Module A
Digestion and Absorption
Nutrition and Upper and Lower GI Tract Disorders

General Module Learning Objectives:

After completing this Module the student should be able to:

- Describe the process of digestion, absorption, and metabolism. This is to include identifying the parts of the digestive system, describing the mechanical and enzymatic activities involved in digestion, and discussing the hormonal regulation of the digestive functions.
- Demonstrate knowledge of the various digestive tract medical conditions and the medical nutrition therapy and lifestyle modifications that assist the individual in managing the conditions.

Student Assignments

1. Reading assignment

- Chapter 3 – Digestion, Absorption, and Transport (70-98)
- Chapter 23 – Nutrition and Disorders of the Upper GI Tract (731-752)
- Chapter 24 – Nutrition and Lower GI Disorders (754-785)
- Review the Modified Diets on pages 621-629.

Students are encouraged to write the answers to each of the study questions listed below in the “Specific Learning Outcomes.” Reading and writing the answers provides directed, in-depth study in order to learn the assignment material.

2. Take the Multiple Choice Quiz on Chapters 3, 23 and 24.

- The quiz on these 3 chapters is available for 8 days – Monday through Monday of this week.
- Each of the questions on the quiz is answered in one or more of your specific learning outcomes. Be sure to go beyond memorizing information and be able to use the information to make decisions. Read notes from former students linked under the “Start Here” Module.

3. Begin work on Personal Nutrition Study 1 located in Module B

Specific learning outcomes:

After completing this reading and personal study you should be able to:

Chapter 3
1. List the segments of the digestive tract in order from the mouth to the anus.
2. Describe the path food follows as it travels through the digestive system. Summarize the muscular actions that take place along the way.
3. List 5 organs that secrete digestive juices. Discuss how the juices and enzymes facilitate digestion.
4. List the secretions that breakdown carbohydrate, protein, and fat.
5. Describe the anatomy of the absorptive system. Describe the problems involved with absorbing nutrients and the solutions offered by the small intestine.
6. Explain the role of the circulatory system and the lymphatic system in transport of nutrients.
7. Identify the hormones involved in digestive and absorptive processes.
8. Explain how the composition of the diet influences the functioning of the GI tract.
9. List the steps that you can take to help your GI tract function at its best.

Chapter 23
1. List the common types of dysphasia, their causes, related complications and methods of evaluation and diagnosis.
2. Describe dietary interventions for dysphagia including the National Dysphagia Diet, food properties, food preparation, and feeding strategies.
3. Discuss the causes and consequences of gastro esophageal reflux disease (GERD)
4. List the treatment options for GERD including drug therapy and lifestyle modifications.
5. Describe the causes for, consequences of, medical treatments for, and dietary interventions for dyspepsia, nausea and vomiting, gastritis, and peptic ulcer disease.
6. Identify the rationale for various types of gastric surgery and their nutritional consequences, and explain the corresponding dietary modifications to prevent dumping syndrome and post-surgical complications.
7. Discuss post-gastric surgery complications their effects on nutrition status and related therapies including steatorrhea, bone disease, and anemia.
8. Name and characterize the various disorders of the mouth/teeth and discuss their relationship to chronic diseases.

Chapter 24
1. Describe the causes and nutritional management of constipation, intestinal gas, and diarrhea.
2. Discuss the potential causes and effects of fat malabsorption and describe effective methods used for treatment.
3. Characterize bacterial overgrowth and discuss its potential causes and treatments.
4. Discuss the consequences of and nutrition therapy for celiac disease.
5. Name and describe the inflammatory bowel diseases and outline the corresponding medical and nutrition therapy treatments.
7. Discuss causes, treatment, and dietary interventions for irritable bowel syndrome and diverticular disease of the colon.
8. Describe the medical nutrition therapy for patients with colostomies and ileostomies.
9. Explain the nature of probiotics and prebiotics and discuss their role in the maintenance of health of the lower GI tract.