

GENERAL ELECTIVE COURSE
01 LIFESTYLE MODIFICATIONS FOR OPTIMAL HEALTH

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical		
01 Lifestyle Modifications for Optimal Health	4	3	1	0	Nil	Nil

Learning Objectives

- To understand the role of lifestyle modification for healthy lifestyle.
- To understand the importance of Nutrition and behaviour change in health and disease reversal.
- To comprehend the role of physical activity in maintaining fitness and health.
- To learn about the association of diet with mental well-being.

Learning Outcomes

The students would be able to:

- Make healthy food choices for themselves and their families.
- Describe the benefits of regular exercise and adequate sleep.
- Explain the relationship between good nutrition and mental health.
- Modify their lifestyle and inculcate habits which promote good health.

THEORY
(Credits 3; Hours 45)

UNIT I : Introduction to Lifestyle Modification, Nutrition and Health **23 Hours**

This unit focuses on the concept and components of lifestyle modification; components of a healthy diet; and the relationship of nutrition with health and disease.

- Six pillars of lifestyle modification
- Evidence for lifestyle modification
- Decoding food labels and related nutritional information

- Defining important terminologies used in the study of food and nutrition
- Components of a healthy diet: macronutrients, micronutrients, phytonutrients, dietary fiber & water
- Food intake patterns, deficiency and excess of nutrients in diets
- Food labels and health impact of ingredients
- Key messages of Global and Indian Dietary guidelines
- Health impact of prominent dietary patterns; plant and non plant based diets
- Level of food processing and its impact on health
- Indian scenario with respect to prevalence of diet-related non-communicable diseases
- Disease based lifestyle approach; Obesity, cardiovascular diseases and diabetes mellitus and evidence-based dietary guidance for health improvement

UNIT II: Physical Activity for a Healthy Lifestyle

10 Hours

This unit highlights the importance of regular physical activity for fitness and good health.

- Introduction and definition of physical activity and exercise
- Understanding physical activity, inactivity and sedentary behaviour
- Types of physical activity
- Benefits of physical activity and physical activity guidelines
- Exercise recommendations during the life span

UNIT III: Good Health and Mental Wellbeing

12 Hours

This unit deals with the importance of paying attention to diet, stress levels and physical activity for better mental well-being.

- Sleep; physiology and its role in health and disease, sleep hygiene and promotion of restorative sleep; understanding risk patterns for common sleep disturbances, Obstructive Sleep Apnea (OSA), chronic insomnia.
- Stress; Types of stress, and stressors; stress, anxiety and depression, strategies for enhancing mental well-being and disease prevention; Mindfulness-based stress reduction and stress management strategies; Role of diet and mental well-being; Perceived Body image and its relation to eating disorders
- Substance abuse and health; Understanding health effects of tobacco, alcohol and substance abuse; Evidence based cessation strategies; Digital de-addiction
- Social connections, positive psychology and mental well-being to inculcate better lifestyle habits

TUTORIAL **(Credits 1; Hours 1)**

1. Group Activity on making modifications in diets to improve diet quality

- Listing of foods which are unhealthy in daily diets and suggesting healthy replacements
- Read labels to compare nutritional profile of similar foods to understand which is a healthier choice
- Planning recipes which are low in fat, salt/sugar.
- Mapping diet diversity

2. Field work on Physical examinations and assessments to understand a person's health status

- Anthropometric assessments; BMI strengths and limitations, waist circumference, percent body fat; ranges of percent body fat in males and females normal and in obese.
- Pulse
- Blood pressure understanding the guidelines for the prevention, detection, evaluation and management of High blood pressure

3. Problem solving activity: Making modifications in physical activity levels for healthier lifestyle for the population assessed

- Assessment of level of physical activity-using physical activity vital sign PAVS questionnaire
- Listing ways to incorporate exercise in busy lifestyles

4. Behavior change activity for mental wellbeing

- Measuring stress levels using Patient health questionnaire -2, Perceived stress scale-10 item
- Discussing methods of stress relief
- Global sleep assessment questionnaire and STOP-BANG questionnaire

Essential Readings

- Chadha R and Mathur P (eds). Nutrition: A Lifecycle Approach. Orient Blackswan, Delhi. 2015
- Indian Council of Medical Research. (2024, May 7). *Dietary guidelines for Indians*. National Institute of Nutrition. <https://www.nin.res.in/dietaryguidelines/pdfjs/locale/DGI07052024P.pdf>
- Chowdhary S.R and Aeri B.T. (2023) Textbook of Food Science and Nutrition. Aarahan Publishers. ISBN:978-93-87270-08-4 <https://amzn.eu/d/bLz8S8>
- Ganong W.F (2005) *Review of Medical Physiology*. 22nd ed. McGraw Hill
- Jeni Shull & Clayton Jonathon Bonnett (2023) Board review manual 4th edition, American College of lifestyle medicine

- West J.B (1996)*Physiological Basis of Medical Practice*. 12th ed. B. I. Waverly Pvt. Ltd.

Suggested Readings

- Mukherjee, K.L and Chakravarthy A (2017) *Medical Laboratory Technology - Procedure Manual for Routine Diagnostic Tests*. 3rd ed. Vol. I. Tata Mc Graw–Hill Publishing Company Limited (New Delhi). ISBN:9789352606801, 9352606809
- Mukherjee, K.L and Chakravarthy A (2017) *Medical Laboratory Technology - Procedure Manual for Routine Diagnostic Tests*. 3rd ed. Vol. II. Tata Mc Graw–Hill Publishing Company Limited (New Delhi). ISBN:9789352606818
- Jain A. K (2019) *Human Physiology for BDS*. 6th ed. Publisher:Avichal Publishing Company;ISBN: 9788177394337

Note: Examination scheme and mode shall be as prescribed by the Examination branch, University of Delhi, from time to time