Faculty of medical laboratory science public health MLS-PUBH-322 sem.6

Infection Control and Prevention

Definition of Terms (1)

Host: living animal or plant

Agent: something that produces or is capable of producing an effect, i.e. infection

Vector: an organism (as an insect) that transmits an agent from one organism or source to another

Vehicle: inanimate object (food, water, etc) that can carry an agent from one organism to another

Definition of Terms (2)

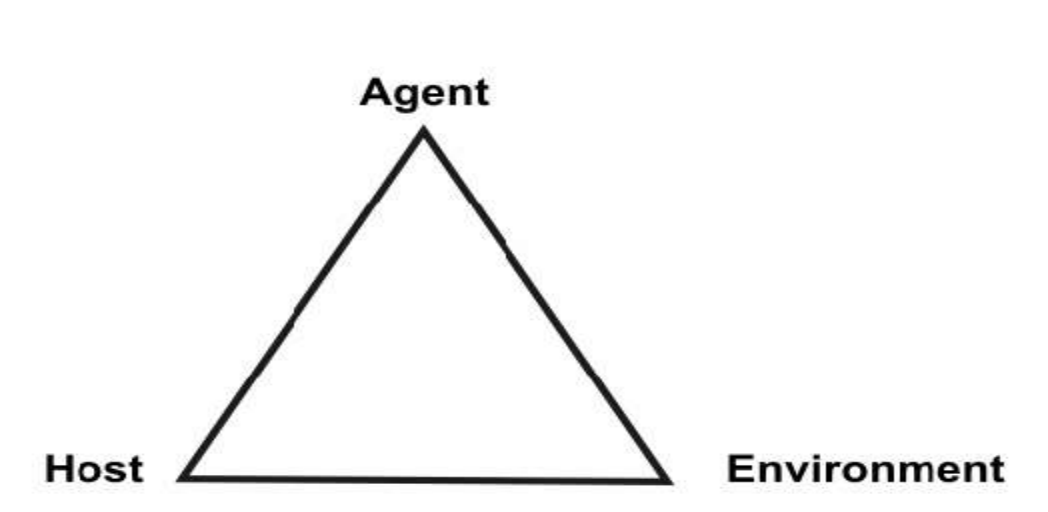
Disease: impairment of normal functioning, manifested by signs and symptoms

Infection: the state produced by the establishment of an infective agent in or on a suitable host , host may or may not have signs or symptoms

Carrier: individual harbors the agent but does not have symptoms. Person can infect others.

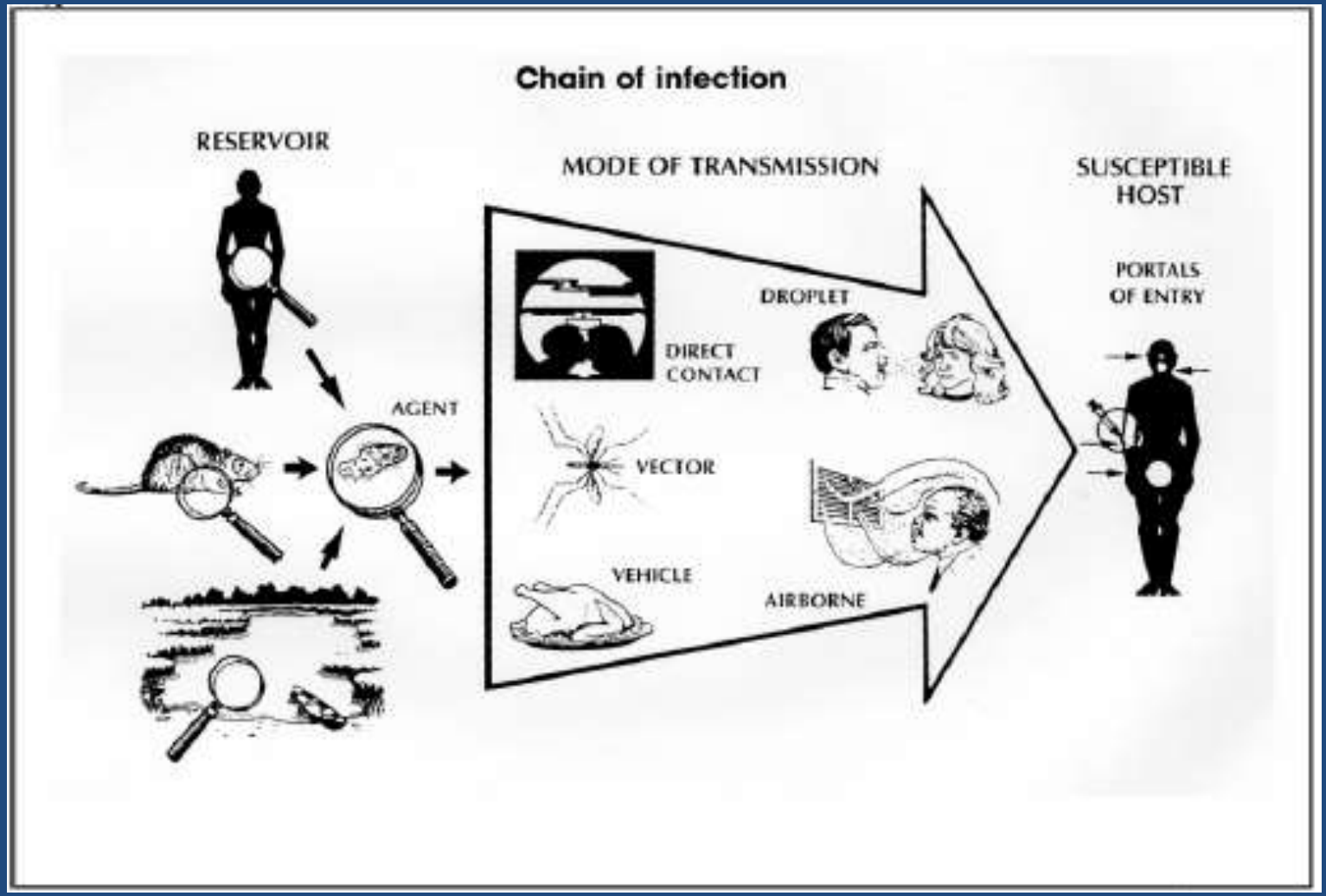
Reservoir: habitat (man, animal, etc.) in which the agent normally lives, grows, and multiplies

Disease Causation



HOST Characteristics	Types of AGENTS	ENVIRONMENTAL Factors
Age	Biologic – bacteria, virus, molds	Housing – crowding, noise
Gender	Chemical – poison, alcohol	Air – temperature, humidity
Occupation	Physical - trauma, fire	Water , food
Race		
Marital status		
Genetic profile		

Disease Transmission



Mode of Transmission

Route	Example	Disease
Direct contact	Kissing, sexual contact, skin-to-skin contact	STDs, skin infections, scabies
Droplet	Organism on large respiratory droplets that people sneeze, cough, drip, or exhale. Disease spread when people are close to each other (usually <3 feet) and inhale droplet.	Mumps, pertussis (whooping cough), common cold, 'strep throat', meningitis
Indirect contact	Contact with contaminated surfaces, clothing, etc	Skin infections, diarrheal disease
Vector	Bite from disease-carrying ticks, fleas, mosquitoes	Lyme disease, LaCrosse encephalitis
Vehicle	Eat/drink contaminated food/beverage, transfuse infected blood, fomites (bedding, infected tatoo needle)	Some diarrheal disease, hepatitis b/c
Airborne	Organism on dust particles or small respiratory droplets that may become aerosolized when people sneeze, cough, laugh, or exhale	Chickenpox, Tuberculosis, Smallpox, SARS, Anthrax (inhalational)

Infection Control

Route	Example	Control Measures
Direct contact	Kissing, sexual contact, skin-to-skin contact	Use of barrier (condom, clothing, dressing)
Droplet	Organism on large respiratory droplets that people sneeze, cough, drip, or exhale.	Respiratory etiquette
Indirect contact	Contact with contaminated surfaces, clothing, etc	Hand-hygiene, sanitizing infected surfaces
Vector	Bite from disease-carrying ticks, fleas, mosquitoes	Vector control
Vehicle	Eat/drink contaminated food/drink, transfuse infected blood, fomites (bedding, infected tatoo needle)	Proper hygiene and sanitation, cook food/boil water, etc.
Airborne	Organism on dust particles or small respiratory droplets	Respiratory etiquette, isolation (if necessary)

Infection Prevention

Education and Training

- Hygiene
- Sanitation
- Follow public health recommendations – food preparation, isolation and quarantine

Vaccination

- Keep up to date

Medicine

- Prophylactic antibiotics – meningitis, pertussis

Summary

An Ounce of Prevention
Keeps the Germs Away

Follow these easy and low-cost steps to stop many infectious diseases.

Clean Your Hands Often

Keeping your hands clean is one of the best ways to keep from getting sick and spreading illnesses.

Use Antibiotics Appropriately

Antibiotics don't work against viruses such as colds and flu. Unnecessary antibiotics can be harmful. Antibiotics should be taken exactly as prescribed by your doctor.

Routinely Clean and Disinfect Surfaces

Cleaning with soap, water, and scrubbing *removes* dirt and most germs. However, using a disinfectant cleaner *kills* germs, giving even better protection.

Be Careful with Pets

Pets should be routinely cared for by a vet. Babies and children under age 5 should be watched carefully around pets and animals. Always wash hands after touching animals or animal waste.

Handle and Prepare Food Safely

- Clean hands and surfaces often
- Separate – don't cross-contaminate one food with another
- Cook foods to proper temperatures
- Chill – refrigerate foods promptly

Avoid Contact with Wild Animals

Wild animals can carry deadly diseases and pass them to you and your pets. Keep your house free of wild animals by not leaving any food around. Keep garbage cans sealed.

Get Immunized

Getting immunizations is easy, low-cost, and saves lives. Make sure you and your kids get the shots suggested by your doctor.

For information about ordering brochures and posters, please visit **www.cdc.gov/ounceofprevention**