Environmental Sanitation

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Objectives

- Discuss the importance of sanitation to the welfare and recovery of patients
- Discuss the legal sanitation requirements
- Describe sanitation techniques used in veterinary practice
- Discuss the role of sanitation in disease prevention
Introduction

Development of disease requires:
- Susceptible host – individual or population
- Viable causative agent – primary cause
- Favorable environment – affects agent and host
  - Temperature
  - Humidity
  - Sunlight

Environmental conditions
- Facilitate or retard growth of microorganisms
- Sanitary practices – disinfection
  - Stalls, cages, equipment, utensils
General Principles

- Pre-cleaning inanimate objects
  - Organic matter (feces, urine, blood, hair)
    - Physical removal
    - Degrading and inactivating effects on disinfectants

- Disinfection
  - Destruction of pathogenic microorganisms

- Sterilization
  - Destruction of all living microorganisms

- Decontamination
  - Cleaning, disinfection, antisepsis, sterilization
Air-borne Transmission

- Mechanical force
  - Sweeping, dusting, washing
- Protective clothing and gear
  - Mechanical respirators
  - Face masks
Disinfection Methods

- Physical – sunlight, high temperature
  - Moist heat – >60°C
  - Dry heat – >100°C
- Chemical – solutions, gaseous
  - Anionic
  - Cationic
  - Amphoteric
- Biological – metabolites of microorganisms
Classes of Chemical Disinfectants

- Alkalies – carbonates, hydroxides
- Phenolics – coal tars
- Chlorhexidine – wide spectrum
- Aldehydes – formaldehyde
- Halogens – chlorine, iodine
- Alcohols
Personnel Training: Disinfectants

- Methods and application
- Safe application
  - Toxic effects
  - Hazardous to animals and humans
  - Emergency actions in event of accidents
- Read and follow labels