

Preventive nutrition

Course No.	Title of Course	Credit Hours
HND-423	Preventive nutrition	3(3-0)

Learning Outcomes:

- To acquaint knowledge about the preventive nutrition with special reference to historical perspective, public health benefits, ethnic and socioeconomic issues and its role throughout the life cycle
- To understand the role of dietary components in the prevention and management of various health disorders

Theory:

Preventive nutrition: a historical perspective, public health benefits, ethnic and socioeconomic issues, nutrition in the age of polypharmacy, preventive nutrition throughout the life cycle; Cancer prevention: upper GIT cancer, prostate cancer, dietary supplements and cancer risks, soy and cancer prevention, micronutrients as intermediate biomarkers in chemotherapy; Cardiovascular disease prevention: omega-3 fatty acids from fish and plants, cardiovascular effects of trans fatty acids, antioxidants and B-vitamins and atherosclerosis, Prevention and nutritional management - TLC dietary patterns, AHA dietary patterns, DASH dietary patterns, weight reduction, increased dietary fiber, Omega-3 fatty acids, soy proteins, fruits and vegetables as antioxidant role, reduce dietary cholesterol; Diabetes and obesity: role of nutrition in pathophysiology, prevention and treatment, Adipokines, nutrition and obesity, obesity and insulin resistance in childhood and adolescence, obesity and chronic disease, meal replacement products and fat substitutes, prevention and treatment (dietary changes, calories restricted diet and other dietary regimens, exercise, behavioural modification); Growth, Immunity and Infection: Role of long chain fatty acids, polyunsaturated fatty acids and autoimmune diseases; Prevention and treatment for hypertension: weight reduction, adaptation of DASH diet, nutrition education for behavioural modification; Bone density: Osteoarthritis - role of nutrition and dietary supplements, calcium requirement during treatment of osteoporosis, Prevention and treatment - adequate calcium intake, adequate vitamin D intake,

avoidance of excess phosphorous, lifestyle dietary modifications, exercise; Role of dietary fiber in preventing diseases (colon cancer, diabetes, constipation, diverticular disease, obesity, cardiovascular diseases); Health claims for foods and dietary supplements; Micronutrient and immunity in older people.

Suggested Readings:

1. Bendich, A. and R.J. Deckelbaum. 2001. Primary and Secondary Preventive Nutrition. Springer Science+Business Media, New York, USA.
2. Bendich, A. and R.J. Deckelbaum. 2010. Preventive Nutrition: The Comprehensive Guide for Health Professional, 4th ed. Humana Press, New York, USA.
3. Coulston, A.M. and C.J. Boushey. 2008. Nutrition in the Prevention and Treatment of Diseases, 2nd ed. Academic Press, Elsevier Inc., San Diego, CA, USA.
4. Gerber, J.M. 2007. Handbook of Preventive and Therapeutic Nutrition. Aspen Publications, Silver Spring, MD, USA.
5. Thomson, C. 1996. Preventive and Therapeutic Nutrition Handbook. Chapman & Hall, UK.



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