

Course Title: Certified Diabetes Educator Program

Duration: 12 weeks (can be adjusted as per depth)

Module 1- The Endocrine System

1. Role of hormones in regulating body functions
2. The pancreas and insulin production
3. Endocrine disorders related to diabetes

Module 2 - "Principles of Nutrition and Dietary Guidelines (RDA for General Health)"

Introduction to Nutrients

- Definition and importance of nutrients in the human body
- Classification of nutrients: macronutrients and micronutrients

Macronutrients

- **Carbohydrates**
 - Types: simple vs. complex carbohydrates
 - Role in energy production and blood sugar regulation
 - Dietary sources and recommended intake
- **Proteins**
 - Structure and function of proteins
 - Essential vs. non-essential amino acids
 - Dietary sources and protein requirements
- **Fats**
 - Types of fats: saturated, unsaturated, and trans fats
 - Role of fats in hormone production and energy storage
 - Recommended fat intake and sources of healthy fats

Micronutrients

- **Vitamins**
 - Importance of vitamins for metabolic processes
 - Fat-soluble vs. water-soluble vitamins
 - Dietary sources and recommended daily allowances (RDAs)

- **Minerals**
 - Key minerals essential for bodily functions (e.g., calcium, potassium, magnesium)
 - Role of minerals in metabolic and physiological processes
 - Dietary sources and recommended intake

Water and Hydration

- Importance of water in maintaining homeostasis
- Daily water intake recommendations
- Effects of dehydration on health and diabetes

Module 3: Introduction to Diabetes

1. Overview of Type 1, Type 2, Gestational, and Prediabetes
2. Pathophysiology: How diabetes affects the body
3. Risk factors and prevention
4. Complications (acute & chronic)
5. Epidemiology: Global and regional statistics

Module 4: Diabetes Diagnosis and Monitoring

1. Diagnostic Criteria (Fasting glucose, HbA1c, OGTT)
2. Understanding blood sugar monitoring devices (glucometers, CGMs)
3. Interpreting lab results
4. Continuous Glucose Monitoring (CGM) and its relevance

Module 5: Diabetes Nutrition Therapy

1. Principles of Medical Nutrition Therapy (MNT)
2. Carbohydrate counting and exchange lists
3. Glycemic index and glycemic load
4. Meal planning for diabetes (including different age groups and co-morbidities)
5. Portion control and label reading

Module 6: Pharmacology and Diabetes

1. Insulin types, administration, and adjustments
2. Oral hypoglycemic agents (Metformin, SGLT-2 inhibitors, etc.)
3. Injectable therapies (GLP-1 receptor agonists)
4. Medication management in special populations (elderly, pregnancy, etc.)
5. Potential side effects and adherence strategies

Module 7: Behavioral Strategies and Patient Education

1. Patient education techniques for lifestyle modification
2. Overcoming barriers to adherence (cultural, psychological)
3. Motivational interviewing and counseling
4. Stress management and mental health in diabetes
5. Building long-term healthy habits

Module 8: Exercise and Physical Activity

1. Benefits of exercise in diabetes control
2. Exercise recommendations for different populations (age, co-morbidities)
3. Safe exercise practices for diabetics
4. Adjusting exercise based on insulin and medication use
5. Monitoring and modifying physical activity

Module 9: Complications and Special Considerations

1. Macro vascular complications of Diabetes Mellitus
2. Micro vascular complications of Diabetes Mellitus
3. Managing diabetes in special conditions (pregnancy, elderly, children)
4. Foot care and wound management
5. Prevention strategies and early detection

Module 10: Technology in Diabetes Care

1. Overview of diabetes apps and telemedicine tools
2. Use of continuous glucose monitors (CGM) and insulin pumps
3. Data analysis for better treatment adjustments
4. Remote monitoring and patient engagement strategies

Module 11: Diabetes in Public Health

1. Diabetes as a public health issue
2. National and global diabetes prevention programs
3. Screening and awareness campaigns
5. Policy development for diabetes care and prevention

Assessment & Certification

- Final Exam: Multiple-choice test covering all modules
- Practical Exam: Case study or role-play evaluation
- Project: Develop a comprehensive diabetes education program for a community
- Certification: Successful completion grants the "Certified Diabetes Educator" title



ONLINE CERTIFICATION IN NUTRITION
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