



**Tishk**  
International University

**Faculty of Nursing**

**Nursing Department**

**Health Promotion**

**4<sup>th</sup> Year**

**Assist. Prof. Dr. Sangar M. AHMED**

E. mail: [sangar.ahmed@tiu.edu.iq](mailto:sangar.ahmed@tiu.edu.iq)

@Dr.Sangarjaff

# Environmental Health

**FALL Semester**

**Week 5 Topic No.5**

**2024-25**

## After completion the lecture the students enable to:

- Define the environmental health
- Identify main components of environmental health.
- Mention the scope of environmental health
- Discuss about problems facing environmental health
- Explain the communicable disease and the environment

## Definition

**Environmental Health** is the branch of public health concerned with all aspects of the natural and built environment affecting human health.

**Environmental health** focuses on the natural and built environments for the benefit of human health.

# Components of environmental health include:

- Housing sanitation
- Water sanitation
- Food hygiene and safety
- Health education
- School health services
- Air pollution control
- Care of the dead
- Sanitation of markets and business premises
- Prevention and control of communicable diseases
- Control of noise pollution

# The scope of environmental health

- 1. Planning, design, construction and maintenance of water supply systems to ensure that water is adequate, safe and readily available.**
- 2. Methods for the safe collection and disposal of human excreta.**
- 3. Control of insects, rodents and animal reservoirs of disease in areas where they are of significant importance.**

# The scope of environmental health

**4-Protection of all water sources** from chemical, biological and radioactive contamination.

**5-Food and milk sanitation.**

**6-Supervision of the public health aspects** of residential areas, schools, and other public buildings and places of congregation such as fairs, festivals, camps, swimming pools, etc

# The scope of environmental health

**7-Control of health hazards** – physical, chemical, and biological – arising from occupational exposure in industry and agriculture.

**8-Control of health hazards arising from environmental and man made catastrophes;** such as floods, cyclones, wars, etc.

**9-Control of industrial pollution.**

# Problems Facing Environmental Health

1. Chemical safety
2. Air pollution
3. Climate change and natural disasters
4. Diseases caused by microbes
5. Lack of access to health care
6. Infrastructure issues
7. Poor water quality
8. Global environmental issues



# The Benefits of Optimizing Environmental Health



Cleaner air  
quality



Cleaner  
water



Reduced  
hazardous  
waste



Increased access  
to healthy foods



Safer outdoor  
environments  
for adults and  
children



Improved  
population  
health



Improved health equity

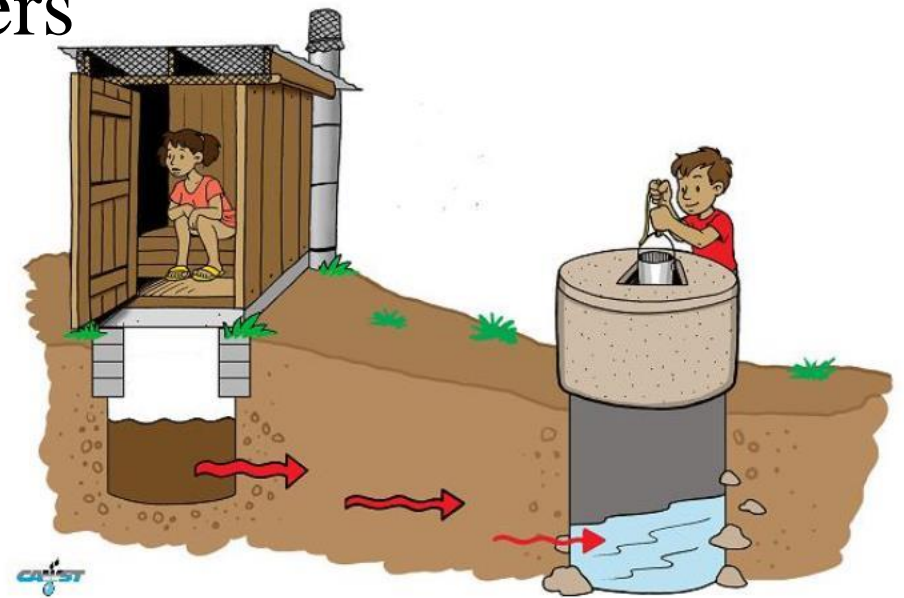


# Communicable disease and the environment

**Water, sanitation, food and air quality** are vital elements in the transmission of communicable diseases and in the spread of diseases prone to cause epidemics. A number of environmental factors influence the spread of communicable diseases that are prone to cause epidemics. The most important of these are: water supply.

**Water-borne diseases** are the ones caused by pathogenic microbes spread via contaminated water.

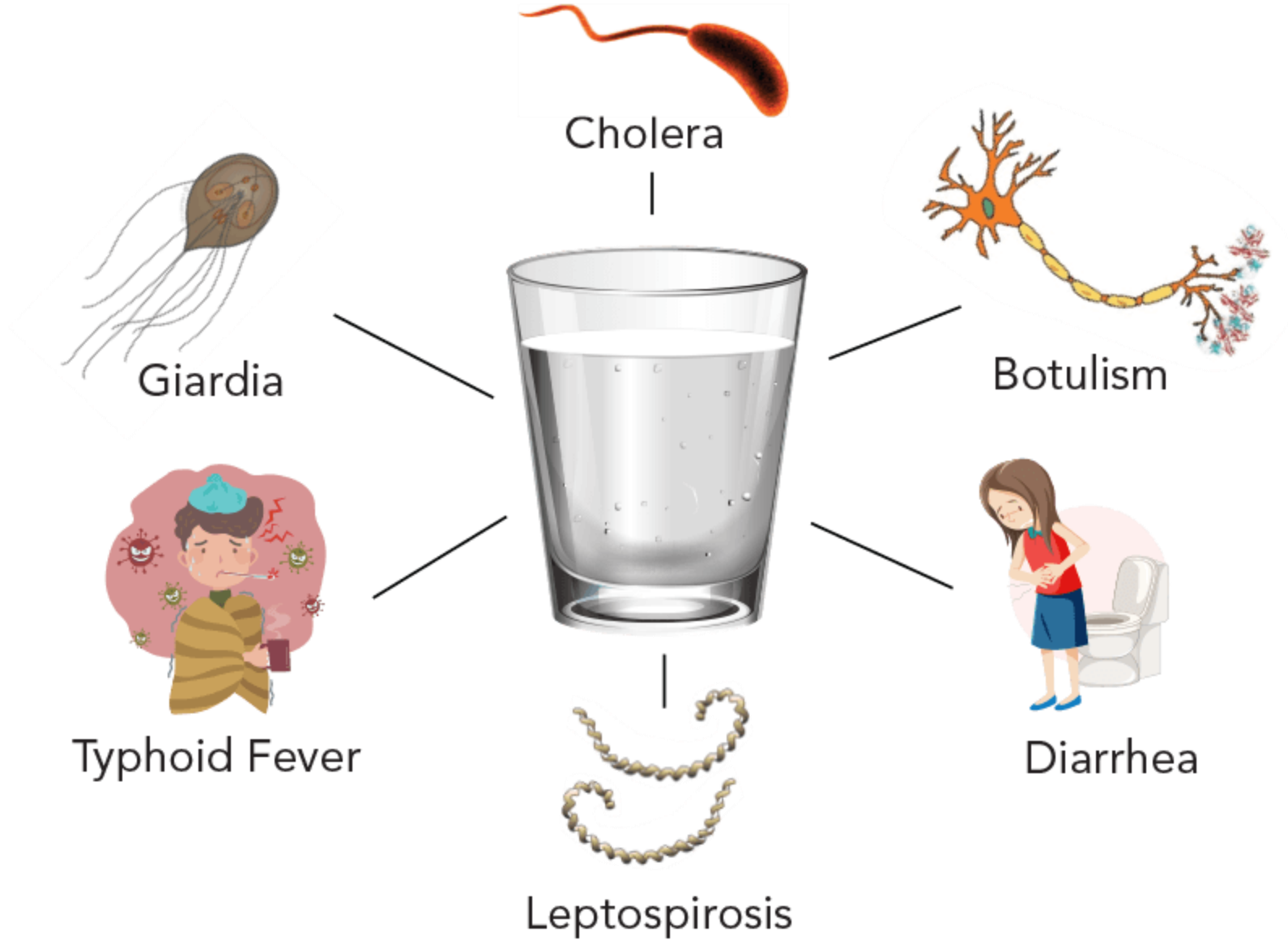
Transmission of these pathogens occurs while using infected water for drinking, food preparation, and washing clothes, among others



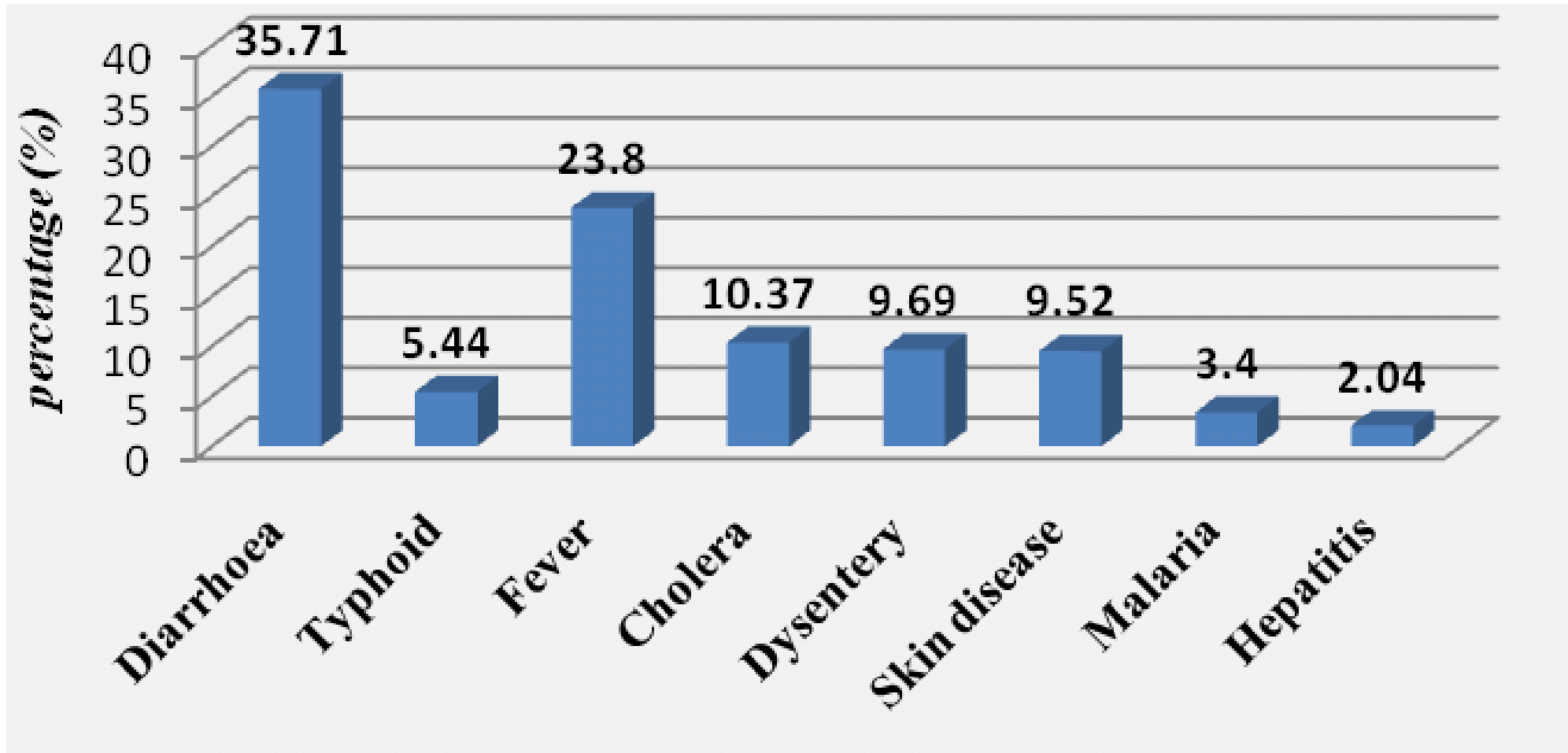
# Water-borne diseases

Class	Route Cause	Disease
<b>Water-borne</b>	Drinking contaminated water	Cholera, Amoebic dysentery, Bacillary dysentery (shigellosis), Cryptosporidiosis, Typhoid, Giardiasis, Paratyphoid, Balantidiasis, Salmonellosis, Campylobacter enteritis, Rotavirus diarrhoea, <i>E. coli</i> diarrhoea, Hepatitis A, Leptospirosis and Poliomyelitis [21] [22] [24].
<b>Water-Washed</b>	Lack of clean water for washing.	Scabies, Typhus, Yaws, Relapsing fever, Impetigo, Trachoma, Conjunctivitis and Skin ulcers.
<b>Water-Based</b>	Host organisms that develop to human parasites.	Schistosomiasis, Dracunculiasis, Paragonimiasis and Clonorchiasis.
<b>Insect-Vector</b>	Organisms that need water to breed.	Mosquito-borne diseases; Malaria, Yellow fever, Dengue fever, Filariasis and Fly-borne diseases; Onchocerciasis (river-blindness), Trypanosomiasis (West African sleeping sickness), Leishmaniasis (Kala-azar), Loiasis, [21]

# Water-borne diseases

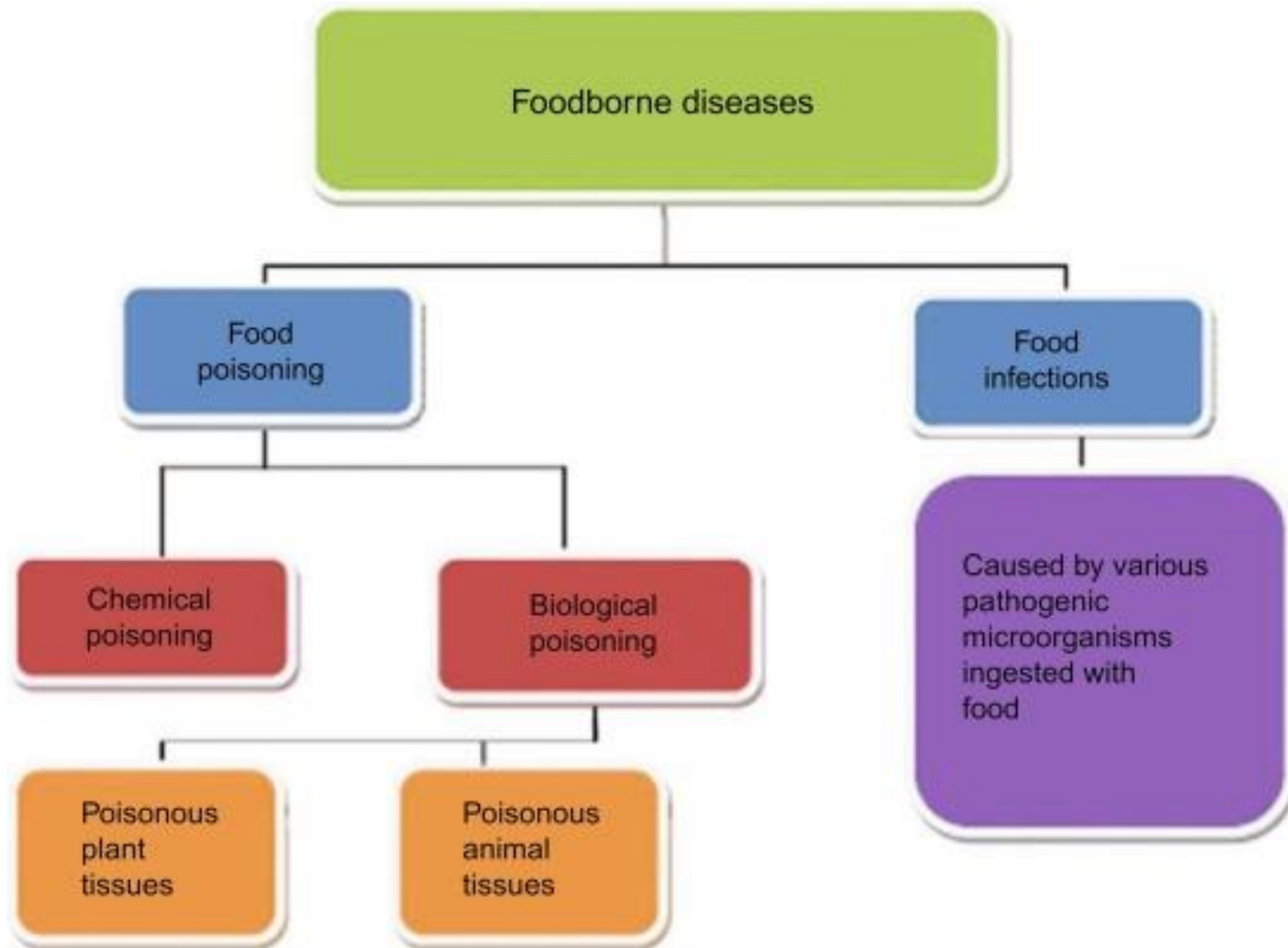


## Types of water borne diseases

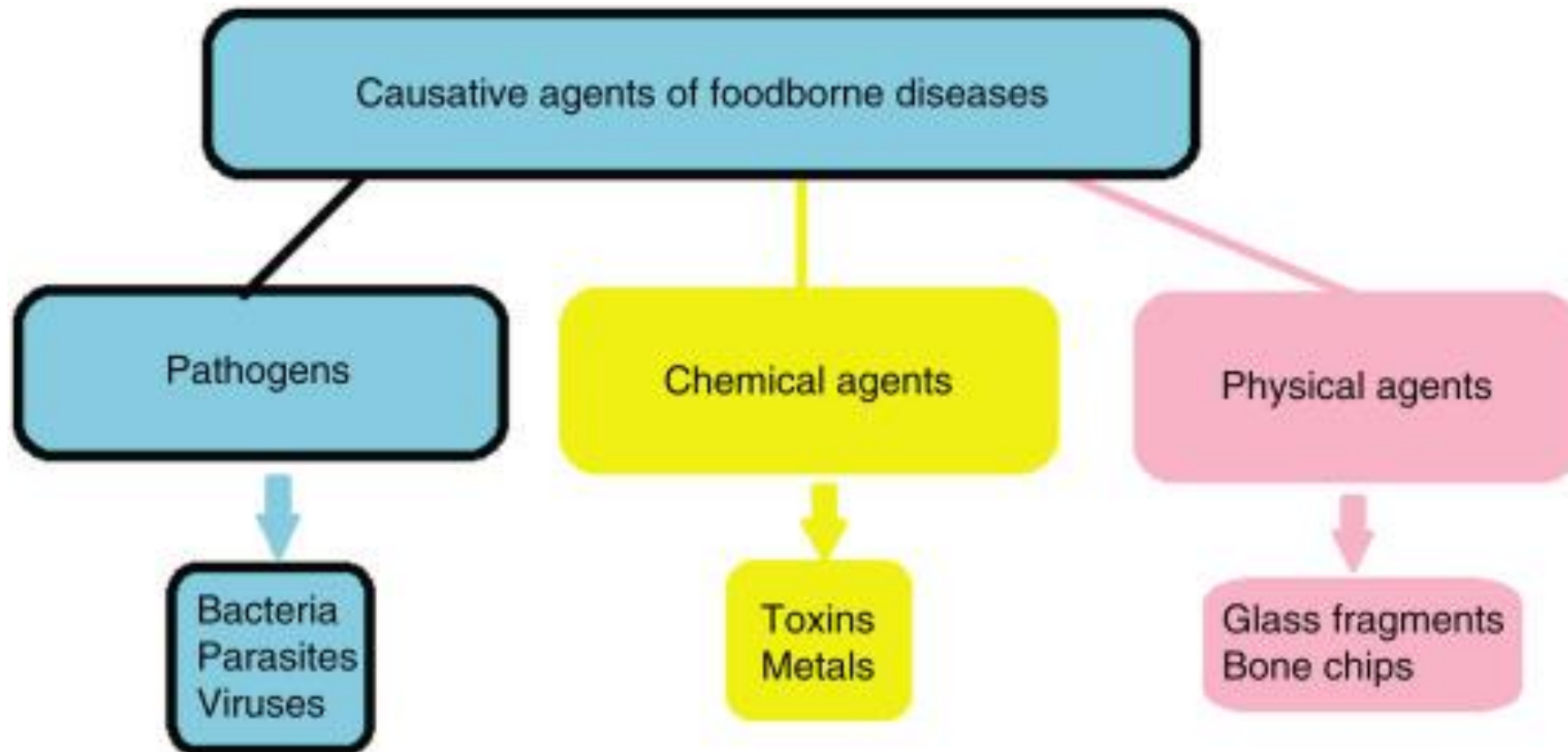


**Foodborne diseases** are caused by contamination of food and occur at any stage of the food production, delivery and consumption chain.

They can result from several forms of environmental contamination including pollution in water, soil or air, as well as unsafe food storage and processing.







**1 in 6** 

Americans each year suffer  
a foodborne disease (CDC)

**3,000** 

Annual foodborne disease  
deaths in U.S. (CDC)

**2 Million** 

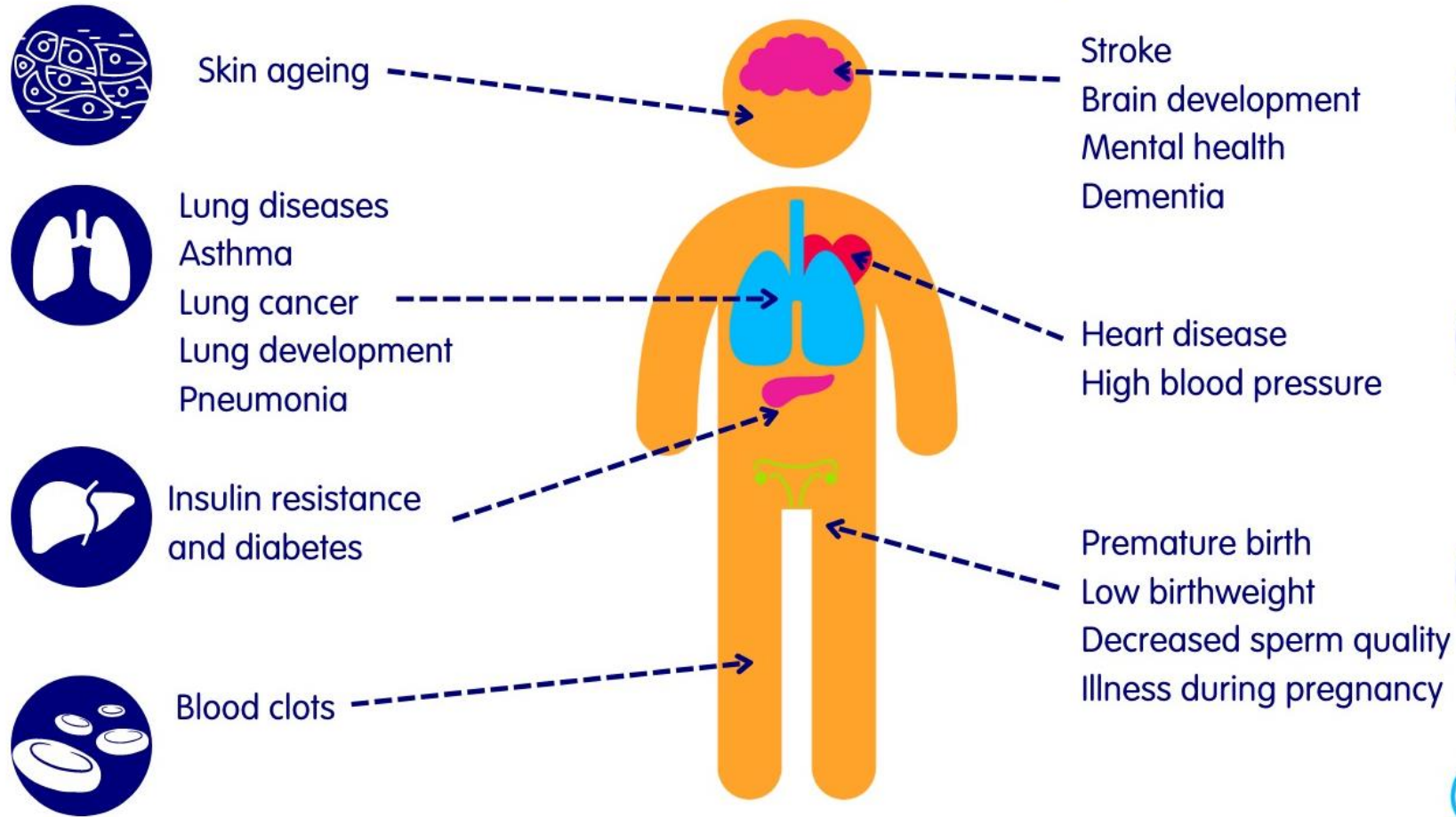
Annual deaths in emerging areas  
due to foodborne infections

**\$80 Billion** 

Annual cost of losses and illness  
caused by foodborne disease

**Airborne diseases** are caused by pathogenic microbes small enough to be discharged from an infected person via coughing, sneezing, laughing and close personal contact or aerosolization of the microbe. The discharged microbes remain suspended in the air on dust particles, respiratory and water droplets.

## The health harms of air pollution





# Airborne-borne diseases

