Aseptic Technique

Can be applied in any clinical setting

Pertains to any invasive procedure, most drains, or infusions
surgery, IVs, urinary catheters, and wound drains

Goal is to protect the patient from infection

Prevent the spread of pathogens /harmful microorganisms

Surgical suite is an aseptic environment

Medical Asepsis

Deals with reducing the probability of spreading infection

Healthy individuals can resist most minor infections

When exposure is overwhelming – disease occurs

Compromised individuals can be susceptible to even minor exposures
Aseptic Technique

Medical Asepsis/Antisepsis
- Microbial dilution
- Reduce the number of organisms a patient is exposed to
- Simple cleanliness
- Hand hygiene

Disinfection
- Destroying pathogens using chemicals
- Must be OSHA approved
- Handle with caution

Sterilization
- Surgical asepsis – heat, gas, chemicals
- Germ Free
- Stored in a manner to prevent contamination

Aseptic Technique

Surgical Asepsis
- Complete destruction of all organisms and spores
- All equipment used to perform patient care or procedures
- OR equipment, sheets, towels, instruments
- Surgical procedures, lumbar punctures, catheter insertions

Aseptic Technique

Radiographers are typically not sterile in the OR
- Any equipment within the sterile field must be sterile
- Cover C arm or cassette if necessary
- Disposable items come in paper or plastic
- Reusable items are typically wrapped in blue sheets or towels
- Never enter the sterile corridor or turn your back on sterile field
Aseptic Technique

Sterile Fields

Open the flap farthest away from you

Two side flaps

Pull the front flap down towards you

Do not touch inside – unless you are sterile

Do not touch clothing, bedding, side rails

Sterile items may be opened and dropped onto field

Aseptic Technique

Sterile Conscience

Do not open items unnecessarily

Do not touch items once they are open

When done:

dispose of sharps

clean area by folding all debris into sterile field

discard according to policy

It is never acceptable to break sterile field and ignore it
Aseptic Technique

Surgical Scrub
30 strokes to each finger including nail
20 strokes to each part of hand
5 minutes to complete
Light friction – do not damage the skin
Rinse with hand up, elbows down
Dry with a sterile towel

Aseptic Technique
Gowning and Gloving

Aseptic Technique
Sterile Apparel

Donning:
Put on shoe covers, mask, and cap
Put on gown – may have assistance especially to tie
Glove last

Doffing:
Remove shoe covers, mask, and cap
Untie gown
Remove gloves
Remove gown
Hand hygiene
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Two Person Assist

Aseptic Technique

Dressings

May be asked to remove a dressing
Perform hand hygiene
Non-sterile gloves
Explain procedure
Use care due to skin adherence, irritation, pain
Discard appropriately

Aseptic Technique

Dressings

May be asked to apply a new dressing
Explain procedure to patient
Gather supplies:
   NS, gauze, tape, abx ointment, sterile field
Open sterile field to work on

Cleanse the area
Let it dry
Apply bandage with abx ointment
Tape it in place
Hand hygiene
Aseptic Technique

**Tracheostomy**

Operative incision through the trachea
Provides an airway
Communication is critical
Not being able to talk ≠ not being able to communicate
Help minimize anxiety
Consider the tracheostomy sterile
Only properly trained personnel suction the tracheostomy patient

Aseptic Technique

**Thoracostomy Tubes/Chest Tubes**

Drain the intrapleural space and mediastinum of fluid or air
Creates negative pressure
Atelectasis, Pneumo/hemothorax, Pleural effusion/Empyema
Images performed to confirm position
Avoid catching tube equipment
Drainage must be below the level of the chest
Caution is necessary when moving and positioning
Report drainage ≥ 100 mL/hr

Aseptic Technique

**Foley Catheter**

Various purposes
- Drain/measure urine
- Relieve bladder retention
- Irrigate bladder
- Introduce drugs into bladder
- Relieve incontinence
Aseptic Technique

Intravenous and Intra-arterial Lines

Sterile technique required

Used for a variety of purposes: medications, procedures, monitoring pressures

May need images to confirm placement and function

Use caution when positioning for images

Aseptic Technique

Pacemakers

may be done in the OR, cath lab, EPS lab

done under fluoroscopy or with a C arm

if not – will need a chest xray post implantation

avoid elevating/abducting the arm for 24 hrs to prevent dislodging wires

may have a sling – watch for placement of the buckles

References