



**ALL INDIA INSTITUTE OF MEDICAL SCIENCES, NAGPUR**  
**DEPARTMENT OF PHYSIOLOGY**

**CURRICULUM FOR**  
**POST DOCTORAL CERTIFICATE COURSE IN**  
**LIFESTYLE MEDICINE**



**CURRICULUM FOR POST DOCTORAL CERTIFICATE COURSE IN LIFESTYLE  
MEDICINE**

**Department of Physiology  
AIIMS Nagpur  
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## **I. Mission Statement**

To promote the health and well-being of the community by capacity building of physicians through evidence-based educational programs, innovative research, integrated health care services, and community awareness programs in the field of lifestyle medicine.

## **II. Goal**

To train physicians with the fundamental knowledge and skills necessary to integrate lifestyle medicine principles into clinical practice.

## **III. Programme Outcomes**

Upon completing the Post-Doctoral Certificate in Lifestyle Medicine physicians should be able to:

1. Understand the importance of lifestyle medicine in healthcare with scientific evidence in order to implement lifestyle interventions effectively in clinical practice.
2. Understand the pathophysiology, conventional treatment and complications of common NCDs
3. Understand and implement models of behavior change.
4. Assess, identify nutritional needs, develop & monitor personalized dietary plans.
5. Assess, advise and monitor personalized exercise programs.
6. Assess and Incorporate stress management strategies into patient care.
7. Assess and Incorporate sleep health strategies into patient care.
8. Screen for and counsel on addiction disorders.
9. Assess and Implement balanced strategies pertaining to social connectedness and spiritual health.
10. Incorporate strategies for comprehensive sexual health.
11. Empowering to collaborate with patients to promote behaviour change.
12. Understand the steps for setting up a Lifestyle Medicine clinic.

## **IV. Duration of Programme**

One year

## **V. Eligibility Criteria**

MD/MS/ DNB/ Diploma in any specialty from NMC recognized institutions/centers or INIs

## VI. Selection Process

- Selection for the PDCC in LM will be based on the eligibility criteria and written MCQ based exam as per institute policy.
- The MCQs would be based on pathophysiology, current evidence-based treatment guidelines for NCDs & Lifestyle Medicine approach to various NCDs.

## VII. Teaching Learning Activities

The teaching-learning activities for the PDCC in LM would consist of:

### 1. Online Lectures:

- Weekly online lectures of 01 hour.
- Participate in case studies and group discussions as part of online teaching activities wherever applicable to facilitate deeper understanding and practical application of lifestyle medicine principles.

### 2. In-Person Contact session

- Three contact sessions will be conducted during the course, focusing on Lifestyle Intervention in Clinical Practice.
- Participants will be given an opportunity to witness the actual case discussion online in real time, twice in a month.
- Provision for increasing the duration of contact session will be kept, based on felt need during the course.

### Week-wise Lecture Topics and Plan for Lifestyle Medicine Course

Week	Lecture Topic	Brief Plan
Week 1	Orientation and Course Overview	Introduction to course structure, goals, and expectations.
<b>Module 1</b> <b>Foundations of Lifestyle Medicine: Understanding Behaviour Change</b>		
Week 2	Pathophysiology of various NCDs	Overview of pathophysiology of common NCDs
Week 3	Conventional treatment guidelines for NCDs	Current evidence-based treatment guidelines for common NCDs & Complications
Week 4	Introduction to Lifestyle Medicine	Overview of lifestyle medicine principles, evolution, and competencies.
	Epidemiology of Lifestyle-Related Diseases	Study of key lifestyle-related diseases and epidemiological data.
Week 5	Common Pathophysiology of Lifestyle Diseases	Exploring mechanisms like oxidative stress, gut microbiome, and epigenetics.
	Role of the Lifestyle Physician	Discussion on the physician's role in personal well-being and community wellness.

Week 6	<b>Group Discussion (Week 1 to 5)</b>	<b>Catch-up and review of previous topics.</b>
	<b>MCQ ASSESSMENT TEST 1 (20 MCQs of 01mark each = 20 Marks) MCQ assessment will be done through learning management system, with a limited time window to attempt the MCQ test</b>	
Week 7	Introduction to Behavior Change	Understanding behavior development, habit formation, and change theories.
Week 8	Preparedness for Behavior Change	Learning motivational interviewing and patient communication techniques.
Week 9	Techniques for Behavior Change	Applying frameworks like 5A's, CBT, and setting SMART goals.
Week 10	Sustaining Behavior Change	Strategies for preventing relapse, sustaining motivation, and self-monitoring.
Week 11	<b>Group Discussion (Week 7 to 10)</b>	<b>Time for catching up and discussions.</b>
	<b>MCQ ASSESSMENT TEST 2</b>	
<b>Module 2</b>		
<b>Food as Medicine: Nutrition for Optimal Health</b>		
Week 12	Nutritional Science	Overview of macro- and micronutrients, diet types, and energy balance.
Week 13	Carbohydrates: Role and Health Impact	Understanding glycemic index/load and health effects of carbohydrates.
Week 14	Proteins and Fats: Health Impact	Learning about protein digestion, fat metabolism, and chronic diseases.
Week 15	Micronutrients, Antioxidants, and Phytonutrients	Studying essential vitamins, minerals, and antioxidants.
Week 16	<b>Group Discussion (Week 12 to 15)</b>	<b>Time for catching up and discussions.</b>
<b>MCQ ASSESSMENT TEST 3</b>		
Week 17	Water and Dietary Fibers	Importance of hydration and fiber in maintaining health.
Week 18	Nutritional Assessment	Practical training on anthropometry and body composition analysis.
Week 19	Nutritional Prescription	Developing personalized nutrition plans with fasting and chrono-nutrition principles.
Week 20	Nutritional Monitoring	Tools and strategies for tracking dietary adherence.
Week 21	<b>Group Discussion (Week 17 to 20)</b>	<b>Time for case studies or additional review.</b>
	<b>MCQ ASSESSMENT TEST 4</b>	
<b>Module 3</b>		
<b>Exercise as Medicine: Principles and Applications</b>		
Week 22	Physical Activity: Introduction and Benefits	Exploring physical activity types, fitness, and health impact.
Week 23	Physical Assessment	Practical methods for evaluating physical activity and fitness.
Week 24	Exercise Prescription	Developing exercise plans using the FITT-VP principle.

Week 25	Monitoring Physical Activity	Use of wearables and home-based exercise monitoring strategies.
Week 26	<b>Group Discussion (Week 22 to 25)</b>	<b>Review, practical discussions, and Q&amp;A sessions.</b>
	<b>MCQ ASSESSMENT TEST 5</b>	
Week 27	<b>1<sup>st</sup> Contact Session</b>	<b>One-week workshop with OPD/ward case-based learning.</b>
<b>Module 4</b> <b>The Science of Sleep: Cultivating Restorative Practices</b>		
Week 28 & 29	The Science of Sleep	Role of sleep in health and strategies for sleep hygiene. Management & prevention of Sleep disorders
<b>Module 5</b> <b>Addiction Recovery: Tools for a Sustainable Lifestyle</b>		
Week 30 & 31	Addictions: Management and Prevention	Epidemiology of addiction and lifestyle interventions for addiction management.
Week 32	<b>Group Discussion (Week 28 to 31)</b>	<b>Space for reviewing topics and case studies.</b>
<b>Module 6</b> <b>Building Resilience: Effective Strategies for Stress Management</b>		
Week 33 & 34	Stress Management and Resilience	Positive psychology, LIFT Project, and mindfulness techniques for stress.
<b>Module 7</b> <b>Embracing Spirituality: Enhancing Health through Spiritual Care</b>		
Week 35	Spiritual Care and Social Health	Integrating spiritual and social health into clinical practice.
<b>Module 8</b> <b>Social Connectedness: Enhancing Health through Social Relationships</b>		
Week 36	Introduction to Social Health	Optimizing Social Health
Week 37	<b>Group Discussion (Week 33 to 36)</b>	<b>Space for reviewing topics and case studies.</b>
	<b>MCQ ASSESSMENT TEST 6</b>	
<b>Module 9</b> <b>Exploring Sexual Health: Foundations for Wellbeing</b>		
Week 38 & Week 39	Sexual Health Education and Awareness	Impact of lifestyle on reproductive health and fertility.
	Sexual Health Education and Awareness	Impact of lifestyle on reproductive health and fertility.
	Reproductive Health and Fertility	Reproductive Health and Fertility
	Sexual Health in Clinical Practice	Sexual Health in Clinical Practice
Week 40	<b>Group Discussion (Week 38 to 39)</b>	<b>Space for reviewing topics and case studies.</b>
	<b>MCQ ASSESSMENT TEST 7</b>	
Week 41	<b>2<sup>nd</sup> Contact Session</b>	<b>One-week hands-on clinical exposure and patient interaction.</b>
<b>Module 10</b> <b>Understanding Lifestyle-Related Disorders and Their Management</b>		
Week 42	LM approaches to Metabolic Diseases	Prevention and management of metabolic conditions.
Week 43	LM approaches to Cardiac Diseases	Prevention and management of cardiac conditions.

Week 44	LM approaches to Chronic Lifestyle-Related Kidney Diseases	Developing strategies for CKD and neurological conditions.
Week 45	LM approaches to Chronic Lifestyle-Related Neurological Diseases	LM approaches to Chronic Lifestyle-Related Neurological Diseases
<b>Week 46</b>	<b>Group Discussion (Week 42 to 45)</b>	<b>Space for reviewing topics and case studies.</b>
	<b>MCQ ASSESSMENT TEST 8</b>	
<b>Week 47</b>	LM Approaches to Cancer and Inflammatory Diseases	Lifestyle interventions to manage cancer and inflammation.
<b>Week 48</b>	LM approaches to Mental illness, Reproductive illnesses,	Common Mental illness, Reproductive illnesses,
<b>Week 49</b>	GI disorders and circadian disruption disorders	GI disorders and circadian disruption disorders
<b>Week 50</b>	<b>Group Discussion (Week 47 to 49)</b>	<b>Space for reviewing topics and case studies.</b>
	<b>MCQ ASSESSMENT TEST 9</b>	
<b>Week 51 to 53</b>	<b>Buffer Weeks</b>	<b>Open for exam preparation and project work.</b>
<b>Week 54</b>	<b>3rd Contact session</b>	<b>3 days of sessions and last 3 days Final assessment covering theory and practical knowledge.</b>
<b>Week 55 to 58</b>	<b>Preparation of results</b> <b>Supplementary Examination</b> <b>Distribution of course certificates</b>	

## Specific Learning Objectives

### Week 1

#### Orientation to Course

### Module 1

#### Foundations of Lifestyle Medicine: Understanding Behavior Change

### Week 2

#### Lecture 1: Pathophysiology of Various NCDs and Overview of Pathophysiology of Common NCDs

- Define Non-Communicable Diseases (NCDs): Understand the classification and global burden of NCDs with examples of common conditions like diabetes, hypertension, cardiovascular diseases, and cancer.
- Explain the Pathophysiological Mechanisms: Describe the underlying pathophysiological mechanisms of major NCDs, including metabolic dysregulation, chronic inflammation, and oxidative stress.
- Understand Key Pathways: Illustrate the role of genetics, environment, and lifestyle factors in the development of NCDs.

- Describe Disease-Specific Pathophysiology: Analyze the pathophysiology of selected common NCDs, such as:
  - ❖ Diabetes Mellitus: Insulin resistance and beta-cell dysfunction.
  - ❖ Hypertension: Vascular remodeling and renin-angiotensin-aldosterone system.
  - ❖ Coronary Artery Disease (CAD): Atherosclerosis and plaque formation.
  - ❖ Chronic Obstructive Pulmonary Disease (COPD): Airway inflammation and obstruction.
  - ❖ Cancer: Mechanisms of oncogenesis and tumor progression.
- Discuss the Interconnections: Examine how pathophysiological processes interconnect in multi-morbidity cases like metabolic syndrome.

### **Week 3**

#### **Lecture2: Conventional Treatment Guidelines for NCDs and Evidence-Based Guidelines for Common NCDs & Complications**

- Identify Conventional Treatment Approaches: Outline the historical and conventional treatment approaches for major NCDs such as diabetes, hypertension, cardiovascular diseases, and cancer.
- Understand Evidence-Based Guidelines: Interpret current evidence-based guidelines for the management of common NCDs, including recommendations from global authorities like the WHO, ADA, AHA, and NICE.
- Describe Pharmacological and Non-Pharmacological Interventions: Discuss both pharmacological and lifestyle-based approaches for the prevention and management of NCDs.
- Recognize Disease-Specific Management Guidelines: Summarize specific treatment guidelines for common NCDs, including:
  - ❖ Diabetes: Glycemic targets, oral antidiabetic drugs, and insulin therapy.
  - ❖ Hypertension: Blood pressure control targets and antihypertensive drug classes.
  - ❖ CAD: Anti-platelet therapy, lipid-lowering drugs, and revascularization procedures.
  - ❖ COPD: Bronchodilators, corticosteroids, and oxygen therapy.
  - ❖ Cancer: Principles of chemotherapy, radiotherapy, and surgical interventions.
- Understand the Management of Complications: Explain the evidence-based guidelines for managing complications of NCDs, such as diabetic nephropathy, heart failure, and stroke.
- Compare Conventional vs. Evidence-Based Approaches: Evaluate the differences between conventional and current evidence-based guidelines in terms of outcomes, cost-effectiveness, and patient-centered care.

- Incorporate Guidelines in Practice: Develop a framework to integrate evidence-based guidelines into clinical decision-making and patient education.

## **Week 4**

### **Lecture 3: Introduction to Lifestyle Medicine**

- Define lifestyle medicine and explain its evolution over time.
- Identify key landmark studies that shaped the field of lifestyle medicine.
- Describe the modern lifestyle medicine movement and its relevance in healthcare today.
- Explain the essential components of lifestyle medicine (e.g., diet, physical activity, sleep, stress management, etc.).
- List the core competencies required for the practice of lifestyle medicine.
- Compare and contrast lifestyle medicine with other medical disciplines in terms of approach, focus, and outcomes.

### **Lecture 4: Epidemiology of Lifestyle-Related Diseases (LRD)**

- Identify the key risk factors contributing to lifestyle-related diseases.
- Explain the measures used to assess the burden of lifestyle diseases (e.g., DALYs, QALYs).
- Discuss the concept of epidemiological transition and its impact on public health.
- Analyze trends and patterns from the Global Burden of Disease (GBD) reports related to lifestyle diseases.
- Evaluate the significance of prevention strategies for lifestyle-related diseases from an epidemiological perspective.

## **Week 5**

### **Lecture 5: Common Pathophysiology of Lifestyle-Related Diseases**

- Explain the role of oxidative stress in the development of lifestyle-related diseases.
- Describe how alterations in the gut microbiome contribute to lifestyle diseases.
- Discuss the influence of epigenetic changes on the pathogenesis of lifestyle-related diseases.
- Illustrate the impact of chronobiology on health and disease outcomes.
- Integrate the unified theory of pathogenesis for lifestyle diseases and apply it to clinical practice.

## **Lecture 6: Role of a Lifestyle Physician**

- Recognize the importance of maintaining personal health and well-being as a healthcare provider.
- Develop strategies to enhance personal resilience and prevent burnout.
- Demonstrate the ability to model healthy behaviors for patients and the community.
- Evaluate the role of a physician in promoting wellness at both individual and community levels.
- Assess how a physician's own health practices influence patient care outcomes and community wellness initiatives.

### **Week 6 Buffer Week**

### **Week 7**

#### **Lecture 1: Introduction to Behavior Change**

- Explain the significance of behavior change in improving health outcomes.
- Describe how behaviors are developed over time.
- Discuss the process of habit formation and its impact on lifestyle changes.
- Identify key determinants influencing behavior change (e.g., environment, motivation, social norms).
- Compare and contrast various theories of behavior change (e.g., Health Belief Model, Transtheoretical Model).

### **Week 8**

#### **Lecture 2: Preparedness for Behavior Change**

- Explain the importance of preparedness in facilitating successful behavior change.
- Identify the factors that influence an individual's readiness for change.
- Describe the principles of motivational interviewing (MI) in promoting behavior change.
- Outline the key steps of motivational interviewing and how to apply them during patient interactions.
- Demonstrate effective communication techniques for patient encounters focused on behavior change.

## **Week 9**

### **Lecture 3: Techniques of Behavior Change**

- Describe the “Coach Approach” and its role in supporting behavior change.
- Apply the 5A’s framework (Ask, Advise, Assess, Assist, Arrange) to guide behavior change interventions.
- Explain the principles of Cognitive Behavioral Therapy (CBT) in managing cognitive distortions and promoting behavior change.
- Identify common cognitive distortions and describe strategies to address them.
- Develop SMART (Specific, Measurable, Achievable, Relevant, Time-bound) behavioral goals to enhance adherence.
- Explore how positive psychology can reinforce sustainable behavior change.
- Discuss the role and structure of Group Medical Visits (GMV) in supporting behavior change.

## **Week 10**

### **Lecture 4: Sustaining Behavior Change**

- Explain the importance of sustaining behavior change for long-term health benefits.
- Identify common reasons for lapse and relapse in behavior change efforts.
- Describe strategies to manage and recover from lapses and relapses.
- Discuss the five themes for maintaining behavior change (e.g., motivation, accountability, rewards).
- Apply principles for sustaining behavior change in clinical practice.
- Develop strategies to improve patient adherence to behavior change plans.
- Demonstrate the role of self-monitoring tools (e.g., journals, apps) in maintaining behavior change.

## **Week 11**

### **Buffer week**

## **Module 2**

### **Food as Medicine: Nutrition for Optimal Health**

## **Week 12**

### **Lecture 1: Nutritional Science**

- Define nutrition and explain its role in health and well-being.
- Classify nutrients into macronutrients and micronutrients.
- Identify different types of diets and their characteristics.
- Explain the concept of energy balance and its importance in maintaining health.

- Describe the principles of a whole food plant-based diet across the lifespan.
- Understand the relationship between satiety, taste, and food choices.
- Identify key Indian nutrition resources for reference and dietary planning.

### **Week 13**

#### **Lecture 2: Carbohydrates**

- Classify carbohydrates and understand their role in the diet.
- Explain the concepts of glycemic index (GI) and glycemic load (GL).
- Discuss dietary recommendations for carbohydrates and their health implications.
- Describe the digestion, absorption, and metabolism of carbohydrates.
- Analyze the effects of refining and processing carbohydrates.
- Identify different types of sugars and sweeteners and their impact on health.
- Understand the role of carbohydrates in both health promotion and disease.

### **Week 14**

#### **Lecture 3: Proteins and Fats**

- Classify proteins and list their sources and recommended dietary allowances (RDA).
- Describe the digestion and absorption of proteins in the body.
- Evaluate the impact of refining and processing on protein quality.
- Discuss the role of protein in health maintenance and disease prevention
- Classify fats and list their sources along with RDA.
- Explain the functions of fats in the body.
- Describe the digestion, absorption, and metabolism of fats.
- Understand the concept of the “fat package” and the impact of different oils and fats.
- Analyze how fat processing affects health.
- Discuss the role of fats in the development of chronic diseases.

### **Week 15**

#### **Lecture 4: Micronutrients – Vitamins, Minerals, antioxidants and phytonutrients**

- Define micronutrients and classify them into vitamins and minerals.
- Explain the role of various vitamins and minerals in health.
- Understand the deficiency and toxicity states of key micronutrients.
- Classify antioxidants and phytonutrients and describe their sources.
- Explain the functions of antioxidants and phytonutrients in the body.
- Discuss the role of phytonutrients in disease prevention and health promotion.

### **Week 16 Buffer week**

## **Week 17**

### **Lecture 5: Water and dietary fibers**

- Describe the properties of water and its distribution in the body.
- Explain the functions of water in maintaining health.
- Understand the principles of water replacement and hydration.
- Identify the sources of water and water-rich foods.
- Discuss water requirements and the role of hydration in health and disease.

## **Week 18**

### **Lecture 6: Nutritional Assessment**

- Conduct a physical examination focused on nutritional status.
- Understand anthropometry and its role in assessing nutrition.
- Perform body composition analysis to evaluate nutritional health.
- Identify key investigations used in nutritional assessment.

## **Week 19**

### **Lecture 7: Nutritional Prescription**

- Understand chrono-nutrition and the impact of meal timing on circadian rhythms.
- Explore different fasting methods and their physiological effects.
- Interpret food labels to make informed dietary choices.
- Learn the art of writing a personalized nutrition prescription.

## **Week 20**

### **Lecture 8: Nutritional Monitoring**

- Explain the importance of monitoring nutrition for long-term health outcomes.
- Identify tools used for effective nutritional monitoring.
- Discuss common barriers and challenges to nutritional monitoring.
- Develop strategies to overcome these barriers and ensure adherence

## **Week 21 Buffer week**

## **Module 3**

### **Exercise as Medicine: Principles and Applications**

#### **Week 22**

##### **Lecture 1: Physical Activity – Introduction**

- Define physical activity and distinguish it from related concepts like exercise and fitness.
- Explain the epidemiological relationship between physical activity and the prevention of diseases.
- Describe the role of physical activity in maintaining normal physiological function.
- Analyze the pathophysiological effects of a sedentary lifestyle on health.

#### **Week 23**

##### **Lecture 2: Physical Assessment**

- Understand the physical activity patterns specific to the South Asian context.
- Describe the importance of conducting a comprehensive physical assessment.
- Explain the concept of Metabolic Equivalent of Task (METs) and its applications.
- Identify screening tools used to assess physical fitness and physical activity levels.
- Describe objective physical assessment tests for evaluating fitness.
- Apply principles of risk stratification to safely enhance physical activity and exercise.

#### **Week 24**

##### **Lecture 3: Physical Activity & Exercise Prescription**

- Classify different types of physical activity and exercise.
- Develop personalized exercise prescriptions using the FITT-VP principle (Frequency, Intensity, Time, Type, Volume, Progression).
- Create specific exercise prescriptions for various medical conditions (e.g., diabetes, hypertension, obesity).
- Identify and address common exercise-related issues such as injury or burnout.

#### **Week 25**

##### **Lecture 4: Monitoring Physical Activity & Setting up a Home-based Exercise Unit**

- Explain the importance of monitoring physical activity and exercise for achieving health goals.
- Identify key parameters used to monitor physical activity and exercise performance.

- Explore different tools for monitoring physical activity (e.g., pedometers, wearable devices, fitness apps).
- Describe the steps involved in setting up a home-based exercise space.
- Develop strategies to promote adherence to home-based exercise routines.

### **Week 26 Buffer week**

### **Week 27**

#### **1st contact session One Week Hands-on Training Plan for Participants**

This one-week hands-on training is structured to provide participants with both theoretical knowledge and practical skills based on the content of the lecture series. Each day focuses on an essential area, combining interactive sessions, group discussions, practical activities, and skill-building exercises.

Morning Session will be posting in OPD or Ward for examining patients with Lifestyle related disorders

#### **Introduction to Lifestyle Medicine and Epidemiology of Lifestyle Diseases**

- Objective: Understand the foundations of lifestyle medicine and the epidemiology of lifestyle-related diseases (LRD).

Afternoon Session:

- Activity: Group brainstorming on the comparison of lifestyle medicine with other healthcare approaches.
- Workshop: Use case studies to identify risk factors for LRD and prevention strategies.
- Analyze DALYs/QALYs and trends from the GBD report.
- Interactive Exercise: Participants create a flowchart of preventive strategies for common lifestyle diseases.

#### **Common Pathophysiology of Lifestyle Diseases & Role of a Lifestyle Physician**

- Objective: Understand disease mechanisms and the role of physicians in promoting wellness

Afternoon Session:

- Explore oxidative stress, microbiome, epigenetics, and chronobiology in small groups.
- Practical Activity: Participants integrate the unified theory of LRD pathogenesis into clinical scenarios.
- Interactive Lecture: The role of physicians in maintaining personal health and modeling behavior.
- Activity: Develop personalized strategies for preventing burnout and promoting community wellness.

#### **Introduction to Behavior Change & Preparedness for Change**

- Objective: Equip participants with tools to understand and facilitate behavior change.

Afternoon Session:

- Role-play Activity: Simulate behavior change scenarios using principles from the Transtheoretical Model and Health Belief Model.
- Workshop: Develop personalized behavior change plans considering determinants like motivation and environment.
- Training in Motivational Interviewing (MI):
- Participants practice MI techniques in small groups.
- Patient Simulation: Apply MI principles in simulated patient encounters.

### **Techniques of Behavior Change & Sustaining Behavior Change**

- Objective: Teach effective behavior change techniques and how to maintain long-term changes.

#### **Afternoon Session:**

- Workshop: Apply the 5A's framework and CBT techniques in small-group activities.
- Interactive Exercise: Identify and address common cognitive distortions through role-play.
- Group Discussion: Explore the use of SMART goals and positive psychology to sustain change.
- Activity: Participants design group medical visits (GMV) for supporting behavior change.

### **Nutrition Science and Assessment**

- Objective: Provide practical skills in nutrition science and assessment techniques.

#### **Afternoon Session:**

- Workshop: Classify macronutrients and micronutrients and identify their roles in health.
- Practical Session: Participants assess energy balance and create sample plant-based meal plans.
- Hands-on Training: Conduct anthropometric assessments and body composition analysis.
- Interactive Session: Use case studies to perform nutritional assessments and plan interventions.

### **Nutritional Prescription and Monitoring**

- Objective: Develop skills in writing nutrition prescriptions and monitoring outcomes.

#### **Afternoon Session:**

- Workshop: Write personalized nutrition prescriptions considering chrono-nutrition and fasting methods.
- Activity: Analyze and interpret food labels with practical exercises.
- Interactive Discussion: Identify barriers to nutritional monitoring and develop strategies to overcome them.
- Practical Activity: Use nutrition apps and self-monitoring tools to track dietary intake.

### **Physical Activity, Assessment, and Prescription**

- Objective: Train participants in physical activity assessment, prescription, and monitoring.

#### **Afternoon Session:**

- Practical Session: Conduct physical fitness assessments (e.g., METs calculation, grip strength test).
- Workshop: Use the FITT-VP principle to create exercise prescriptions for various health conditions.
- Interactive Training: Explore tools for physical activity monitoring (e.g., pedometers, wearables).
- Hands-on Activity: Participants design a home-based exercise unit and develop strategies to ensure adherence.

#### Program Conclusion

- Final Group Presentations: Participants present their exercise, behavior change, and nutrition plans.
- Feedback Session: Group discussion on challenges faced during training and lessons learned.
- Certificate Distribution & Closing Remarks: Wrap-up and future action planning.

This training plan ensures a comprehensive understanding of lifestyle medicine, behavior change, nutrition, and physical activity, providing participants with practical skills to apply in clinical and community settings.

## **Module 4**

### **The Science of Sleep: Cultivating Restorative Practices**

#### **Week 28 & Week 29**

##### **Lecture 1: Sleep**

- Understand the epidemiology of sleep and current sleep duration recommendations across age groups.
- Describe the physiology of sleep and its role in maintaining health and well-being.
- Analyze the health consequences of sleep deprivation, including its effects on cognitive, emotional, and physical health.
- Identify strategies for managing sleep deprivation and promoting healthy sleep habits.

## **Module 5**

### **Addiction Recovery: Tools for a Sustainable Lifestyle**

#### **Week 30 & Week 31**

##### **Lecture 1: Addictions**

- Explain the epidemiology of addiction, including the prevalence of substance use disorders.
- Describe the physiology of addiction and how it affects the brain and behavior.
- Discuss the health consequences of addiction on individuals and communities.
- Develop strategies for managing addiction, including prevention, treatment, and rehabilitation approaches.

## **Week 32 Buffer Week**

### **Module 6**

#### **Building Resilience: Effective Strategies for Stress Management**

### **Week 33 & Week 34**

#### **Lecture 1: Stress and Resilience, Positive Psychology Technique**

- Explore the LIFT Project and its application to well-being.
- Define positive psychology and its principles in fostering mental health.
- Analyze the role of emotions in health, well-being, and behavior.
- Apply positive psychology interventions to enhance mental health and life satisfaction.
- Define resilience and its importance in personal and professional contexts.
- Develop practical skills to increase resilience, including coping strategies and mindset shifts.

### **Module 7**

#### **Embracing Spirituality: Enhancing Health through Spiritual Care**

### **Week 35**

#### **Lecture 1: Spiritual Care**

- Explain the importance of spiritual care in holistic health care.
- Define key terms related to spirituality and describe its characteristic outcomes.
- Understand the principles of spiritual care and their application in clinical practice.
- Analyze the role of spirituality in both health promotion and disease management.
- Providing Spiritual Care
- Conduct a spiritual assessment to identify patients' spiritual needs.
- Recognize signs of spiritual distress and its impact on health
- Implement spiritual interventions to support patients' well-being.
- Understand the role of physicians as spiritual caregivers and develop skills to provide compassionate spiritual care.

## **Module 8**

### **Social Connectedness: Enhancing Health through Social Relationships**

#### **Week 36**

##### **Lecture 1: Introduction to Social Health**

- Understand the importance of social health and its impact on overall well-being.
- Describe the development of social health across the lifespan.
- Identify key determinants that influence social health.
- Apply tools and methods for the assessment of social health.

##### **Lecture 2: Optimizing Social Health**

- Use event scenarios and trigger questions to explore social health challenges.
- Understand the principles and processes for achieving optimal social health.
- Develop strategies to manage anger and promote emotional regulation.
- Promote family wellness through healthy relationships and communication.
- Apply strategies for workplace-related wellness, including stress management and team collaboration.
- Practice group activities that foster social well-being and improve group dynamics.

#### **Week 37 Buffer Week**

## **Module 9**

### **Exploring Sexual Health: Foundations for Wellbeing**

#### **Week 38**

##### **Lecture 1: Sexual Health and Well-being**

- Introduction to Sexual Health
- Define sexual health and its components as per the WHO framework.
- Understand the importance of sexual health in overall well-being.
- Recognize the role of healthy sexual relationships in mental, emotional, and physical health.
- Sexual Development and Lifespan Changes
- Describe sexual development across different stages of life (adolescence, adulthood, aging).
- Identify physiological and psychological changes affecting sexual health during the lifespan.
- Understand gender identity, sexual orientation, and the spectrum of sexual diversity.

## **Lecture 2: Sexual Health Education and Awareness**

- Identify the importance of comprehensive sex education in promoting healthy behaviors.
- Understand cultural, social, and religious influences on sexual attitudes and behaviors.
- Discuss the impact of stigma, myths, and taboos on sexual health.
- Prevention and Management of Sexual Health Issues
- Identify common sexual health disorders (e.g., erectile dysfunction, sexual pain disorders, STIs).
- Discuss preventive strategies for sexually transmitted infections (STIs) and unintended pregnancies.
- Explore methods for promoting safe sex practices, including contraceptive options.

## **Week 39**

### **Lecture 3. Reproductive Health and Fertility**

- Understand the basics of reproductive health, including fertility and infertility.
- Explain the impact of lifestyle factors on reproductive health (e.g., diet, stress, exercise).
- Discuss family planning methods and access to reproductive healthcare.
- Sexual Violence and Abuse
- Recognize the impact of sexual violence and abuse on physical and mental health.
- Identify strategies for supporting survivors of sexual violence, including referral pathways.
- Understand the importance of consent and healthy boundaries in sexual relationships.
- Mental Health and Sexual Well-being
- Discuss the relationship between sexual health and mental well-being.
- Identify the impact of stress, anxiety, and depression on sexual functioning.
- Explore counseling and therapeutic approaches to support sexual well-being.

### **Lecture 4: Sexual Health in Clinical Practice**

- Conduct sensitive sexual health assessments in clinical settings.
- Develop communication skills for discussing sexual health issues with patients.
- Understand the importance of confidentiality, empathy, and non-judgment in sexual health care.
- Promoting Healthy Relationships and Well-being
- Explore the role of intimacy, trust, and communication in healthy sexual relationships.
- Discuss strategies to strengthen sexual well-being within partnerships.
- Understand the impact of relationship dynamics on sexual health and satisfaction.

## **Week 40 Buffer Week**

## Week 41

### 2nd contact session of One Week

One Week Contact Session Plan: Hands-on and Clinical OPD/Ward Exposure with Lifestyle Medicine (LM) Focus

This 7-day plan is designed to provide participants with hands-on clinical exposure, interactive learning, and case-based discussions in OPD and ward settings, integrating Lifestyle Medicine principles.

#### Sleep & Addiction Management

- Objective: Understand the role of sleep and addiction in health and clinical practice.
- Mornings Session (OPD Exposure):
  - Observe sleep disorder cases (insomnia, sleep apnea) in a clinical setting.
  - Practice conducting sleep assessments using screening tools (e.g., Pittsburgh Sleep Quality Index).
  - Case discussion: Strategies to manage sleep deprivation.
- Afternoon Session (Hands-on):
  - Workshop on identifying substance use disorders.
  - Role-play: Motivational interviewing techniques for addiction counseling.
  - Group activity: Develop lifestyle interventions to improve sleep hygiene and manage addiction.

#### Positive Psychology, Stress & Resilience

- Objective: Develop resilience and use positive psychology interventions in healthcare.
- Morning Session (Ward Exposure):
  - Engage with patients facing chronic illnesses; assess mental well-being and resilience.
  - Practice brief mindfulness and stress management techniques with patients.
- Afternoon Session (Hands-on):
  - Workshop on applying the LIFT Project techniques for well-being.
  - Case scenario discussion: Designing coping strategies for resilience.
  - Group activity: Role-play on using positive psychology interventions with patients.

#### Spiritual Care & Social Health

- Objective: Provide holistic care addressing spiritual and social health.
- Morning Session (Clinical Exposure):
  - Participate in a spiritual care round and observe patient interactions.
  - Conduct spiritual assessments and identify spiritual distress.
  - Case-based discussion: Implementing spiritual interventions in chronic illness care.
- Afternoon Session (Hands-on):
  - Workshop on assessing social health and managing anger.
  - Role-play: Developing family wellness and workplace wellness strategies.
  - Group activity: Practice group dynamics and collaborative exercises to foster social health.

## **Sexual Health, Reproductive Health, and Fertility**

- Objective: Gain skills in sexual health assessments and reproductive healthcare.
- Morning Session (OPD Exposure):
  - Observe consultations in sexual health and reproductive health clinics.
  - Conduct sensitive sexual health assessments under supervision.
  - Case discussion: Managing common sexual health issues (e.g., STIs, infertility).
- Afternoon Session (Hands-on):
  - Workshop on communication skills for discussing sexual health topics.
  - Scenario-based learning: Promoting healthy relationships and sexual well-being.
  - Group discussion: Strategies for family planning and addressing sexual violence.

## **LM Approaches to Metabolic & Cardiac Diseases**

- Objective: Integrate lifestyle interventions for managing metabolic and cardiac diseases.
- Morning Session (OPD/Ward Exposure):
  - Observe patient consultations for diabetes, obesity, dyslipidemia, and hypertension.
  - Practice developing personalized lifestyle prescriptions (diet, exercise) under supervision.
- Afternoon Session (Hands-on):
  - Workshop on monitoring metabolic parameters (e.g., blood glucose, lipid profile).
  - Group exercise: Case-based discussions on managing CVD through lifestyle changes.
  - Role-play: Counseling patients with metabolic diseases on lifestyle modifications.

## **LM Approaches to Chronic Kidney & Neurological Diseases**

- Objective: Understand lifestyle interventions for managing CKD and neurological conditions.
- Morning Session (Ward/OPD Exposure):
  - Participate in rounds with nephrology and neurology teams.
  - Practice clinical evaluations for CKD and neurological diseases (e.g., stroke, dementia).
- Afternoon Session (Hands-on):
  - Workshop: Develop lifestyle management plans for CKD (diet, hydration, physical activity).
  - Group activity: Design cognitive training and stress management interventions for neurological diseases.
  - Case discussion: Monitoring progress in CKD and neurological patients.

## **LM Approaches to Cancer, Inflammatory, GI, and Circadian Disruption Diseases**

- Objective: Apply LM principles to cancer, inflammatory, GI, and circadian disruption diseases.
- Morning Session (Clinical Exposure):
  - Observe patient consultations for cancer, GI disorders, and chronic inflammation.

- Practice developing dietary plans (e.g., anti-inflammatory diets) and circadian alignment strategies.
- Afternoon Session (Hands-on):
  - Workshop on circadian disruption management (sleep hygiene, meal timing).
  - Group activity: Design lifestyle interventions to manage chronic GI disorders and cancer.
  - Case scenario discussion: Create personalized plans for managing circadian rhythm disorders in shift workers.
- Program Conclusion and Certification
  - Final Group Presentations:
  - Participants present lifestyle intervention plans based on clinical cases observed during the contact session.
  - Feedback Session:
  - Reflection on lessons learned and challenges faced.
  - Open discussion on applying LM concepts in clinical practice.
  - Certificate Distribution & Closing Remarks.
- Materials and Resources Required:
  - Assessment tools (e.g., sleep quality indices, addiction screening forms).
  - Access to OPD and ward rounds in relevant specialties (sleep clinic, psychiatry, nephrology, cardiology, reproductive health).
  - Educational materials for positive psychology, sexual health, and chronic disease management.
  - Wearable devices and nutrition tracking tools for hands-on activities.

## **Module 10**

### **Understanding Lifestyle-Related Disorders: Common Disorders and Their Management**

#### **Week 42**

#### **Lecture 1: LM approaches to Metabolic Diseases**

- Obesity
  - Define obesity and describe its classification and risk factors.
  - Explain the health consequences of obesity, including its impact on metabolism.
  - Develop strategies for lifestyle management of obesity, including diet, physical activity, and behavior change.
- Diabetes Mellitus
  - Describe the epidemiology and pathophysiology of diabetes mellitus (Type 1, Type 2).
  - Identify symptoms, complications, and diagnostic criteria for diabetes.
  - Formulate a lifestyle intervention plan for diabetes management, including diet, exercise, and stress reduction.

## **Week 43**

### **Lecture 2: LM approaches to Cardiac Diseases**

- Dyslipidemia
  - Explain the types of dyslipidemia and their risk factors.
  - Discuss the impact of dyslipidemia on cardiovascular health.
  - Develop lifestyle interventions to manage dyslipidemia and reduce cardiovascular risks.
- Cardiovascular Disease (CVD)
  - Describe the epidemiology and pathophysiology of common cardiovascular diseases (e.g., hypertension, coronary artery disease).
  - Identify lifestyle factors that contribute to CVD and its complications.
  - Design lifestyle interventions to prevent and manage CVD.

## **Week 44**

### **Lecture 3: LM approaches to Chronic Lifestyle-Related Kidney Diseases**

- Chronic Kidney Disease (CKD)
- Describe the epidemiology and etiopathophysiology of CKD.
- Perform a clinical evaluation of CKD, including laboratory and diagnostic tests.
- Develop a lifestyle management plan for CKD, focusing on diet, physical activity, and hydration.
- Identify key metrics for monitoring CKD progression and treatment response.

## **Week 45**

### **Lecture 4: LM approaches to Chronic Lifestyle-Related Neurological Diseases**

- Neurological Diseases
- Describe the epidemiology and etiopathophysiology of common neurological diseases (e.g., stroke, Parkinson's disease, dementia)
- Conduct a clinical evaluation of neurological diseases, including symptom assessment and diagnostic tests
- Formulate lifestyle interventions for managing neurological diseases, including cognitive training, physical activity, and stress management.

## **Week 46 Buffer Week**

## **Week 47**

### **Lecture 4: LM approaches to Cancer & Inflammatory Disease**

- **Cancer**
  - Describe the epidemiology of common cancers and their global burden.
  - Explain the etiopathogenesis of cancer, including genetic, environmental, and lifestyle factors.
  - Develop lifestyle strategies for cancer prevention and management, including nutrition, physical activity, and stress reduction.
- **Inflammation**
  - Explain the epidemiology of chronic inflammatory diseases (e.g., rheumatoid arthritis, inflammatory bowel disease).
  - Describe the etiopathogenesis of chronic inflammation and its role in disease development.
  - Design lifestyle interventions to manage chronic inflammation, focusing on diet, physical activity, and stress reduction.

## **Week 48**

### **Lecture 5: LM approaches to Mental illness, Reproductive illnesses**

- **Mental Illness and Lifestyle Medicine**
  - **Epidemiology and Etiopathophysiology:** Describe the prevalence and burden of common mental illnesses (e.g., anxiety, depression, bipolar disorder).
  - Explain the neurobiological and psychosocial factors contributing to mental illness.
  - **Lifestyle Interventions in Mental Health**
  - Explore the role of physical activity, diet, sleep, and stress management in mental health.
  - Apply mindfulness-based practices and positive psychology interventions for mental well-being.
  - Develop strategies for using social connectivity and community support to enhance mental health outcomes.
  - **Prevention and Management of Mental Illness**
  - Identify lifestyle-related risk factors for mental illness and strategies for prevention.
  - Formulate personalized lifestyle intervention plans for managing mental illness.
  - Monitor progress and adherence to lifestyle interventions for mental health improvement.

- Reproductive Illness and Lifestyle Medicine
  - Epidemiology and Etiopathophysiology of Reproductive Illness: Describe the epidemiology and causes of common reproductive illnesses (e.g., PCOS, infertility, endometriosis).
  - Explain the impact of hormonal imbalances and lifestyle factors on reproductive health.
  - Lifestyle Interventions in Reproductive Health
  - Develop nutrition and exercise plans tailored to improve reproductive health outcomes.
  - Explore the role of stress reduction, sleep, and weight management in managing reproductive illnesses.
  - Identify the impact of substance use and environmental factors on reproductive health.
  - Monitoring and Management of Reproductive Illness
  - Formulate lifestyle-based management strategies for conditions such as PCOS and infertility.
  - Evaluate progress in reproductive health interventions and make necessary adjustments.

## **Week 49**

### **Lecture 6: GI disorders and circadian disruption disorders**

- Gastrointestinal (GI) Diseases and Lifestyle Medicine
  - Epidemiology and Etiopathophysiology of GI Diseases: Describe the prevalence and causes of lifestyle-related GI diseases (e.g., GERD, IBS, non-alcoholic fatty liver disease).
  - Explain the role of the gut microbiome in maintaining gastrointestinal health and disease development.
  - Lifestyle Interventions in GI Health
  - Develop dietary plans (e.g., high-fiber diets, elimination diets) to manage GI disorders.
  - Explore the impact of stress and circadian rhythms on GI health and disease.
  - Promote physical activity to enhance digestive function and manage GI symptoms.
  - Monitoring and Management of GI Diseases
  - Monitor dietary adherence and symptom progression in patients with GI diseases.
  - Formulate lifestyle management strategies for chronic GI disorders to prevent complications.

- **Circadian Disruption Diseases and Lifestyle Medicine**
  - Epidemiology and Etiopathophysiology of Circadian Disruption Diseases
  - Explain the role of circadian rhythms in health and disease.
  - Identify diseases associated with circadian disruption (e.g., shift work disorder, metabolic syndrome, insomnia).
  - Lifestyle Interventions for Circadian Health
  - Develop lifestyle strategies to restore circadian alignment, including meal timing and sleep hygiene.
  - Explore the impact of light exposure, physical activity, and stress management on circadian rhythms.
  - Identify dietary and behavioral interventions to optimize circadian health for shift workers.
  - Monitoring and Management of Circadian Disruption
  - Monitor adherence to lifestyle interventions targeting circadian alignment.
  - Formulate personalized plans to address circadian disruption in patients with sleep disorders or shift work schedules.

### **Week 50 Buffer Week**

### **Week 51-53**

### **Revision and Preparation weeks**

### **Week 54**

#### **3<sup>rd</sup> Contact Session**

**First 3 days contact session with case discussion in Wards/OPD or conference  
2 days of Final exam**

#### **Eligibility for Final exam**

Minimum of 80 % cumulative score in end of modules MCQ tests

Minimum of 75 % attendance in group discussion sessions

#### **Pattern of Final Exam**

#### **Components:**

- 1. Theory Examination (50 Marks)**
  - 20 MCQs x 01 Mark = **20 Marks**
  - 04 Short Notes x 05 Marks = **20 Marks**
  - 01 LAQ x 10 Marks = **10 Marks**
- 2. Practical Examination (50 Marks)**

## **01 Long Case Evaluated as follows:**

The case presentation will focus on five domains, each evaluated on Assessment and Management skills. Each domain will carry 10 marks (05 for Assessment and 05 for Management), with a total of 50 marks across all domains.

Domains:

1. Nutrition
  - Assessment: 05 marks
  - Management: 05 marks
2. Physical Activity/Exercise (PA/E)
  - Assessment: 05 marks
  - Management: 05 marks
3. Sleep
  - Assessment: 05 marks
  - Management: 05 marks
4. Stress/Social Connectivity/Addiction/Spirituality/Sexual Health
  - Assessment: 05 marks
  - Management: 05 marks
5. Vitals/General Health
  - Assessment: 05 marks
  - Management: 05 marks

**Passing criteria for certification: Minimum of 50 % marks separately in Theory and Practical Exam**

**Repeat Summative Examination will be conducted in 45 days after results.**

### **Suggested Books:**

1. **Lifestyle Medicine by James M. Rippe** A comprehensive guide covering the foundations of lifestyle medicine, including prevention and management strategies for lifestyle-related diseases.
2. **Textbook of Lifestyle Medicine by Jeffrey I. Mechanick and Robert F. Kushner** This textbook provides a clinical approach to lifestyle medicine, discussing interventions for chronic diseases, with a strong emphasis on dietary, physical, and mental health.
3. **Lifestyle Medicine: A Manual for Clinical Practice by Jeffrey I. Mechanick and Elise M. Brett** Practical guidance for healthcare professionals on integrating lifestyle medicine into patient care, covering evidence-based interventions for diet, physical activity, and stress management.

4. **Essentials of Lifestyle Medicine by James M. Rippe** A condensed version of Rippe's "Lifestyle Medicine," offering key insights into the principles of lifestyle modification for disease prevention and management.
5. **The China Study by T. Colin Campbell and Thomas M. Campbell II** A landmark book on the impact of diet on health, focusing on the relationship between nutrition and chronic diseases, particularly cancer and heart disease.
6. **How Not to Die by Dr. Michael Greger** An evidence-based exploration of how lifestyle factors, particularly diet, influence health outcomes. Includes practical advice on diet and lifestyle interventions.
7. **Integrative Preventive Medicine by Richard H. Carmona, Mark Liponis, and Andrew Weil** This book explores integrative and preventive approaches, emphasizing lifestyle interventions to prevent chronic diseases.
8. **The Blue Zones: 9 Lessons for Living Longer from the People Who've Lived the Longest by Dan Buettner** A study of regions around the world where people live longer, healthier lives, with insights on lifestyle habits that contribute to longevity and well-being.
9. **Frates B, Bonnet JP, Joseph R, Peterson JA. Understanding lifestyle medicine. In: Frates B, editor. Lifestyle Medicine Handbook: An Introduction to the Power of Healthy Habits. Monterey, CA: Healthy Learning; 2021.**
10. **Egger G, Binns A, Rossner S. Lifestyle Medicine: Managing Diseases of Lifestyle in the 21st Century. 2nd ed. North Ryde, Australia: McGraw-Hill; 2010.**