Fig. 1-5 The chain of infection. Components of the infectious disease process.
The interaction between the 6 elements of the chain determine whether an infection will result.
6 Links to the Chain of Infection

- Portal of Entry
- Susceptible Host
- Causative Agent
- Reservoir
- Portal of Exit
- Mode of Transmission
# 1 Causative Agent

- Bacteria (includes Richettsia, Chlamydia, and Mycoplasma)
- Viruses
- Fungi
- Protozoa
- Helminths
#2 Reservoir

- **Humans:**
  
  ➔ Patients
  
  ➔ Healthcare Workers
Reservoirs

- Animals
- Insects
- Rodents
- Shell Fish
Reservoirs

- Environment
  - Patient Care Equipment
  - Environmental Surfaces
  - Food
The path by which the infectious organism (agent) leaves the reservoir
• **Respiratory Tract:**

  ➔ Coughing
  ➔ Sneezing
  ➔ Talking
  ➔ Suctioning
Genitourinary Tract:
- Foley Catheters
- Sexually transmitted diseases

Gastrointestinal Tract:
- Feces
- Vomitus
Skin/Mucous Membranes

- Wounds
- Skin breaks

Transplacental

Blood:
- Needle stick
- Blood Transfusion
#4 Mode of Transmission

The mechanism for transfer of an infectious agent from the reservoir to a susceptible host.
4 Modes of Transmission

- Contact (Direct and Indirect)
- Airborne
- Vector-Borne
- Common Vehicle
#5 PORTAL OF ENTRY

The path by which an infectious agent enters the susceptible host
• Respiratory Tract
• Genitourinary Tract
• Gastrointestinal Tract
• Skin/Mucous Membrane
• Trasplacental (fetus from mother)
• Parenteral (percutaneous, via blood)
#6 SUSCEPTIBLE HOST

A person or animal lacking effective resistance to a particular pathogenic agent
Remember--breaking the chain of infection is the responsibility of each health professional.
THANKS