

# 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.