

### Learning Objective

- Understand what alcohol is and its basic types.
- Discuss the impact of alcohol on nutrition.
- Explain how alcohol affects blood sugar levels and weight management.
- Identify health risks of excessive alcohol consumption.

# Alcohol

- Alcohol is a psychoactive substance that is consumed in various forms like beer, wine, and spirits.
- **Ethanol** is the type of alcohol found in beverages.
- Provides **7 calories** per gram, making it high in energy.
- Alcohol provides calories but no essential nutrients (vitamins, minerals).
- Heavy drinking may replace more nutritious food choices, leading to nutrient deficiencies.
- While alcohol is metabolized for energy, it's not a good source for sustainable nutrition.



# **Types of Alcohol**

Ethanol	Methanol	Isopropanol	Butanol
<ul> <li>Found in Beverages - alcohol used in alcoholic drinks like beer, wine, and spirits.</li> </ul>	<ul> <li>Methanol is toxic to humans and is found in products like antifreeze and solvents.</li> </ul>	<ul> <li>Commonly used in cleaning products, rubbing alcohol, and antiseptics.</li> <li>Ingesting isopropanol</li> </ul>	<ul> <li>Used as a solvent in manufacturing, cleaning products, and perfumes.</li> <li>Can cause poisoning</li> </ul>
<ul> <li>It is the only type of alcohol safe for human consumption in moderation.</li> <li>It is absorbed directly into the bloodstream and metabolized by the liver.</li> </ul>	<ul> <li>Consumption of even small amounts can lead to severe poisoning, causing symptoms like nausea, vomiting, headache, dizziness, and even blindness or death</li> </ul>	can lead to poisoning, causing symptoms like dizziness, headache, and difficulty breathing.	if ingested.

#### **Digestion & Metabolism of Alcohol**



### **Nutrition Impact of Alcohol**

- Chronic alcohol consumption can lead to deficiencies in B vitamins (especially thiamine, folate), Vitamin A, and Vitamin D.
- Alcohol impairs absorption of minerals like calcium, magnesium, and zinc.
- The liver, which processes vitamins and minerals, is often damaged by excessive alcohol consumption, further hindering nutrient metabolism.
- It increases urination, leading to dehydration
- Increase the desire to eat high-calorie, low-nutrient foods, leading to over consumption
- Impair the metabolism of fats, proteins, and carbohydrates

#### **Effects on Blood Sugar Levels**

- Alcohol can interfere with the body's ability to regulate blood glucose.
- Excessive alcohol can lead to dangerously low blood sugar levels, especially in individuals on medications for diabetes.

## **Alcohol and Weight Management**

- Alcohol is calorically dense, which can contribute to weight gain if consumed in large amounts.
- Can increase appetite and lead to overeating, contributing to further weight gain.
- Disrupt fat metabolism, leading to fat storage and reduced fat burning.



#### Health Risks of Excessive Alcohol Consumption

- Chronic alcohol use can lead to fatty liver, alcoholic hepatitis, and cirrhosis.
- Excessive drinking is linked to cardiovascular disease, high blood pressure, and certain cancers.
- Alcohol abuse can contribute to conditions like scurvy (Vitamin C deficiency) or beriberi (Thiamine deficiency).



