Digestive System Health

A balanced diet is important for the maintenance of optimal health. However, without the aid of the digestive system, the foods we consume would not be converted into energy needed to support life. The digestive system is a complex series of organs and glands that work in concert to break down the foods we eat into smaller molecules that can be utilized by the body.

The process of digestion begins in the mouth, where food is partially broken down by the process of chewing and by the chemical action of carbohydrate-digesting amylase enzymes found in saliva. Once food is swallowed, it makes its way down the esophagus to the stomach.

The stomach is a sac-like organ with strong, muscular walls. In addition to holding the food, it's also a mixer and grinder. In the stomach, food is digested with the aid of gastric acid and a protein-digesting enzyme called pepsin. Gastric acid consists mainly of hydrochloric acid (HCl) and is very efficient at breaking down food material, particularly protein. If gastric acid production decreases, as is often the case with advancing age, digestion becomes less efficient. Fortunately, there are natural approaches to help support optimal digestion in the stomach. **PDA Combination** supplements the stomach's digestive secretions with pepsin and hydrochloric acid in the form of betaine HCl. **Food Enzymes** also contains enzymes and betaine HCl to support digestion that occurs in the stomach as well as in the small intestine.

After food leaves the stomach, digestion continues in the small intestine, a loosely coiled tube made up of three segments: the duodenum, jejunum and ileum. The duodenum is responsible for continuing the process of breaking down food with the aid of bile from the gallbladder, and enzymes released by the pancreas and intestinal walls. Bile aids in breaking down fats into smaller molecules. Further digestion of fats, protein and carbohydrates takes place with the help of enzymes, including lipase, trypsin and amylase. Digestive enzyme products such as **Hi-Lipase**, **Proactazyme® Plus**, **High Potency Protease** and **Protease Plus** help support optimal digestion in the small intestine. **Gallbladder Formula** provides nutrients that support the proper function of the digestive system, particularly the liver and gallbladder.

Once food passes through the duodenum, its digestion is essentially complete and the absorption of nutrients into the bloodstream can begin. This takes place in the jejunum and ileum. During nutrient absorption, food molecules enter the bloodstream through the intestinal walls. The blood is then purified by the liver as harmful substances such

as alcohol and ammonia are removed. The liver also stores fat-soluble vitamins (namely A, D, E and K) and excess glucose for future use. Products that support the liver include **Chinese Liver Balance**, **Chinese Liver Balance TCM Concentrate**, **Liver Cleanse Formula**, **LIV-J**, **Milk Thistle Combination** and **Milk Thistle Time Release**.

By the time the food matter reaches the large intestine, or colon, it is mostly composed of indigestible material and water. Here excess water and any residual minerals are absorbed. Fiber aids this process by promoting the movement of the remaining debris through the intestine and easing the passage of waste (also known as stool). **Everybody's Fiber**, **Nature's Three**, **LOCLO®** and **Psyllium Hulls Capsules** are terrific dietary fiber products. In addition to promoting elimination, fiber also helps to support friendly bacteria. About 100 trillion bacteria reside in a healthy digestive system. These bacteria, or probiotics, perform several essential functions. Probiotics promote good digestion, support the immune system and produce vitamins such as vitamin K and biotin. NSP offers several probiotic products to help replenish bacteria in the gut, including **L. Acidophilus**, **Bifidophilus Flora Force®**, **L. Reuteri Chewable** and **Probiotic Eleven**. Altogether, the digestive process can take anywhere between 24–72 hours and is complete once stool is eliminated.