

CLINICAL NUTRITION THEORY

4 Credits

Objectives:

The course will enable the students to:

1. Understand the etiology, physiologic and metabolic anomalies of acute and chronic diseases and patient needs.
2. To assess nutritional status of patients.
3. Be familiar with recent advances in the medical nutritional management of various diseases.

Module No	Topic and Details	No of Credits
1	<p>A. Cellular adaptations to stress.</p> <p>a. Types of stress</p> <p>b. Changes in hormonal secretion, CNS and immune system. Cellular changes</p> <p>c. Effects on cells and tissues</p> <p>B. Diet, nutrient and drug interactions.</p> <p>a. Effect of drugs on ingestion, digestion, absorption and metabolism of food and nutrients.</p> <p>C. Nutrition and Immune response</p> <p>a: Role of individual nutrients in immune response and function</p> <p>b: Effect of undernutrition and overnutrition on immune function</p> <p>c: Immunoenhancers, immunosuppressants, conditionally essential nutrients. d. Effect of food, nutrients and nutritional status on drug dosage and efficacy.</p> <p>D. Ageing</p> <p>Physiological changes with ageing</p> <p>Bone health</p> <p>Osteoporosis</p> <p>Rheumatoid arthritis</p>	1.5

2	<p>A. Nutrition and the gastro intestinal tract</p> <p>a.Malabsorption and its patho-physiology, Carbohydrate intolerance.</p> <p>b.Parasitic infections</p> <p>c.Acute and chronic infections</p> <p>d.Diarrhea</p> <p>e.Recent advances in gastroenterology and nutrition</p> <p>f.Diet and gut microflora</p> <p>B. Nutrition and oral health</p> <p>a.Structure, development and maturation</p> <p>b.Dental caries</p> <p>c.Recent advances in role of nutrition in dental health</p>	1
3	<p>A. Nutrition and cardiovascular diseases</p> <p>a.Role of lipids, carbohydrates, protein, and other nutrients</p> <p>b. Bile acid metabolism</p> <p>c.Prostaglandins</p> <p>B. Diabetes mellitus and complications-Recent advances</p> <p>C. Nutrition and Renal Disease</p> <p>a.Nephrotic syndrome</p> <p>b.Nephritis</p> <p>c.ESRD</p> <p>d.Renal Transplant</p> <p>e.Nephrolithiasis</p> <p>Recent advances</p>	1
4	<p>Nutrition and Cancer</p> <p>Carcinogenesis and Mutagenesis- Carcinogens in Food</p> <p>Epidemiology Investigations of Diet-Cancer relationship</p> <p>Development of cancer</p> <p>Types of cancer and effect on metabolism and nutritional status</p> <p>Nutrients and their relationship with cancer</p> <p>Recent developments in nutrition and cancer.</p> <p>Nutrition and HIV/AIDS</p>	0.5

References:

1. Mahan, L.K. and Escott-Stump, S. (2000): Krause's Food Nutrition and Diet Therapy, 10th Edition, W.B. Saunders Ltd.
2. Shils, M.E., Olson, J.A., Shike, M. and Ross, A.C. (1999): Modern Nutrition in Health and Disease, 9th Edition, Williams and Wilkins.

3. Escott-Stump, S. (1998): Nutrition and Diagnosis Related Care, 4th Edition, Williams and Wilkins.
4. Garrow, J.S., James, W.P.T. and Ralph, A. (2000): Human Nutrition and Dietetics, 10th Edition, Churchill Livingstone.
5. Williams, S.R. (1993): Nutrition and Diet Therapy, 7th Edition, Times Mirror/Mosby College Publishing.
6. Davis, J. and Sherer, K. (1994): Applied Nutrition and Diet Therapy for Nurses, 2nd Edition, W.B. Saunders Co.
7. Walker, W.A. and Watkins, J.B. (Ed) (1985): Nutrition in Pediatrics, Boston, Little, Brown & Co.
8. Guyton, A.C. and Hall, J.E. (1999): Textbook of Medical Physiology, 9th Edition, W.B. Saunders Co.
9. Ritchie, A.C. (1990): Boyd's Textbook of Pathology, 9th Edition, Lea and Febiger, Philadelphia.
10. Fauci, S.A. et al (1998): Harrison's Principles of Internal Medicine, 14th Edition, McGraw Hill.
11. World Cancer Research Fund (1997). Food, Nutrition and the Prevention of Cancer- A Global perspective, Washington E.D. WCRF

Journals and Other Reference Series

1. Nutrition Update Series
2. World Review of Nutrition and Dietetics
3. Journal of the American Dietetic Association
4. American Journal of Clinical Nutrition
5. European Journal of Clinical Nutrition
6. Nutrition Reviews
7. Clinical Nutrition
8. Asia Pacific Journal of Clinical Nutrition
9. Nutrition in Clinical Practice
10. Current Opinion in Clinical Nutrition and Metabolic Care
11. International Journal of Clinical Nutrition and Dietetics
12. Guidelines /Position statements of ASPEN, ESPEN, ADA, IDF
13. Canadian Journal of Clinical Nutrition
14. Annals of Nutrition and Metabolism