

# PAK200 – NUTRITION SPECIALIST

## BEHAVIORAL OBJECTIVES

The training objectives are divided into 5 sections: nutrition basics, the nutrients, nutrient utilization, practical aspects, and legal and ethical concerns. At the end of this training, the instructor will demonstrate an understanding of the basic-principles that follow:

### SECTION1: NUTRITION BASICS

#### ***Foundation Information***

- define nutrition
- define a nutrient
- list the 6 major nutrients
- list the recognized vitamins and minerals
- discuss nutritional relevance
- list sources of each nutrient
- define the U.S. Customary system, metric system, and international unit
- define and compare the ounce, pint, quart, milliliter, and liter to the ounce, pound, kilogram, gram, and microgram
- discuss the most important nutritional concern
- define RDA, AI, EAR, UL, and BMR
- determine caloric requirements for healthy adults
- discuss the number of calories per gram in each of the 6 nutrients
- define nutrient density
- discuss the recommended amounts of each of the 6 nutrients
- discuss the repercussions of inadequate intake and excess amounts of each of the 6 nutrients
- discuss the concept of vitamin and mineral toxicity and explain in detail one example for a specific vitamin and a specific mineral
- discuss the repercussions of both inadequate and excessive water intake
- explain the index of nutritional quality
- explain the food pyramid and food guide to serving size
- provide an example of the recommended serving size for a specific food within the following categories: grain, vegetable, fruit, milk, and meat.
- discuss the variable encountered when determining nutrients in recipes
- explain the common exchange list

#### ***Food Labels***

- explain three ways to determine a meal plan
- explain the major information included on food labels
- define the following terminology regarding food labels: free, low, lean, High, good source, reduced, less and fewer, light, more

- define and discuss regulations regarding claims for the following terms: percent fat free, implied, healthy, fresh, health claims, calcium and osteoporosis, fat and cancer, saturated fat and cholesterol and coronary heart disease, fiber content, sodium and hypertension, fruits and vegetables and cancer, folic acid and neural tube defects, enriched, fortified
- discuss the foods that may use abbreviated and voluntary labels

### ***Food Additives***

- define and discuss at least 15 food additives their purpose

### ***Body Weight***

- define overweight, underweight and obesity
- explain essential fat, storage fat, lean body tissue, and body composition
- list the recommended percentage body fat for men and women
- list 3 major methods to determine body composition
- determine ideal body weight

### ***The Dietary Guidelines***

- list and discuss the Dietary Guidelines for Americans

## **SECTION 2: THE NUTRIENTS**

### ***Carbohydrates***

- explain the general chemical structure of a simple carbohydrate molecule
- discuss the importance of consuming adequate carbohydrates and list 7 functions
- explain the types of fats
- explain the role of fiber

### ***Fat***

- explain the general chemical structure of a fat molecule
- discuss the significance of fat in the daily diet and list 7 functions
- explain the types of fats
- explain the important role of essential fatty acids
- define and discuss cholesterol, phospholipids, and lipoproteins

### ***Protein***

- explain the general chemical structure of a simple protein molecule
- discuss the significance of protein in the daily diet and list 7 functions
- determine the recommended protein intake for adults
- explain the building blocks of protein
- explain a complete and incomplete protein
- define a vegetarian and list 3 types

### ***Vitamins***

- explain the purpose and general sources of vitamins
- list and define the water and fat soluble vitamins
- list a food or environmental source for each of the vitamins

### ***Minerals***

- explain the purpose and general sources of minerals
- list and define the types of minerals
- list a food or environmental source for each of the minerals

### ***Water***

- explain the chemical structure of a water molecule
- discuss the significance of water in the daily diet and list 7 functions
- determine the recommended amount of water intake per day
- list watery foods that can contribute to hydration

## **SECTION 3: NUTRIENT UTILIZATION**

### ***Energy and Metabolic Pathways***

- define metabolism, anabolism, catabolism, and metabolic pathway
- list and explain the 3 major metabolic pathways, including the Krebs Cycle
- discuss the paths of each major nutrient as an energy source
- explain the glycemic index
- define insulin sensitivity
- discuss protein supplements, the benefit of obtaining protein from foods, and situations in which protein supplements might be beneficial
- summarize nutrient utilization during activity
- discuss the role of the minor nutrients in energy production
- explain water balance in the body
- define the 2 types of extracellular water interstitial, vascular
- explain hydration, body water reserves, and electrolytes
- explain heat balance and heat illness in the body
- list at least 10 hydration guidelines

## **SECTION 4: PRACTICAL ASPECTS**

- discuss the challenges of educating people about proper nutrition in the modern world
- discuss and provide recommendations about food safety and quality
- discuss general information regarding food and medication interaction
- discuss the following: organics, irradiation, GRAS food allergies, artificial ingredients, BHA and BHT, and caffeine
- list the number of calories in alcohol and how the body metabolizes it

- discuss the pros and cons of nutrient supplementation and energy drinks and bars
- provide guidance for healthy weight management and safe weight loss
- define anorexia nervosa and bulimia nervosa and explain at least 5 symptoms of each
- discuss theories of food cravings

## **SECTION 5: LEGAL AND ETHICAL CONCERNS**

### ***The Nutrition Specialist***

- explain the role of a nutrition specialist as a public information source of general nutrition information based on current SCIENCE and NOT as a qualified nutritionist or registered dietician who designs diets or provides individual consultations for nutritional problems
- refer people to a registered dietician or qualified medical professional when asked to solve individual issues or design personal diet plans
- list at least 5 sources of science based professional nutrition resources to learn updates, research questions, and keep updated on new research