

## Unit 3 One Shot by SkillVeda

### Diet in Health and Disease II

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#### Hypertension (High Blood Pressure)

- **Definition:** Condition where blood pressure remains consistently high ( $>140/90$  mmHg).
  - **Silent Killer:** No symptoms in early stages but can cause serious complications.
  - **Optimum BP Levels:** Normal: 120/80 mmHg
  - **Systolic Pressure:** Pressure during heart contraction.
  - **Diastolic Pressure:** Pressure during heart relaxation.
  - **Sphygmomanometer:** Device used to measure blood pressure.
  - **Consequences:** Stroke, heart failure, kidney disease, dementia, sleep apnea, arrhythmia.
  - **Modifiable Risk Factors:** Smoking, alcohol, obesity, high salt intake, lack of exercise.
  - **Non-Modifiable Risk Factors:** Age, genetics, gender.
  - **DASH Diet:** High in fruits, vegetables, whole grains; low in salt and saturated fat.
  - **Dietary Objectives:** Lower BP, reduce heart/kidney disease risk, manage weight, limit sodium.
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#### Jaundice & Hepatitis

- **Jaundice:** Yellowing of skin and eyes due to excess bilirubin.
- **Hepatitis:** Liver inflammation, often caused by viral infections.
- **Types of Jaundice:**
  - **Pre-hepatic:** Excess RBC breakdown.
  - **Hepatic:** Liver dysfunction.
  - **Post-hepatic:** Bile duct obstruction.

- **Difference:** Jaundice is a symptom; hepatitis is a liver disease.
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## **Celiac Disease**

- **Definition:** Autoimmune disorder triggered by gluten (wheat, barley, rye).
  - **Symptoms:** Bloating, diarrhea, weight loss, fatigue.
  - **Complications:** Malabsorption, anemia, osteoporosis, infertility, neurological disorders.
  - **Dietary Management:** Strict gluten-free diet (rice, corn, quinoa, fruits, vegetables).
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## **Lactose Intolerance**

- **Definition:** Inability to digest lactose due to lactase enzyme deficiency.
  - **Types:**
    - **Primary (Congenital):** Present from birth (genetic).
    - **Secondary:** Due to gut infections or diseases.
  - **Symptoms:** Bloating, cramps, diarrhea after consuming dairy.
  - **Dietary Management:** Use lactose-free milk, plant-based alternatives (soy, almond).
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## **Peptic Ulcer & NSAIDs**

- **Peptic Ulcer:** Sores in the stomach/duodenal lining, often caused by *H. pylori* or NSAID use.
- **NSAID (Non-Steroidal Anti-Inflammatory Drugs):** Painkillers (ibuprofen, aspirin) that can irritate the stomach lining.
- **Symptoms:** Burning stomach pain, nausea, bloating.
- **Dietary Management:** Avoid spicy, fried, acidic foods; eat soft, bland foods (milk, banana, oats).

## Malabsorption Syndrome

- **Definition:** Small intestine fails to absorb nutrients properly.
  - **Causes:** Celiac disease, lactose intolerance, pancreatic disorders.
  - **Symptoms:** Diarrhea, weight loss, vitamin/mineral deficiencies.
  - **Management:** Treat underlying condition, nutrient-rich diet.
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## Diabetes Mellitus (DM)

- **Definition:** Condition where blood sugar is too high due to insulin issues.
  - **Types:**
    - **Type 1:** Autoimmune, insulin-dependent.
    - **Type 2:** Lifestyle-related, insulin resistance.
    - **Gestational Diabetes:** Develops during pregnancy.
  - **Hyperglycemia:** High blood glucose.
  - **HbA1C:** Measures average blood sugar over past 2–3 months.
  - **Diabetic Ketoacidosis (DKA):** Life-threatening diabetes complication with high ketones.
  - **Glycemic Index (GI):** Measures how quickly a food raises blood sugar.
  - **Modifiable Risk Factors:** Obesity, inactivity, diet.
  - **Non-Modifiable Risk Factors:** Age, family history.
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## Keywords

- **Angina:** Chest pain due to reduced blood flow to the heart.
- **Arrhythmia:** Irregular heartbeats, can cause dizziness and palpitations.
- **Dementia:** Cognitive decline, memory loss, confusion.

- **Stroke:** Sudden loss of brain function due to blocked or ruptured blood vessel.
  - **Sleep Apnea:** Breathing stops during sleep, linked to hypertension.
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## **Hypertension (High Blood Pressure)**

### **Q1: Why is Hypertension Called a Silent Killer?**

- It often has no symptoms until it causes severe complications like heart attack, stroke, or kidney failure.

### **Q2: Define Hypertension.**

- Hypertension is a condition where blood pressure remains consistently high, typically above 140/90 mmHg.

### **Q3: What are the Optimum BP Levels?**

- Normal BP: Below 120/80 mmHg
- Elevated BP: 120-129 / <80 mmHg
- Hypertension Stage 1: 130-139 / 80-89 mmHg
- Hypertension Stage 2:  $\geq 140$  /  $\geq 90$  mmHg

### **Q4: What are the Consequences of Hypertension?**

- Stroke
- Heart attack
- Kidney failure
- Dementia
- Arrhythmia
- Sleep apnea

### **Q5: Write about the Modifiable and Non-Modifiable Risk Factors of Hypertension.**

- **Modifiable:** Smoking, obesity, high salt intake, lack of exercise, alcohol.
- **Non-Modifiable:** Age, genetics, gender, family history.

**Q6: Why is the DASH Diet Recommended for Hypertension?**

- It is low in sodium and high in potassium, magnesium, and fiber.
- Promotes heart health and reduces BP.

**Q7: What are the Objectives of the Dietary Management of Hypertension?**

- Reduce sodium intake.
  - Increase potassium, magnesium, and calcium intake.
  - Maintain a healthy weight.
  - Improve heart health through a balanced diet.
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**Jaundice & Hepatitis**

**Q8: What are the Types of Jaundice?**

- Pre-hepatic: Caused by excess breakdown of red blood cells.
- Hepatic: Due to liver damage (e.g., hepatitis, cirrhosis).
- Post-hepatic: Blockage of bile ducts (e.g., gallstones, tumors).

**Q9: Differentiate Between Jaundice and Hepatitis.**

Jaundice	Hepatitis
Symptom of yellowing of skin and eyes.	Inflammation of the liver.
Caused by bilirubin buildup.	Caused by viral infections, toxins, or alcohol.
Affects skin color.	Affects liver function.

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**Q10: Define Celiac Disease.**

- An autoimmune disorder where gluten damages the small intestine, leading to malabsorption.

**Q11: What are the Complications of Celiac Disease?**

- Malnutrition, osteoporosis, infertility, anemia, neurological disorders.

**Q12: What is Lactose Intolerance?**

- Inability to digest lactose due to a deficiency of lactase enzyme.

**Q13: Differentiate Between Secondary and Congenital Lactose Intolerance.**

Secondary	Congenital
Develops due to illness/infection (e.g., gastroenteritis).	Present from birth (genetic condition).
Can be reversed if the gut heals.	Lifelong condition.

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**Q14: Define Peptic Ulcer.**

- Open sores in the stomach or duodenal lining, caused by H. pylori infection or long-term NSAID use.

**Q15: What are NSAIDs?**

- Non-Steroidal Anti-Inflammatory Drugs like ibuprofen and aspirin, which can damage the stomach lining.

**Q16: Discuss the Dietetics Involved in the Management of Peptic Ulcers.**

- **Avoid: Spicy, acidic, fried foods, alcohol, caffeine.**
  - **Include: Bananas, oats, yogurt, soft foods, non-acidic fruits.**
  - **Frequent small meals help in digestion.**
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**Q17: What is Malabsorption Syndrome?**

- **A condition where the small intestine fails to absorb nutrients, leading to deficiencies.**
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**Q18: Differentiate Between Type 1 and Type 2 Diabetes.**

Type 1 Diabetes	Type 2 Diabetes
Autoimmune disorder.	Linked to obesity and lifestyle.
Body does not produce insulin.	Body resists insulin (insulin resistance).
Requires lifelong insulin therapy.	Managed through diet, exercise, and medication.

**Q19: What is Gestational Diabetes?**

- **Diabetes that develops during pregnancy due to hormonal changes.**

**Q20: Define the Terms:**

- **Autoimmune Disease: A condition where the immune system attacks the body's own tissues.**
- **Glycosylated Hemoglobin (HbA1C): A blood test that shows average blood sugar levels over 2–3 months.**

**Q21: List the Modifiable and Non-Modifiable Risk Factors of Diabetes.**

- **Modifiable:** Diet, obesity, lack of exercise, high sugar intake.
- **Non-Modifiable:** Genetics, age, family history.

**Q22: What is Diabetic Ketoacidosis (DKA)?**

- **A life-threatening complication where the body breaks down fat for energy, causing acidic ketone buildup.**

**Q23: Write a Brief Note on Glycemic Index (GI).**

- **GI measures how quickly a food raises blood sugar.**
- **Low GI Foods (Good):** Whole grains, legumes, vegetables.
- **High GI Foods (Avoid):** White bread, sugary drinks.

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### **Keywords & Definitions**

- **Sphygmomanometer:** Device used to measure blood pressure.
- **Systolic Pressure:** BP when the heart contracts.
- **Diastolic Pressure:** BP when the heart relaxes.
- **Angina:** Chest pain due to low blood flow to the heart.
- **Arrhythmia:** Irregular heartbeat that may cause dizziness.
- **Dementia:** Cognitive decline affecting memory and reasoning.
- **Stroke:** Brain damage due to lack of blood supply.
- **Sleep Apnea:** A disorder where breathing stops and starts during sleep.
- **Hyperglycemia:** High blood sugar levels.
- **HbA1C:** Reflects average blood sugar over past 3 months.
- **Types of Diabetes:** Type 1, Type 2, Gestational.
- **Diabetic Ketoacidosis (DKA):** A severe diabetes complication with high ketone levels.

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### **Summary Chart**



Disease	Cause	Symptoms	Dietary Management
Hypertension	High BP, stress, diet	Headache, dizziness	Low salt, high potassium
Diabetes	Insulin resistance	Thirst, weight loss, fatigue	Low sugar, high fiber
Jaundice	Liver dysfunction	Yellow skin, fatigue	High protein, avoid alcohol
Celiac Disease	Gluten intolerance	Bloating, weight loss	Gluten-free diet
Lactose Intolerance	Enzyme deficiency	Bloating, cramps	Lactose-free foods
Peptic Ulcer	Acid erosion, bacteria	Stomach pain, nausea	Low acid, probiotics

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### Quick Revision Tips

- ✓ Hypertension: High BP; reduce salt.
- ✓ Diabetes: Sugar control, low GI diet.
- ✓ Jaundice: Liver health, high protein diet.
- ✓ Celiac: No gluten!
- ✓ Lactose Intolerance: Avoid dairy.
- ✓ Peptic Ulcer: Soft foods, no spices.

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This concise and structured format makes revision easy and effective! 😊 Let me know if you need more details. 🚀

## 🔴 Hypertension (High Blood Pressure)

### 📌 What is Hypertension?

- A condition where blood pressure is consistently high, increasing the risk of heart disease, stroke, and kidney failure.
- Known as a “Silent Killer” due to the lack of early symptoms.
- Measured in Systolic (when heart contracts) and Diastolic (when heart relaxes) pressure.

### 📊 Blood Pressure Levels

Category	Systolic (mm Hg)	Diastolic (mm Hg)
Normal	<120	<80
Elevated	120-129	<80
Stage 1 Hypertension	130-139	80-89
Stage 2 Hypertension	≥140	≥90
Hypertensive Crisis	≥180	≥120

### ⚠️ Risk Factors

- **Modifiable:** Smoking, obesity, high-salt diet, stress, alcohol, lack of exercise.
- **Non-modifiable:** Family history, age, gender.

### 🩺 Symptoms & Consequences

- Often asymptomatic!
- Severe cases may cause headaches, dizziness, blurred vision, nosebleeds.
- Long-term effects: Heart attack, stroke, kidney damage, vision loss.

## Dietary Management

### Increase:

- DASH Diet (Dietary Approaches to Stop Hypertension).
- Fresh fruits, vegetables, whole grains.
- Potassium-rich foods (bananas, spinach, beans).
- Low-fat dairy, nuts, and seeds.

### Avoid:

- Excess salt, processed & fried foods.
  - Red meat, full-fat dairy, sugary beverages.
  - Alcohol, excessive caffeine.
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## Diabetes

### What is Diabetes?

- A condition where the body cannot properly use or produce insulin, leading to high blood sugar.
- Type 1 Diabetes: Autoimmune disorder; body doesn't produce insulin.
- Type 2 Diabetes: Insulin resistance, often due to lifestyle choices.

### Risk Factors

- Modifiable: Obesity, sedentary lifestyle, unhealthy diet.
- Non-modifiable: Genetics, age, ethnicity.

### Symptoms

- Frequent urination (Polyuria)
- Extreme thirst (Polydipsia)
- Unexplained weight loss
- Fatigue, slow wound healing, blurry vision

## Dietary Management

### Increase:

- Low Glycemic Index (GI) foods: Oats, whole grains, legumes.
- Lean proteins: Fish, chicken, tofu.
- Healthy fats: Nuts, seeds, olive oil.

### Avoid:

- Refined sugar, white rice, pastries.
  - Full-fat dairy, fried foods.
  - Processed snacks, sugary drinks.
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## Jaundice & Hepatitis

### What is Jaundice?

- A condition where the skin and eyes turn yellow due to excess bilirubin.
- Causes: Liver diseases (Hepatitis, Cirrhosis), infections, alcohol.

### What is Hepatitis?

- Inflammation of the liver, caused by viruses, alcohol, toxins.
- Types: Hepatitis A, B, C, D, E.

### Symptoms

- Yellow skin and eyes (Jaundice).
- Dark-colored urine, pale stool.
- Fatigue, nausea, fever.

## Dietary Management

### Increase:

- High-protein diet: Eggs, fish, lean meats.
- Liver-cleansing foods: Lemon, turmeric, tomatoes.
- Hydration: Coconut water, buttermilk, fresh juices.

### Avoid:

- Alcohol, oily foods, high-fat dairy.
  - Excess salt, processed foods..
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## Celiac Disease

### What is Celiac Disease?

- Autoimmune disorder where gluten damages the small intestine.
- Triggered by gluten (found in wheat, barley, rye).

### Symptoms

- Digestive issues: Bloating, diarrhea, constipation.
- Other: Fatigue, weight loss, joint pain, skin rash.

## Dietary Management

### Gluten-Free Diet:

- Rice, quinoa, corn, potatoes.
- Fruits, vegetables, nuts, dairy.

### Avoid:

- Wheat, barley, rye, pasta, bread.
  - Processed foods with hidden gluten.
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## ● Lactose Intolerance

### 📌 What is Lactose Intolerance?

- Inability to digest lactose, a sugar found in dairy products.
- Due to low levels of lactase enzyme in the intestine.

### ⚠️ Symptoms

- Bloating, diarrhea, stomach cramps after consuming dairy.

### 🍏 Dietary Management

#### ✅ Lactose-Free Alternatives:

- Almond, soy, or lactose-free milk.
- Hard cheese, yogurt (low in lactose).

#### ❌ Avoid:

- Milk, butter, ice cream, cream.
  - Processed foods with hidden dairy.
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## ● Peptic Ulcer

### 📌 What is a Peptic Ulcer?

- Open sores in the stomach lining or small intestine.
- Caused by H. pylori bacteria, excessive acid, or long-term NSAID use.

### ⚠️ Symptoms

- Burning stomach pain (worse at night)
- Nausea, vomiting, bloating, weight loss

### 🍏 Dietary Management

#### ✅ Increase:

- Healing foods: Cabbage juice, aloe vera, bananas.

- **Alkaline foods:** Oatmeal, green vegetables.
- **Probiotics:** Yogurt, fermented foods.

**✗ Avoid:**

- **Spicy, acidic foods** (citrus, tomatoes).
- **Alcohol, caffeine, deep-fried items.**

**📌 Summary Chart**

Disease	Cause	Symptoms	Diet
Hypertension	High BP, stress, diet	Headache, dizziness	Low salt, high potassium
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