

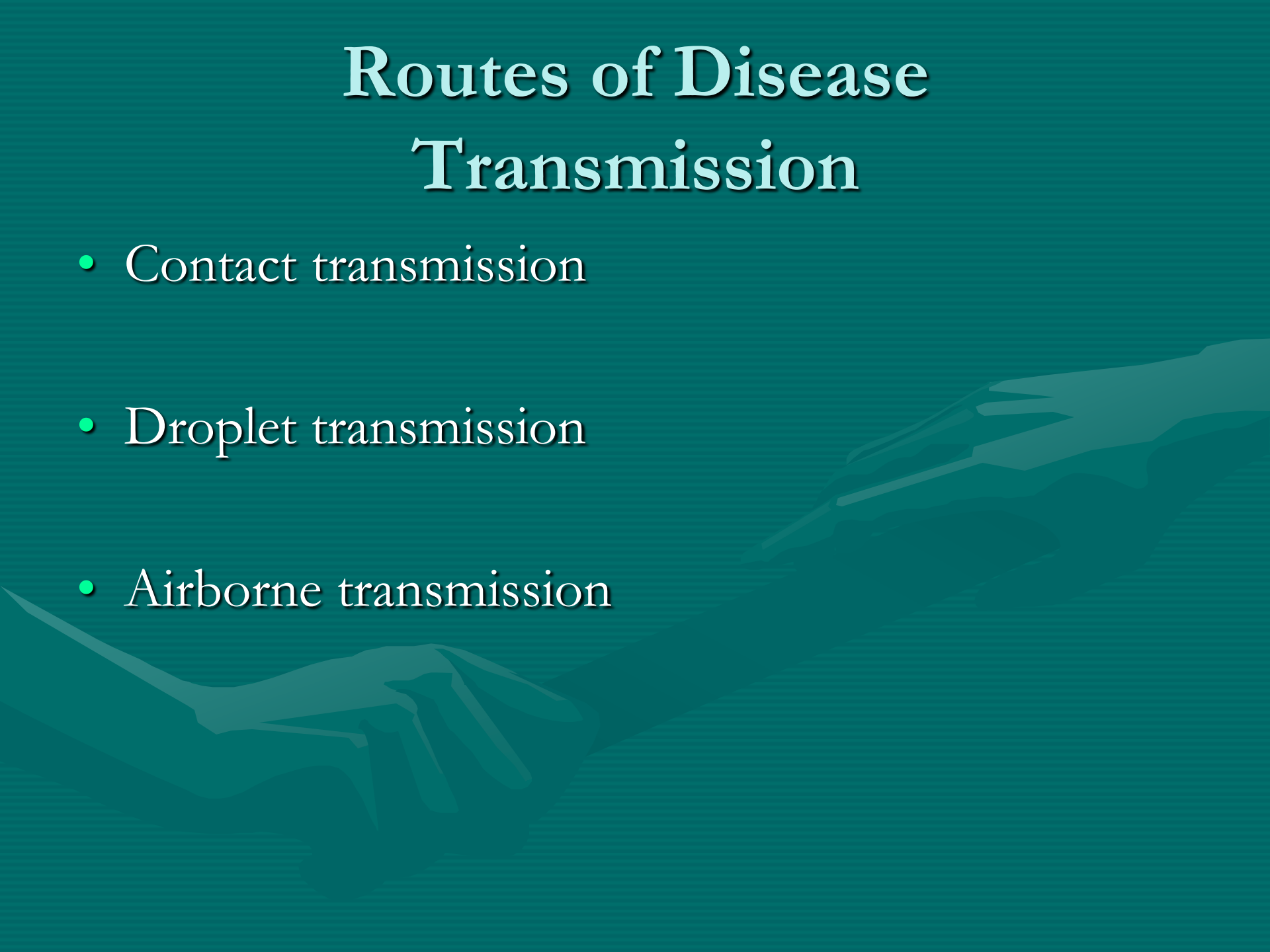
Infection Control Techniques

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Why This Topic?

- To increase employees awareness on infection control
- To make employees aware of potential hazards of infection towards themselves and their elderly patients
- To discuss the proper personal protective equipment needed for different isolation precautions.

Routes of Disease Transmission

- Contact transmission
 - Droplet transmission
 - Airborne transmission
- 
- A faint, semi-transparent image of two hands shaking is visible in the background of the slide, positioned behind the text.

Contact Transmission

Direct Contact (No Intermediate)

- Host in contact with reservoir e.g. MRSA
- Skin to skin contact e.g. Scabies, herpetic whitlow

Indirect Contact (Intermediate)

- Disease carried from reservoir to host-infected or colonized person or object.
- Contaminated surfaces-electronic thermometers, glucose monitoring device.

Airborne transmission

- Very small particles of evaporated droplets or dusts with infectious agents:
 - Remain in air for a long time
 - Travel farther than droplets

Examples:

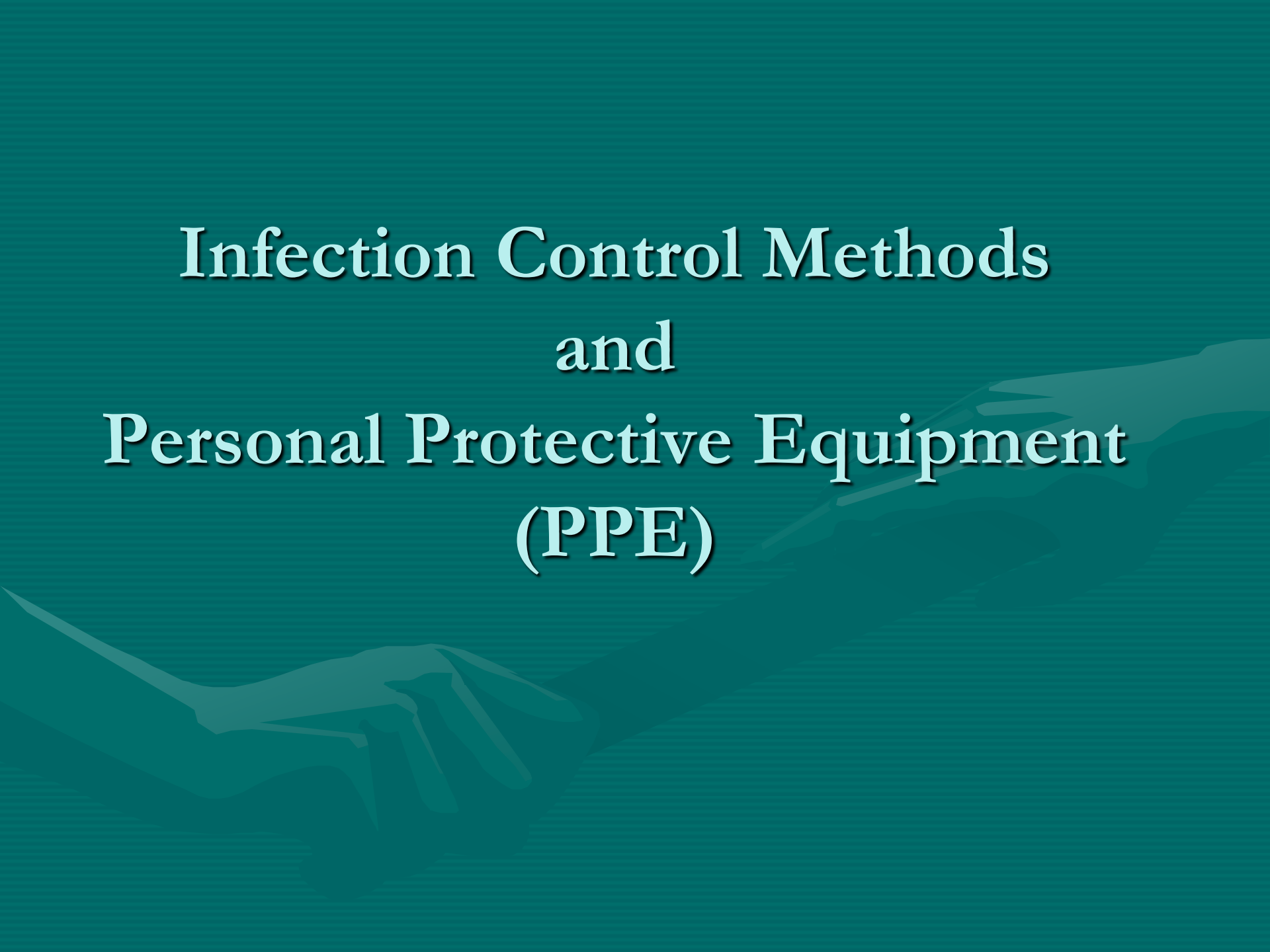
- Tuberculosis
- Measles
- Chickenpox

Droplet Transmission

- Large droplets within 3 feet, or more, transmit infection through:
 - coughing, sneezing, and talking

Examples:

- *Bordetella pertussis* (Whooping cough)
- Viral infections e.g. Influenza virus, rhinovirus
- *Neisseria meningitidis*
- *Mycoplasma pneumoniae*

The background is a solid teal color. Faint, semi-transparent silhouettes of hands are visible, one on the left and one on the right, appearing to be in a handshake or a similar gesture. The text is centered and reads:

**Infection Control Methods
and
Personal Protective Equipment
(PPE)**

Hand Hygiene

- Single most important practice to reduce transmission of infectious agents.
- Includes both:
 - Hand washing with antiseptic soap and water
 - and Alcohol-based products (gels, rinses, foams) without water.

Types of PPE

- Gloves
- Isolation gowns
- Face protection- masks, goggles, and face shields.
- Respiratory Protection e.g. respirator with N95
- Boots

Infection Control Precautions

The background is a solid teal color. In the lower half, there is a faint, semi-transparent image of two hands being washed under a stream of water, symbolizing hygiene and infection control.

Precautions

All requires hand hygiene

- Standard

Transmission based precautions:

- Contact
- Droplet
- Airborne

Standard Precautions

- Prevents the transmission of common infectious agent
- Hand washing is the key
- Assume infectious agents could be present in the patient's
 - Blood
 - Body fluids, secretions, excretions (except sweat)
 - Non-intact skin, and
 - Mucous membranes

PPE for Standard Precautions

Wear:

- Gloves
- Isolation gowns
- Face protection

If:

Touching

- Respiratory secretions
- Contaminated items
- Blood or body fluids

Soiled clothes with patient's body fluids, secretions, or excretions

Possible splashes/sprays of blood, body fluids, secretions, and excretions

Contact Precautions

In addition to Standard Precautions

- Isolate or cohort patients
- Gown and gloves for patient or room contact – remove immediately after contact
- Do not touch eyes, nose, or mouth with hands
- Avoid contaminating environmental surfaces

Contact Precautions

- Wash hands immediately after patient contact
- Use dedicated equipment if possible
 - If not, clean and disinfect between uses
- Clean, then disinfect patient room daily
 - Bed rails
 - Bed side tables
 - Toilet surfaces, and other equipments

Droplet Precautions

In addition to standard precautions

- Place patients in single rooms or cohort 3 feet apart
- Wear mask within 3 feet of patient
- Wear face shield or goggles within 3 feet of patient
- Patient wears mask when outside room

Airborne Precautions

In addition to standard precautions

- Prevent spread of infection through inhaled airborne particles
- Patient in Isolation
- Patient in airborne isolation room, if possible
 - Air exhaust to outside or re-circulated with HEPA filtration
- Patient to wear a mask if outside of isolation room

References

- Guidelines for Isolation Precautions 2007:
<http://www.cdc.gov/ncidod/dhqp/guidelines.html>
- Infection Control :
<http://www.nlm.nih.gov/medlineplus/infectioncontrol.html>
- Bloodborne Pathogens:
<http://www.osha.gov/SLTC/eetools/hospital/hazards/bbp/bbp.html>

Questions?

