

# 17. Cancer Prevention Basics

## 17.1 Overview

**Cancer** is a group of diseases characterized by uncontrolled cell growth that can invade or spread to other parts of the body.

Globally, cancer is the **second leading cause of death**, responsible for nearly **10 million deaths annually** (WHO, 2023).

Common cancers include lung, breast, colorectal, prostate, and cervical cancers. In India, **ICMR's National Cancer Registry Programme (NCRP)** reports that one in nine people are likely to develop cancer in their lifetime. ([ICMR-NCRP, 2023](#))

## 17.2 Causes / Risk Factors

Cancer develops due to genetic, environmental, and lifestyle factors:

- Tobacco use (responsible for ~25% of cancer deaths globally).
- Alcohol consumption and unhealthy diet.
- Physical inactivity and obesity.
- Infections like HPV (cervical), hepatitis B/C (liver), and H. pylori (stomach).
- Occupational exposure to chemicals or radiation. ([WHO, 2023](#))

## 17.3 Symptoms / Indicators

Early warning signs include:

- Unexplained weight loss, persistent fatigue, or pain.
- Unusual bleeding, lumps, or sores that don't heal.
- Persistent cough or changes in bowel/bladder habits.  
Early detection significantly improves survival.

## 17.4 Prevention / Lifestyle

WHO estimates that up to **40% of cancers are preventable** through:

- **Avoiding tobacco** and exposure to secondhand smoke.
- **Maintaining a healthy diet** rich in fruits, vegetables, and fiber.
- **Limiting alcohol** and engaging in regular exercise.
- **Vaccinations** (HPV, hepatitis B).
- **Safe sun exposure** and use of protective clothing/sunscreen.

## 17.5 Screening / Diagnosis

Screening detects cancer before symptoms develop:

- **Pap test/HPV test** for cervical cancer.
- **Mammography** for breast cancer.
- **Colonoscopy** for colorectal cancer.
- **PSA test** for prostate cancer (based on risk).
- Imaging (CT/MRI) and biopsy confirm diagnosis. ([NHS Cancer Screening, 2023](#))

## 17.6 Management / Public Health Perspective

Public health efforts include:

- WHO's **Global Initiative for Childhood Cancer and Cervical Cancer Elimination Strategy**.
- National Cancer Control Programmes (India: **NPCDCS**).
- Tobacco control laws, awareness campaigns, and vaccination programs.  
Research focuses on genetic screening, early biomarker detection, and reducing disparities in cancer care.

## Summary Points

- Early detection and healthy lifestyle can prevent many cancers.
- Vaccination (HPV, HBV) is a powerful cancer-prevention tool.

- Public health programs emphasize screening and awareness.