contains hydrochloric acid, pepsin, intrinsic factor and gastric lipase. All of which initiate the breakdown of protein and fats. Hydrochloric acid (HCl) breaks down protein and kills off any non-beneficial bacteria. Symptoms of low stomach acid include: bloating and belching

straight after meals, heartburn, indigestion, diarrhoea, constipation and undigested food in the stool. To boost levels of HCl consider taking 5ml of apple cider vinegar in water before meals and adding half a cup of fermented vegetable to meals. Zinc is important in the production of HCl and you can boost your intake through wholefoods such as pumpkin seeds, cashews and grass fed meats, salmon, mushrooms and oysters.

The liver is a vital accessory organ in the process of digestion. It has many functions which include carbohydrate metabolism, blood sugar regulation, detoxification, lipid

metabolism and production of bile. To ensure fats are broken down, absorbed and healthy cholesterol levels are maintained, the gall bladder must have adequate amounts of bile available for release. Foods to help improve bile production include, artichoke, radish, lemon, limes, garlic and celery.

### 3. ABSORPTION

The main events of digestion and absorption occur in the small intestine. The mucosal layer of the small intestine features finger like projections called villi. The villi contain an outer cellular layer where the microvilli are located.





Enterocytes are the absorptive cells found on the microvilli. Our good gut bacteria adhere to these cells and exert their immune protective functions. The health of the gut mucosa and levels of good gut bacteria are vital to our immune function and overall health. If non-beneficial bacteria are able to adhere and thrive, then issues such as bloating, gas, food intolerances, diarrhoea and constipation can result. To improve gut bacteria, foods such as fermented vegetables, kefir or kombucha can be added to the diet.

#### 4. ELIMINATION

The process of elimination of wastes will occur in the large intestine. The mucosal layer of the colon features bacteria that finish the job of absorption and get the wastes ready to be eliminated. Butyrate producing bacteria represent a positive functional group of bacteria. Butyrate is the major energy source for colonic epithelial cells (colonocytes) and is involved in the maintenance of colonic mucosal health. Butter is a food source for butyrate. Consuming organic butter from grass fed cows can improve the health of colonic mucosa.

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Not often do we give thought to the amazing events going on within our own bodies. The health of our digestive system is vital to every

other body system receiving the nutrients needed for optimal functioning. It is also how our bodies get rid of waste and toxins. If living a long healthy life is important to you, consider how you can support the functions of digestion and embrace a nourishing whole food diet to discover greater health potential.

#### Further reading

Grabowski, R Sandra & Tortora, J Gerard (2000) *Principles of Anatomy and Physiology*. 9th ed. Wiley & Sons, USA.

Govbach, S (1996) *Microbiology of the Gastrointestinal Tract*. In: Baron S, Editor. *Medical Microbiology* 4th ed. Galveston, TX.

**Emma Tippet** completed her Bachelor of Health Science (Naturopathy) in 2004 at the Australian College of Natural Medicine. Growing up in rural Victoria within a household that embraced a natural approach to health and a love for wholefood nutrition, Emma has combined this foundation with a passion for continued learning to help others reach greater health potential. Emma practices in Surrey Hills, Victoria, Australia and can be contacted on 1300 214 425 or via her [website](#).