

SEMESTER-V

BC 1551.2: Open Course Course

Title: Lifestyle Diseases

No. of Credits: 2

No. of Contact Hours: 54 Hours/week: 3 (L, T, P, C - 3,

1, 0, 2)

Open courses are offered to students of various other disciplines like arts, humanities and languages. Hence the approach to open course should be made only at a peripheral level. Indepth approach is not expected in this course.

Objective of the course: To create general awareness among students about the various diseases associated with lifestyle and which could be prevented by managing life style.

Course Outcome: Student will be able to

- Enumerate the different causes and risk factors of life style diseases like atherosclerosis, hypertension, stroke, diabetes, obesity, nephritis and liver diseases.
- List out the methods to diagnose the diseases and gain a basic knowledge regarding interpretation of the test results.
- Spell out the methods of prevention, treatment and management of the diseases.
- Identify healthy and unhealthy life habits and adopt better life style.

Course Outline

Module I (4 hrs)

Introduction to Healthy Lifestyle

Life style, food habits, healthy habits, exercise and unhealthy habits (brief description only). Basic biochemistry (Biomolecules- carbohydrates, lipids, proteins, nucleic acids, vitamins, minerals – brief outline).

Core Text: • Biochemistry – U. Satyanarayana, U. Chakrapani , 3 rd edition, ISBN 81-87134-80-1 • Textbook of Medical Biochemistry for Medical Students by DM Vasudevan and Sreekumari S. 5th edition, Japee Brothers, Medical Publishers, ISBN 81-8448-124-1:9788184481242. • Guide to Prevention of Lifestyle Diseases by R. Kumar (Author), M. Kumar (Author), Deep & Deep Publications, ISBN-13: 978-8176295185.

Module II (16 hrs)

Atherosclerosis, Hypertension and Stroke

Atherosclerosis: characteristics, causes (confirmed & indirect risk factors – brief description only), ischemia, myocardial infarction (definition), diagnosis (electrocardiography, exercise stress test, echocardiography, coronary angiography, intravascular ultrasound, magnetic resonance imaging – brief description only), prevention (lifestyle, diet, drugs), management (drugs, angioplasty, stenting, bypass surgery- brief description only) Hypertension: characteristics, Causes, Diagnosis, Prevention and Management (brief description only)

Stroke: characteristics (ischemic and hemorrhagic), causes, diagnosis (neurological examination, scanning - brief description only), management (drugs, mechanical thrombectomy, angioplasty and stenting - brief description only)

Core Text: • Guide to Prevention of Lifestyle Diseases by R. Kumar (Author), M. Kumar (Author), Deep & Deep Publications, ISBN-13: 978-8176295185. • Textbook of Medical Biochemistry for Medical Students by DM Vasudevan and Sreekumari S. 5th edition, Japee Brothers, Medical Publishers, ISBN 81-8448-124-1:9788184481242.

Module III

(12 hrs)

Diabetes mellitus and Obesity

Diabetes mellitus: classification (type 1, type 2, gestational- brief description only), symptoms (polyuria, polydipsia, polyphagia), causes, diagnosis (GTT, glycated haemoglobin- brief description only), management (diet, exercise, drugs). Obesity: classification according to BMI (brief description), symptoms, causes, diagnosis, treatment and management.

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Module IV (8 hrs)

Cancer

Types of cancer, benign and malignant tumor, metastasis (definition), causes, diagnosis (screening, blood tests, X-rays, CT scans & endoscopy - brief description only), prevention (dietary, medication, vaccination, screening- outline only), treatment and management (surgery, chemotherapy, radiation, palliative care).

Core Text: • Cell and Molecular Biology by Gerald Karp, John Wiley & Son, Inc. New York ISBN 978 0470- 16961-2, 5th Edition. • Guide to Prevention of Lifestyle Diseases by R. Kumar (Author), M. Kumar (Author), Deep & Deep Publications, ISBN-13: 978-8176295185.

Module V

(7hrs)

Nephritis

Function of kidney (brief outline), GFR, nephritis (definition), causes, symptoms, diagnosis (kidney function test - brief outline of serum and urine creatinine, blood and urine urea, BUN, clearance test creatinine and urea), treatment, management (dialysis- peritoneal and hemodialysis). Module VI (7hrs) Liver disease 62 Function of liver (brief outline), liver disease (viral hepatitis, alcoholic liver disease, and cirrhosis), symptoms, causes, diagnosis (liver function test- brief outline of serum bilirubin, serum albumin, serum alkaline phosphatase, ALT, AST and LDH), treatment and management.

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Brothers, Medical Publishers, ISBN 81-8448-124-1:9788184481242. • Biochemistry – U. Satyanarayana, U. Chakrapani , third edition, ISBN 81-87134-80-1

Suggested Reading • Textbook of Medical Physiology, by Arthur C Guyton, John E Hall Prism Saunders 9th Edition ISBN: 81-7286-034-X.