

Primary Metabolic Functions of the Gut
Michael J. Shea, Ph.D.
2009

1. *Immune protection.* Upwards to 80% of the lining of the gut is involved in the immune system and thus is protective in nature. Chronic inflammatory processes typically start in the gut and remain subclinical for some time. Gradually, primary and secondary allergies develop. Primary allergies are typically to gluten, dairy, soy and nuts. There are many other primary allergies, but to be distinguished as primary, the reaction time is 2-3 days from the ingestion of the food. Secondary allergies are those food substances that when eaten, cause an immediate reaction in the body, such as histamine responses, epigastric pain, all the way up to anaphylactic shock.
2. *Digestion and absorption of food.* Food brought into the body must be completely broken down and sanitized by a complex series of biochemical reactions. These reactions are largely initiated and processed by another aspect of the lining of the gut involving friendly bacteria. Probiotics are an essential part of the lining of both the small and large intestine. Food must be broken down so thoroughly so as to be processed by the liver almost to the point of reducing everything to a hydrogen molecule in order to mix with oxygen for water and warmth.
3. *Elimination of toxins.* The third major metabolic function of the gut is to rid the body of the toxic substances from the breakdown of digestion and absorption. Toxicity however, is not limited to just the residue of food in the gut, but also environmental toxins that the body is exposed to and other toxic foci in the body, such as mercury and other heavy metals located in the teeth in particular. Thus the use of colon hydrotherapy, enemas and other mild forms of detoxification must be practiced based on one's individual capacity to tolerate detoxification. Stress responses and the intestines' relationship with the autonomic nervous system must be working properly for toxins to be eliminated without compromising other physiological processes in the body. This includes one's state of mind and emotional health as it effects all three aspects of the metabolism of the gut.