

# WATER RELATED DISEASES

- BRADLEY CLASSIFICATION (1977)
- A water related disease is one which in some way is related to water or to impurities within water
  - A. Biological/Specific (water borne-Diseases)
  - B. Non-Infectious/Non Specific water related Diseases

# WATER-BORNE DISEASES

- Also called Biological/Specific Diseases
- Further classified into
  - A. Caused by the presence of an Infective agent
  - B. Due to the presence of an Aquatic host

# CAUSED BY INFECTIVE AGENTS

## ➤ **VIRAL**

1. Viral Hepatitis A &E
2. Poliomyelitis
3. Rotavirus Diarrhea

## ➤ **BACTERIAL**

1. Typhoid & Paratyphoid Fevers
2. Bacillary Dysentery
3. E.Coli Diarrhea
4. Cholera

# Contnd.-----

## **PROTZOAL**

- Amebiasis
- Giardiasis

## **HELMINTHIC**

- Roundworm
- Threadworm
- Hydatid Disease

## **LEPTOSPIRAL**

- Weils Disease

# DUE TO THE PRESENCE OF AN AQUATIC HOST

## SNAIL

- Schistosomiasis

## CYCLOPS

- Guineaworm
- Fish tapworm

# Non-specific/Non-infectious Water Related Diseases

These diseases are due to either excess or deficiency of certain chemicals in the water(Chemical Hazards)

1. Lead Poisoning
2. Endemic Goiter
3. Dental Caries/Dental Decay
4. Fluorosis
5. Infantile Methaemoglobinaemia

# Modified BRADLEY Classification

- Feco-Oral Diseases
- Water Borne Diseases
- Water washed Diseases
- Water Based Diseases
- Water Related Diseases
- Water Dispersed Diseases

# PURIFICATION OF WATER

## A. NATURAL METHODS

- Evaporation & Condensation
- Storage
- Sedimentation
- Oxidation
- Percolation & Filtration through soil



# Contnd.-----

## **B. ARTIFICIAL METHODS**

### **1. PHYSICAL METHODS**

- Distillation
- Boiling

### **2. CHEMICAL METHODS**

- Precipitation
- Removal of Hardness & Softening
- Germicides
- Adsorbents

# Contnd.-----

## 3. FILTRATION METHODS

- ON SMALL SCALE
  - Pasteur Chamberland Filter
  - Berkefeld Filter
  - Meta & Stellar Filter
- ON LARGE SCALE
  - Slow Sand Filtration
  - Rapid Sand Filtration
  - Desalination