



## ONLINE CERTIFICATION IN NUTRITION

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### Module Title: "Mastering the Science of Weight Management"

#### Module Overview:

This module aims to provide a comprehensive understanding of the key components of a healthy diet and their roles in maintaining overall health and managing weight.

#### 1. Introduction to Dietary Components

- Brief overview of the major components of a healthy diet.

#### 2. Carbohydrates: Primary Constituents of the Diet

- Definition and types of dietary carbohydrates.
- Impact of sugars on health and obesity.
- Importance of carbohydrate modification for health and weight management.

#### 3. Lipids: Key Players in Health & Weight Management

- Explanation of fatty acids and their importance.
- Discussion on cholesterol, triglycerides, and their roles in health.
- Understanding the effects of trans fatty acids on health.
- Relationship between dietary fat and obesity.

#### **4. Protein: Builder of Body Tissues**

- Functions of proteins in the body.
- Discussion on protein modification and its relevance to health and weight management.

## **5. Fat-Soluble Vitamins**

- Importance and sources of vitamin A and carotenoids.
- Role of vitamin E in health.
- Significance of vitamin D and K.

## **6. Water-Soluble Vitamins**

- Overview of thiamine, riboflavin, and niacin.
- Importance of vitamin B6, pantothenic acid, and biotin.
- Understanding folate, vitamin B12, and vitamin C.

## **7. Body Water & Minerals**

- Importance of water in the body.
- Role of calcium, phosphorus, and magnesium.
- Discussion on sodium and potassium.
- Understanding iron, zinc, selenium, and other trace minerals.

## **Module 2-**

### **Lesson 1: Etiology**

- A) Heredity
- B) Factors Influencing Weight Gain
- C) Theories of Obesity
- D) Genesis of Obesity (Barker's Hypothesis)

### **Lesson 2: Consequences**

- A) Mechanical Disabilities like Osteoarthritis, Gout, Hernia, Varicose Veins & Pulmonary Diseases
- B) Cardiovascular Problems including Hypertension, Stroke & Coronary Heart Disease
- C) Conditions Associated with Insulin Resistance, such as Non-Insulin Dependent Diabetes Mellitus (NIDDM)
- D) Endocrinal Disturbances such as Polycystic Ovary Syndrome (PCOS)
- E) Gall Bladder Disease
- F) Complications of Childbirth
- G) Psychological Disturbances
- H) Certain Types of Cancer, e.g., Colon Cancer

## **Module 3**

### **Lesson 1: Adipose Tissue: The Fat Depot**

#### **A) Structure**

#### **B) Regional Distribution**

#### **C) Adipocytes**

##### **I) Hypertrophy & Hyperplasia**

##### **II) Fat Cell Development**

#### **D) Fat Storage**

##### **I) Source of Lipid in Fat Cells**

##### **II) Role of Lipoprotein Lipase**

### **Lesson 2: Understanding Weight Classifications**

#### **A) Meaning of Terms: Overweight, Obesity, and Underweight**

## **Module 4: Understanding Energy Metabolism and Expenditure for Optimal Health"**

### **Lesson 1: Energy In: Metabolic Processes of Ingested Food**

- A) Energy Transformation in the Body
- B) Role of Carbohydrates in Energy Metabolism
- C) Role of Lipids in Energy Metabolism
- D) Role of Protein in Energy Metabolism

### **Lesson 2: Total Energy Expenditure**

- A) Basal Metabolic Rate (BMR)
- B) Factors Influencing BMR
- C) Exercise and its Impact on BMR
- D) Relationship between BMR and Obesity

### **Lesson 3: Energy Expenditure: Diet-Induced Thermo genesis**

- A) Understanding Diet-Induced Thermo genesis (DIT)
- B) Thermo genesis and its Relation to Overeating

### **Lesson 4: Energy Expenditure: Physical Activities**

- A) Measurement of Activity Energy Expenditure
- B) Relationship between Non-Resting Energy Expenditure and Weight

## **Module 5 "Effective Dietary Strategies for Weight Management"**

### **Lesson 1: Understanding Weight and Obesity**

- A) Overview of Obesity and Central Obesity
- B) Approaches to Body Weight Reduction

### **Lesson 2: Techniques for Weight Management**

- C) Weight Management Strategies and Techniques
- D) Dietary Modifications for Weight Loss

### **Lesson 3: Exploring Fat in the Diet**

- E) Variations of Fat in the Diet
- F) Evaluation of Fad Diets and Their Impact on Weight Management

## **Role of Physical Activity in Weight Management**

- A) Levels and Types of Physical Activity
- B) Fitness Assessment
  - Cardio Respiratory Fitness
  - Flexibility
- C) Benefits of an Active Lifestyle
- D) Effect of Physical Activity on Body Fatness
- E) Appropriate Type, Duration & Intensity of Exercise
- F) Desk Exercises
- G) Behavioral Modifications for Weight Management

## **Module 6: "Exploring Approaches to Weight Management and Well-being"**

Title: "Exploring Approaches to Weight Management and Well-being"

### **1) Body Therapy**

- A) Principles of Body Therapy
- B) Benefits of Body Therapy
- C) Massage as a Stress Buster
- D) Physical Benefits of Massage
- E) Techniques of Massage
- F) Contraindications

### **2) Lymphatic Drainage**

- A) Advantages and Types
- B) Key Points in Manual Lymphatic Drainage
- C) Contraindications

### **3) Passive Activity for Weight Loss**

- A) Understanding Fat-burning and Non-movement Strategies
- B) Benefits and Contraindications

### **4) Weight Loss Drugs**

- A) CNS-Acting Drugs
- B) Non-CNS Acting Drugs
- C) Evaluating the Effectiveness of Drug Therapy



## 5) Dietary Supplements

- A) Common Dietary Supplements and Their Benefits
- B) Supplements and Weight Loss

## 6) Low-Calorie Diets

- A) Health Benefits and Adverse Effects
- B) Physiological Effects
- C) Exploring Very Low-Calorie Diets

## 7) Weight Loss Surgery

- A) Types of Bariatric Surgery
- B) Dietary Modifications for Bariatric Surgery

## 8) Extreme Approaches to Weight Loss

- A) Understanding Anorexia Nervosa
- B) Exploring Bulimia Nervosa
- C) Addressing Binge Eating
- D) Nutritional Rehabilitation and Psychotherapy