

OPEN COURSES

BCH 5D02 LIFESTYLE DISEASES

CREDITS: 3 TOTAL HOURS: 54 HOURS PER WEEK: 3

Course outcomes(Cos)

On completing the course, the student will be able to

No.	Course outcome
CO1	Identify major biomolecules present in the living system
CO2	Acquire preliminary knowledge on a healthy lifestyle and the characteristics, causes, risk factors diagnosis, prevention, and management of major lifestyle disorders.

UNIT I (4 hrs)

General awareness

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

UNIT II (8 hrs)

Atherosclerosis: Characteristics, risk factors (modifiable & unmodifiable), ischemia, myocardial infarction - definition, Diagnosis (electrocardiography, Exercise ECG – Stress test, Echocardiography, Coronary angiography, Intravascular ultrasound, Magnetic resonance imaging), Prevention (lifestyle, diet, drugs), Management (drugs, angioplasty, stent, bypass surgery)

UNIT III (4 hrs)

Hypertension: Characteristics, Causes, Diagnosis, Prevention, and Management

UNIT-IV (4 hrs)

Stroke: Characteristics (ischemic and hemorrhagic), Causes, Diagnosis (neurological examination, scanning), Management – (Drugs, Mechanical thrombectomy, Angioplasty, and stenting)

Unit V (6 hrs)

Diabetes mellitus: Classification – type 1, type 2, gestational, Type 2 diabetes: Glucose level, GTT, Glycated haemoglobin, Characteristics (polyuria, polydipsia, polyphagia), Causes, Diagnosis, Management (diet, exercise, drugs)

Unit VI (4 hrs)

Obesity: Classification according to BMI, symptoms, causes, diagnosis, treatment, and management.

Unit VII (8 hrs)

Cancer: Introduction, Types-(benign, malignant), Metastasis (definition), Causes, Diagnosis (screening. Blood tests, X-rays, CT scans & endoscopy), Prevention- (Dietary, Medication, Vaccination, Screening-Outline only) Management- (Surgery, Chemotherapy, Radiation, Palliative care).

Unit VIII (8 hrs)

Nephritis: Function of kidney, Nephritis, Causes, Symptoms, Diagnosis (Kidney function test, Significance of Glomerular filtration rate (GFR), Urine Creatinine, Blood Urea Nitrogen, Blood creatinine, Creatinine clearance), Treatment, management (dialysis-peritoneal and hemodialysis).

Unit IX (8 hrs)

Liver disease: Function of the liver (brief outline), Liver disease (viral hepatitis, alcoholic liver disease, cirrhosis), symptoms, causes, diagnosis (Liver function test- Brief outline of serum bilirubin, serum albumin, serum alkaline phosphatase, Aspartate aminotransferase, alanine aminotransferase, lactate dehydrogenase, treatment, and management.

References

1. Arthur C Guyton. Textbook of Medical Physiology, John E Hall Prism Saunders
2. U. Satyanarayana, U. Chakrapani, Biochemistry, books and Allied (P)Ltd
3. Gerald Karp. Cell and Molecular Biology John Wiley & Sons,