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Professional Certificate in Nutrition for Longevity and Wellness

## Digestive System

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The digestive system is a complex network of organs and processes that work together to break down food into nutrients that can be absorbed by the body. Understanding key terms and vocabulary related to the digestive system is essential for anyone studying nutrition for longevity and wellness. Let's explore some of the most important terms in this field:

1. **Digestion**: The process by which food is broken down into smaller molecules that can be absorbed by the body. This process begins in the mouth and continues in the stomach and small intestine.
2. **Absorption**: The process by which nutrients are taken up by the cells of the body after digestion. This occurs primarily in the small intestine.
3. **Gastrointestinal (GI) Tract**: The long tube that runs from the mouth to the anus and includes the esophagus, stomach, and small and large intestines. It is where digestion and absorption take place.
4. **Enzymes**: Proteins that speed up chemical reactions in the body. Digestive enzymes help break down food into smaller molecules that can be absorbed.
5. **Peristalsis**: The rhythmic contractions of muscles in the GI tract that help move food along the digestive system.
6. **Saliva**: The watery fluid produced by the salivary glands in the mouth that helps moisten food and begins the process of digestion.
7. **Stomach**: The organ in the GI tract where food is mixed with digestive juices and broken down into a semi-liquid form called chyme.
8. **Chyme**: The semi-liquid mixture of food and digestive juices that is produced in the stomach and passed into the small intestine.
9. **Small Intestine**: The longest part of the GI tract where most of the digestion and absorption of nutrients takes place. It is divided into three sections: the duodenum, jejunum, and ileum.
10. **Villi**: Tiny, finger-like projections in the lining of the small intestine that increase the surface area for absorption of nutrients.
11. **Microvilli**: Even smaller projections on the surface of villi that further increase the surface area for absorption.
12. **Large Intestine**: The final part of the GI tract where water is absorbed from the remaining indigestible food matter, forming feces.
13. **Feces**: Waste material that is formed in the large intestine and expelled from the body through the

anus.

14. **Probiotics**: Live bacteria and yeasts that are beneficial for digestive health. They can help maintain a healthy balance of gut bacteria.

15. **Prebiotics**: Non-digestible fibers that serve as food for probiotics and help them thrive in the gut.

16. **Gut Microbiota**: The community of microorganisms that live in the digestive tract. They play a crucial role in digestion, immunity, and overall health.

17. **Gut-Brain Axis**: The bidirectional communication system between the gut and the brain that influences various aspects of health, including digestion and mood.

18. **Gallbladder**: An organ located beneath the liver that stores and concentrates bile, a digestive juice produced by the liver.

19. **Bile**: A greenish-yellow fluid produced by the liver that helps break down fats in the small intestine.

20. **Pancreas**: An organ located behind the stomach that produces digestive enzymes and bicarbonate, which are released into the small intestine to aid in digestion.

21. **Gastric Acid**: The hydrochloric acid produced by the stomach that helps break down food and kill harmful bacteria.

22. **Ulcers**: Sores that develop in the lining of the stomach or small intestine due to factors such as infection with *H. pylori* bacteria or the long-term use of nonsteroidal anti-inflammatory drugs (NSAIDs).

23. **Heartburn**: A burning sensation in the chest caused by stomach acid flowing back into the esophagus.

24. **Constipation**: Difficulty passing stools or infrequent bowel movements, often due to a lack of fiber or water in the diet.

25. **Diarrhea**: Loose, watery stools that occur when the intestines move food through too quickly, often due to infection or certain medications.

26. **Celiac Disease**: An autoimmune disorder in which the ingestion of gluten leads to damage in the small intestine, impairing nutrient absorption.

27. **Irritable Bowel Syndrome (IBS)**: A common digestive disorder characterized by abdominal pain, bloating, and changes in bowel habits.

28. **Inflammatory Bowel Disease (IBD)**: A group of chronic inflammatory conditions of the digestive tract, including Crohn's disease and ulcerative colitis.

29. **Diverticulitis**: Inflammation or infection of small pouches that can form in the lining of the colon, known as diverticula.

30. **Colon Cancer**: Cancer that develops in the colon or rectum, often starting as small, noncancerous polyps that can become cancerous over time.

Understanding these key terms and concepts related to the digestive system is crucial for anyone seeking to improve their nutrition for longevity and wellness. By familiarizing yourself with these terms, you can better understand how the digestive system functions, how to support its health, and how to address common digestive issues that may arise.