

ST. JOSEPH'S COLLEGE FOR WOMEN (AUTONOMOUS) VISAKHAPATNAM
VIII SEMESTER HOME SCIENCE TIME:4Hrs/Week
HS-E2-8101 SPORTS NUTRITION THEORY MARKS:100

Course objective:

- Understand the digestion and absorption kinetics of nutrients during rest and exercise.
- Understand dietary techniques for altering the metabolic and immunological activity of human gut bacteria.

Course Outcomes- To enable the students to:

1. Define the concepts of sports Nutrition, physical activity, physical fitness and methods of evaluation.
2. Understand the Energy metabolism pathways during physical activity.
3. Describe the role of macronutrients in physical performance, weight management and obesity.
4. Explains the nutritional needs in different sports and the role of national agencies.

THEORY

UNIT-I Sports Nutrition- Definition, scope, classification:

- Introduction to Sports Nutrition- definition and scope of Sports Nutrition
- Difference between physical activity, exercise, fitness and sport
- Measuring energy expenditure - Measuring Physical activity - METs Metabolic Equivalent – Fatigue.
- Endurance and fatigue in sports performance.

Unit – II Sports– Physical fitness.

- Significance of physical fitness and nutrition in prevention and management of weight control regimes.
- Awareness about the alternative systems for health and fitness, like ayurveda, yoga, Meditation,
- Vegetarianism and traditional diets role in sports nutrition.
- Role of National agencies towards improvements of sports performance.

UNIT-III Sports Nutrition-requirement and Assessment

- Diet and Performance - Importance of Sports Nutrition
- Nutritional requirements and RDA for sports person
- Special needs of sports person - pre, during, post sports events.
- Importance of Water and electrolyte balance, Ergogenic aids.
- Assessment-Kinanthropometry: Definition; Introduction; Body size and proportion; Somatotyping; Circumferences; Skinfold measurement sites and determining body composition; Applications.

Unit – IVDietary and nutritional recommendations for sports

- Nutritional allowances as given by NIN to different groups of players
- Sports specific requirements, Use of different nutrigenic aids and commercial supplements.
- Sports drinks.
- Diets for persons with high energy requirements stress, fracture and injury.

Unit -V

- Nutrition for performance enhancement: Endurance sports.

- Nutrition for Ironman, Triathlon and Ultrathon
- Nutrition for Intermittent sports,
- Nutrition for Strength & Power sports, Nutrition for winter sports,
- Nutrition for Weight conscious sports,
- Nutrition for martial artists in the Olympics - Judo, Wrestling, Wushu, Taekwondo.
- Nutrition for adventure sports, Kayaking, Canoeing, and other water sports. Nutrition in swimming.
- Sports Nutrition research - Latest advancements

REFERENCES:

1. K. Park text book of Preventive and social medicine, 15th edition, MS BanarisidasBhano Publishers, Jabalpur,1997.
2. Ira Wolinsky(ed) (1998). Nutrition in Exercise and Sports, 3rd Edition, CRC Press.
3. Heather Hedrick Fink, Alan E. mike sky. (2012). Practical Applications in Sports Nutrition, Third Edition, Library of Congress Cataloging in Publication Data. United States of America.