

BIOHAZARD WASTE (BIOMEDICAL WASTE)

Definition:

Biohazard waste, also known as biomedical waste, is any waste generated during diagnosis, treatment, immunization, or research involving humans or animals that contains infectious, toxic, or potentially harmful biological material.

Sources of Biohazard Waste:

- Hospitals and Operation Theatres
- Clinics and Dispensaries
- Laboratories
- Blood Banks
- Mortuaries
- Research Centers
- Veterinary Hospitals

Classification / Types of Biohazard Waste:

- **Infectious Waste:** Blood-soaked dressings, swabs, laboratory cultures.
- **Pathological Waste:** Human tissues, organs, placenta, body parts.
- **Sharps Waste:** Needles, syringes, scalpel blades, lancets.
- **Pharmaceutical Waste:** Expired or unused medicines and vaccines.
- **Chemical Waste:** Disinfectants, solvents, formalin.
- **Radioactive Waste:** Waste contaminated with radioactive substances.

Color Coding of Biohazard Waste:

- **Yellow:** Infectious and pathological waste (blood, tissues, placenta).
- **Red:** Contaminated plastics (IV sets, gloves, catheters).
- **White (Translucent):** Sharps (needles, blades).
- **Blue:** Glassware (ampoules, vials).
- **Black:** General non-infectious waste.

Steps of Biohazard Waste Management:

- Segregation at the point of generation using color-coded containers.
- Collection in proper bags and containers.
- Safe temporary storage with biohazard labeling.
- Transportation using covered trolleys.
- Treatment by autoclaving, chemical disinfection, or incineration.
- Final disposal through incineration, deep burial, or secured landfill.

Risks of Improper Disposal:

- Spread of infections such as HIV, Hepatitis B and C.
- Needle-stick injuries.
- Environmental pollution.
- Risk to healthcare workers and the public.

Safety Precautions:

- Use personal protective equipment (PPE).
- Never recap needles.
- Dispose sharps immediately after use.
- Maintain hand hygiene.
- Follow hospital waste management policies.

Biohazard Waste in Operation Theatre (OT):

Common OT biohazard waste includes blood-soaked gauze, used surgical instruments, sharps, gloves, gowns, and removed body tissues. Strict segregation and immediate disposal are essential to prevent infection.