

## Respecting Your Digestive System - Part 2

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In PART 1 of "Respecting Your Digestive System" we learned about the health-building benefits of proper digestive *function*. **Part 2** focuses on the myriad of problems that can arise from the *dysfunction* of digestion. Common, yet abnormal symptoms such as bloating, belching, sleepiness after meals (to name just a few), shouldn't be considered so normal after all. Because such high numbers of the population are experiencing these digestive pangs, they are now viewed as naturally occurring digestive expressions, when in fact, they are sure signs that something in the process of digestion has gone wrong.

### The Dysfunction of Digestion - An Overview

The Nutritional Therapy Association states that digestion is a "north to south process". What goes on in the first stage of digestion has a direct influence on the digestive processes that follow. For example, if we do not chew our food properly, **the brain** is not alerted to activate the correct digestive processes. Saliva production is inhibited and the food will be left partially digested, placing a huge burden on the stomach to come in and *try* save the day in the next stage of digestion. The brain also has to perceive that we are in a state of relaxation (parasympathetic mode of the Autonomic Nervous System or [ANS](#)) to allow digestion to begin. If you eat when stressed (sympathetic mode of the ANS), digestion will not begin at all or will cease to continue if already in progress. Blood supply is transferred to the brain and limbs to help one "escape" the perceived danger or stress. The foods now "stuck" in the stomach begin to putrefy, rancidify and ferment. Hence, one may experience bloating, belching, acid backwash into the esophagus, possible overgrowth of *H. pylori* (the ulcer causing bacteria) and an increased risk of stomach cancer.

Since carbohydrate digestion begins in **the mouth** with salivary amylase, we need to make sure the [parotid glands](#) - the major of three salivary glands - are adequately producing saliva. Your dental hygienist should be able to "milk" these glands to see if they are functioning properly. The dysfunction of the parotid glands will put undo stress on the pancreas to produce more pancreatic amylase to finish breaking down maldigested sugars and starches. Improperly digested carbohydrates stress the body's blood sugar handling abilities and allow partially digested starches to enter the colon and the bloodstream, feeding candida and a host of other opportunistic bugs!

Optimal protein digestion takes place in the presence of a highly acidified stomach with the added action of pepsin. During digestion, the pH of **the stomach** should fall to a pH of 0.8 to 1.5 - nearly pure acid! This activates pepsinogen (the precursor and inactive form of pepsin) to convert into pepsin to begin protein digestion. HCl and pepsin are your front-line defenders against food-borne and other dangerous pathogens, which are of protein in nature. If food (now in a liquid form called "chyme") leaves the stomach too *alkaline* due to inhibited HCl production, the pancreas will not release its digestive juices needed in the next phase of digestion. An acidic pH is needed to deliver the hormone message (via secretin) to **the pancreas** to release its juices, protein-digesting enzyme (protease) and bicarbonate to try and finish protein digestion and to raise the pH of the highly acidic chyme. Duodenal ulcers can result from this dysfunction. HCl production is negatively impacted by the over consumption of alcohol and carbohydrates (refined and unrefined), overeating in general, nutrient deficiencies, food allergies/intolerances, and stress.

Fat digestion takes place in the presence of bile released from **the gallbladder** to digest/emulsify fat molecules into fatty acids. If the bile isn't flowing, you cannot absorb your fatty acids properly! The presence of **healthy** fats in the duodenum triggers the gallbladder to constrict, squeezing free-flowing bile down the common bile duct into the duodenum. Therefore, it is safe to say that a low fat diet or a diet containing poor quality fats will result in bile that is old and thick, causing the gallbladder to become sluggish and upset. Once again, **the pancreas** will have to work even harder by releasing copious amount of pancreatic lipase to *try* and finish fat digestion. Hormonal imbalances, poor cell membrane health, fatigue, and an acidic systemic pH are all a result of poor fat digestion and absorption.

**The small intestinal tract** will now bear the brunt of all this dysfunction thus far. Leaky gut, a compromised condition of the lining of the small intestines, is one major imbalance that can set in from poor digestion. The villi and microvilli on the surface of this lining are damaged resulting in malabsorption and severe systemic nutritional deficiencies. Undigested food particles enter the bloodstream and food allergies and intolerances are born via antibody formation from the active response of **the immune system**.

**The colon (large intestines)** is now burdened with the leftover, undigested foods. The probiotics (beneficial bacteria) living in the colon are greatly disrupted by this toxic by-product of poor digestion. Their presence ensures that the colon will be nourished; their absence ensures a weakened, inflamed colon where imbalances such as IBS, ulcerative colitis, celiac disease, and Crohn's disease can take hold. Ladies (and gentlemen, too), breast tenderness is a primary indication of a colon that needs some attention.

### **Give your belly a break!!**

1. Eat in a relaxed environment. Don't eat on the go!
2. Smell your food before taking the first bite. Your brain will be alerted to start digestive processes.
3. SLOWLY chew your food VERY well! Insalivate carbohydrates well and thoroughly chew proteins.
4. Avoid drinking soda and other carbonated drinks while eating. The bicarbonate used to make these drinks bubbly will inhibit HCl production. Broths and soups are digestive aids as well as filtered, room temperature water with a generous squeeze of lemon. (no more than one cup per meal)
5. Avoid drinking chlorinated water. The friendly bacteria in your digestive tract will perish in the presence of chlorine! They are your digestive helpers! Drink at least half your body weight in water per day. Add more if you are drinking caffeinated beverages. Remember, digestion is a process of [hydrolysis](#).
6. Don't overeat. Leave room for digestion to avoid *indigestion* and sleepiness after meals.
7. Eat fruits alone. They ferment quickly in the digestive tract. Do not combine fruits with other foods except dairy products.
8. Incorporate [cultured vegetables](#) into each meal. They are a fantastic digestive aid! Other cultured foods (kefir, kombucha, cultured butter, etc.) as well as a high-quality [probiotic supplement](#) replenish friendly microbes to the digestive tract.
9. Choose quality fats and [oils](#) (organic, unrefined, first cold pressed and virgin oils, organic raw butter, soaked nuts and seeds and raw, grass-fed dairy products). They build healthy bile!
10. Choose only organic, grass-fed meats, eggs and wild fish.
11. Avoid ALL junk food, fast food and processed/refined foods. They inhibit HCl production and contribute to acid reflux.
12. Eliminate artificial sweeteners (aspartame, splenda, saccharine, etc.) Use honey, rapadura, agave nectar, real maple syrup, xylitol and stevia instead. Use in moderation.
13. Buy organic and cook your meals at home. You will have better control of what's in your food.
14. Switch from table salt to [sea salt](#).
15. Eat sweets alone and in moderation. Too much sugar will stress the pancreas, feed pathogens and kill-off friendly organisms in the digestive tract.