

Nutrition 219 Final Exam Study Guide for Part 2 Chapters 1-16

Chapter 1

How many calories are provided by protein, carbohydrate, fat and alcohol?

Be able to calculate the fat percentage of a food item.

Know the basic characteristics of vitamins

Know the basic characteristics of minerals

Chapter 2

What does “nutrient density” mean?

What is fortification?

What order are the ingredients listed on a label?

Know how to read a food label

Chapter 3

In what order does food pass through the G.I. tract (know the order of the parts of the small intestine)?

What food item is not digested in the small intestine?

Know the physiological function of the stomach, small intestine, pancreas, liver, gallbladder, & large intestine.

Chapter 4

What are the monosaccharides?

What are the disaccharides? What monosaccharides are the disaccharides made from?

What is the normal blood glucose range?

What is the function of insulin?

What is glycogen and where is it stored?

What are the health benefits of a high fiber diet?

Chapter 5: Lipids

What are the two essential fatty acids?

What foods contain cholesterol?

What are good sources of *omega-3 fatty acids*?

Which lipoprotein in **high levels** correlates with **low** cardiovascular risk?

Which lipoprotein in **high levels** correlates with a **high risk** of heart disease?

What is the difference between a monounsaturated fat, a polyunsaturated fat and a saturated fat?

What are good food sources of monounsaturated fat, a polyunsaturated fat and a saturated fat?

Chapter 6: Proteins

What is meant by the amino acid sequence of a protein?

What are the major functions of proteins?

If the diet lacks an essential amino acid, what will be the result?

What kinds of foods are high quality protein sources?

What are complementary proteins?

Chapter 7: Metabolism

When nutrients are eaten in excess, which ones can be stored as fat?
Which nutrients yield energy upon metabolism?
When fasting, what does the body use first for energy?
What does the body eventually adapt to use after long term fasting?

Chapter 8: Energy Balance:

What is the basal metabolic rate?
What percent of your daily energy expenditure is used for basal metabolism?
What factors affect the basal metabolic rate?
What chronic diseases are related to central obesity?

CHAPTER 9: Overweight.

Know how fat cells develop and the behavior of fat cells.
What is leptin? On what organ or tissue does it primarily act on?
What is ghrelin? On what organ or tissue does it primarily act on?
What is the best approach to weight loss?
What are the BMI categories and their BMI numbers?

Chapter 10: Water Soluble Vitamins

What are the general characteristics of water- soluble vitamins?
What is the main function of the B-Vitamins? Why do deficiencies in B vitamins lead to fatigue?
What factor is required for B12 absorption? Know good food sources of Vitamin B12
Know good food sources of Vitamin C. What is the early sign of Vitamin C deficiency?

CHAPTER 11: Fat Soluble Vitamins

What are the characteristics of fat soluble vitamins
What plant source precursor is converted to Vitamin A in the body?
Know good sources of A.
What is the main function of Vit D?
What is the main function of Vit K?

CHAPTER 12: Water and the Major Minerals

What minerals are lost with sweating and bleeding?
At what age do adults normally begin to lose bone mass?
Why is it hard to detect the onset of osteoporosis?
At what age is a person's bone density highest?

Chapter 13: Trace Minerals:

What factors enhance the absorption of iron?
What foods reduce the absorption of iron?
Know the process of iron absorption and recycling.
What mineral deficiency would a low level of hemoglobin indicate?
What foods have iron added to them in fortification?

Chapter 14 : Fitness

What does ACSM say is the exercise schedule needed to maintain an appropriate level of fitness?

What are the components of fitness?

During vigorous physical activity, how long until glycogen reserves are depleted?

What type of diet promotes superior performance in athletes?

What fuel is used by muscle cells after about 20 minutes of low or moderate physical activity?

Chapter 15: Pregnancy and Lactation:

What is a “critical period”?

At what stage in pregnancy is there a beating heart and complete nervous system?

Ideally how much weight should a normal woman gain during pregnancy?

Which nutrients increase their absorption in pregnancy?

What is the most reliable indicator of an infant’s future overall health status?

What is the recommendation for alcohol in pregnancy?

Chapter 16: Nutrition in Infancy and Childhood:

What advantages does breast feeding have over formula?

What nutrients may need to be supplemented in the breast fed infant after 6 months?

At what age is an infant ready to swallow solid foods?

What are the likely reasons for the increase in childhood obesity over the past 30 years?