

Patient Positioning



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Objectives

1. Achieving proper exposure of the operated organ and allowing easy access for the surgeon
2. Maintenance of airways, ventilation and patient monitoring
3. Maintenance of good circulation
4. Prevention of decubitus ulcers and preservation of skin integrity
5. Prevention of neural damage
6. Securing the patient to the table and prevention of falls
7. Keeping the patient's privacy

Criteria for Determining the Patient's Position

1. The desired position
2. The surgeon's personal preference
3. Type of anesthesia
4. Length of the operation
5. Medical history and risk factors (age, weight, disabilities etc...)
6. Anatomy and physiology in accordance with the desired position
7. Patient's safety
8. Patient's privacy

Responsibility for the Patient's Positioning

The sole responsibility is of the surgeon in charge!

By determining and implementing the position, leading the OR team while maintaining continuous monitoring and promoting the patient's safety.

The OR Table

- Hydraulic Vs Electric
- Fixed Vs Mobile
- Operated from a remote control or from the base of the table
- Includes different supports
- Can be manipulated to different positions



Parts of the Operating Table



Supports



Table



Remote Control

Securing the Table's Supports

- The supports aren't preliminary fixed to the table
- Can be moved from table to table
- Can be adapted to a variety of positions of different patients
- Are fixed on two treks on the sides of the table
- Secured to the treks by turning the handle
- Need to be double checked or otherwise might disconnect and fall



Basic Operation of Electrical Remote Control

- OFF
- Lock
- Head Down
- Table Up
- Tilt to the Left
- Back Up
- Legs Down
- Flex Down



- ON
- Unlock
- Head Up
- Table Up
- Tilt to the Right
- Back Up
- Legs Down
- Flex Up

Back to "0"

Risks During Patient's Positioning

Fall

Nerve Damage

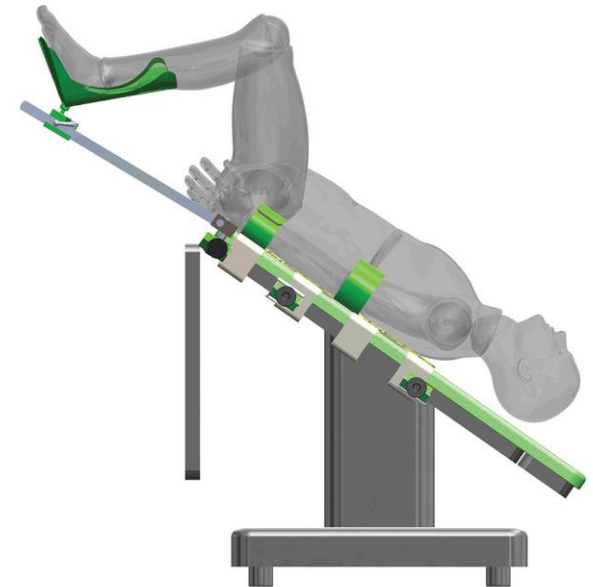
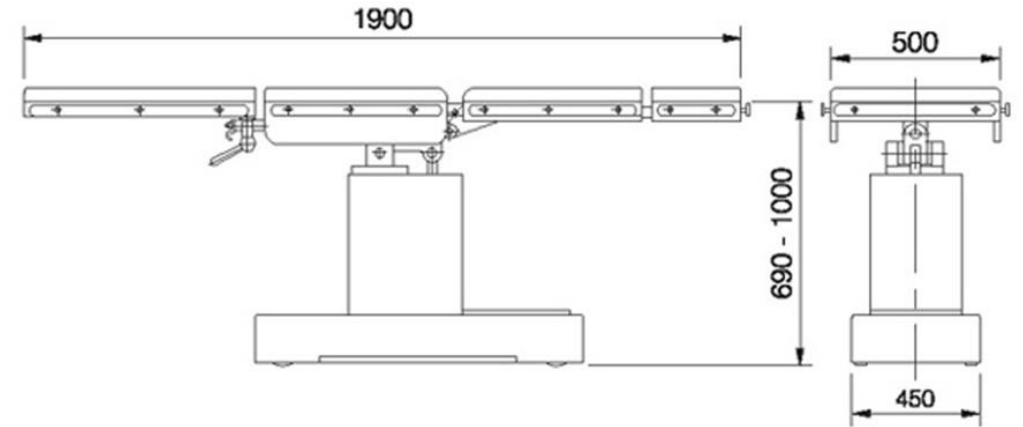
Decubitus Ulcers

Venous Thrombo-Embolic (VTE) Events

Hypothermia

Fall - A Never Event

- Narrow table (only 50 cm!)
- Wide patient
- Sharp angles
- **Special care during patient transfer to and off the table!**
- **Special attention during awakening!**



Nerve Damage – Etiologies

- Non-physiological positions
- Pull or twist of a certain body part
- Long period in the same position
- The patient can not inform in case of discomfort or pain
- Leaning of personnel or heavy equipment on the patient's body

Nerve Damage – Common Examples

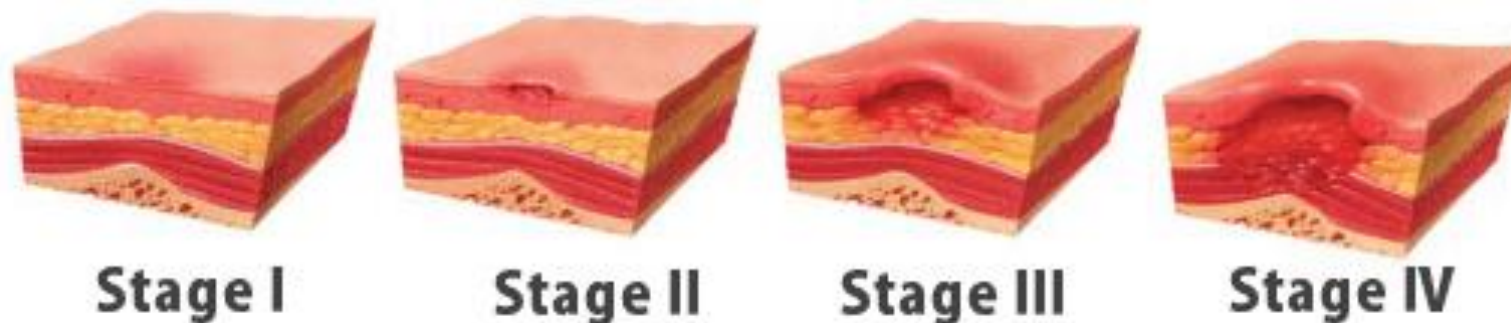
- Brachial plexus injury - stretching the arms above 90 degrees
- Radial and ulnar nerve injury – during pressure application on the elbow due to leaning on the patient's body
- Peroneal and Tibial nerve injury – during plantar flexion or leg crossing



Decubitus Ulcers - Etiologies

Prone to occur in places where bony prominences are close to the skin due to continuous pressure or not sufficient padding.

Demands extra padding on a level and dry surface to avoid shearing forces that can lead to damaged skin integrity.



Decubitus Ulcers - Prevention

- Check the integrity of the skin prior to the **beginning** of the operation while moving the patient **to** the OR table
- Pad the body with pillows or other padding devices
- Keep sheets stretched w/o wrinkles
- Check the integrity of the skin at the **end** of the operation while moving the patient **from** the OR table



VTE - Etiologies

- Long immobilization
- Muscle relaxation
- Hypotension
- Lack of anticoagulants



VTE – Prevention = SCD's (Sequential Compression Device)

Comprised of 3 parts:

1. Engine

2. Tubes

3. Pneumatic stockings

- Make sure the device is **connected to AC power!**
- Make sure the device is **turned on!**



Hypothermia - Etiologies

1. Low room temperature
2. Cold fluids
3. Blood loss
4. Cold table and contact with cold surfaces
5. Open cavities \ loss of natural body barriers
6. Muscle relaxation (lack of shivering)
7. Capillary distention (d/t anesthesia)
8. Ventilation with cold and non humid air

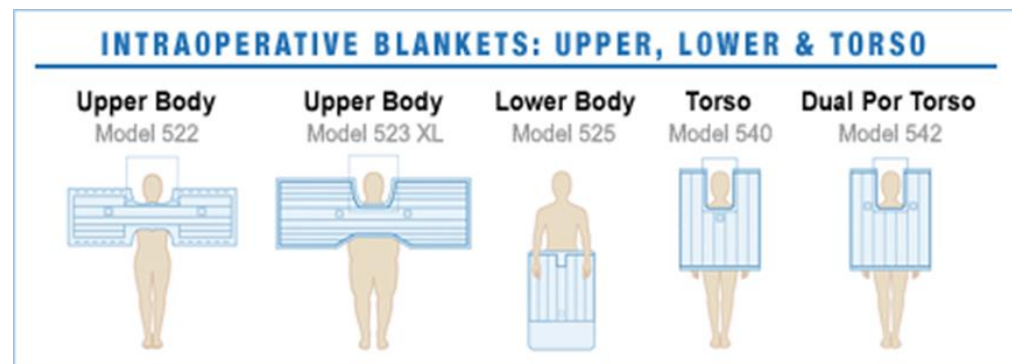
Hypothermia - Prevention

1. Heated mattress
2. Heated blanket (“Bear Hagger”)
3. Heated fluids and blood products
4. Cavitory washes with warm fluids



Hypothermia - Prevention

Remember! Maintaining normothermia is an active process that starts long before the operation begins. The patient's body temperature should be constantly monitored and actively corrected.



Basic Positions

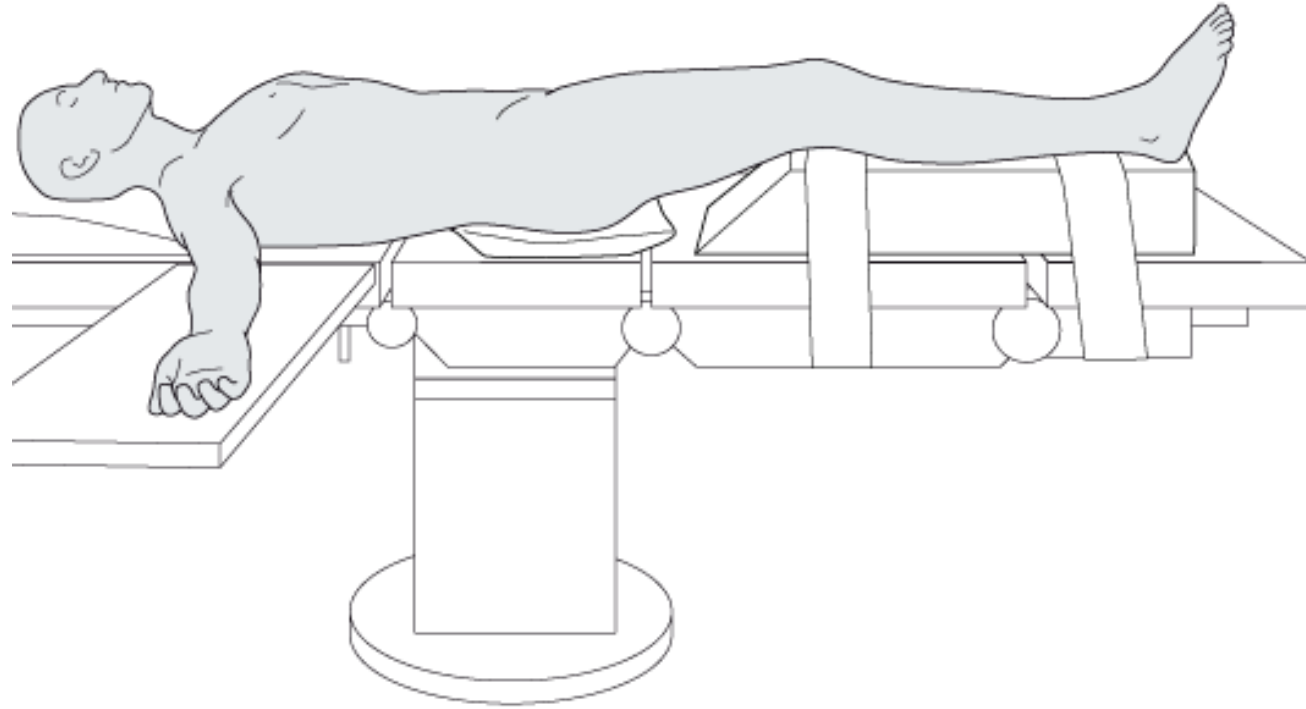
Supine

Prone

Lateral

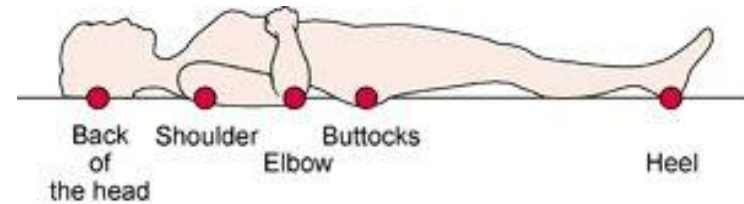
Lithotomy

Supine

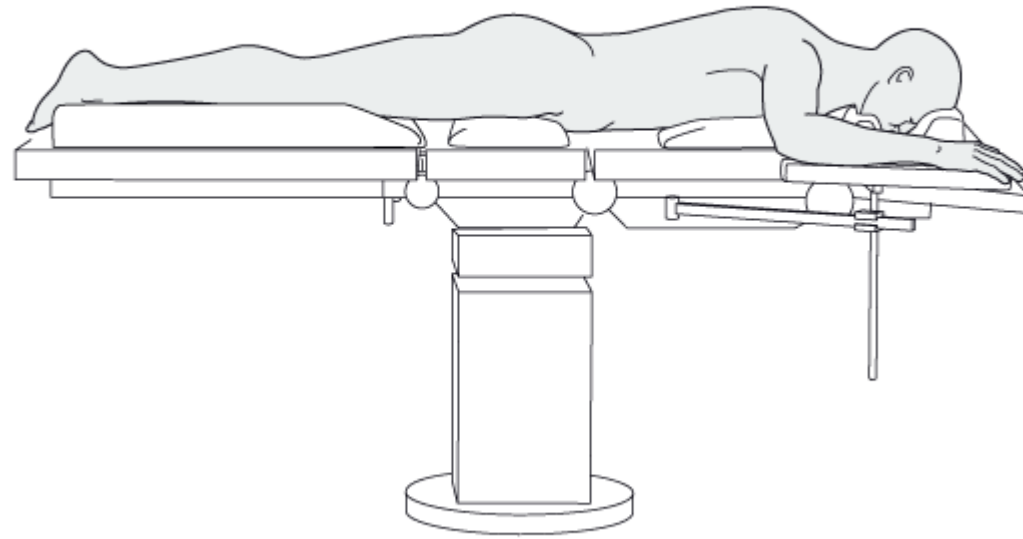


Supine – Pressure Points

- The Occiput
- Spinous Process of Thoracic vertebrae
- Scapula
- Olecranon
- Sacrum
- Coccyx
- Calves
- Calcaneus

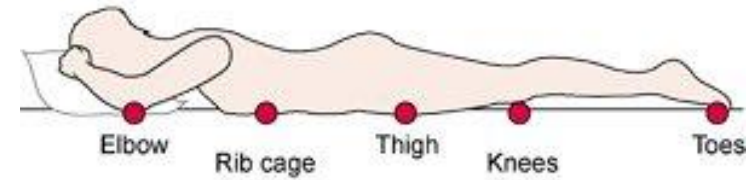


Prone

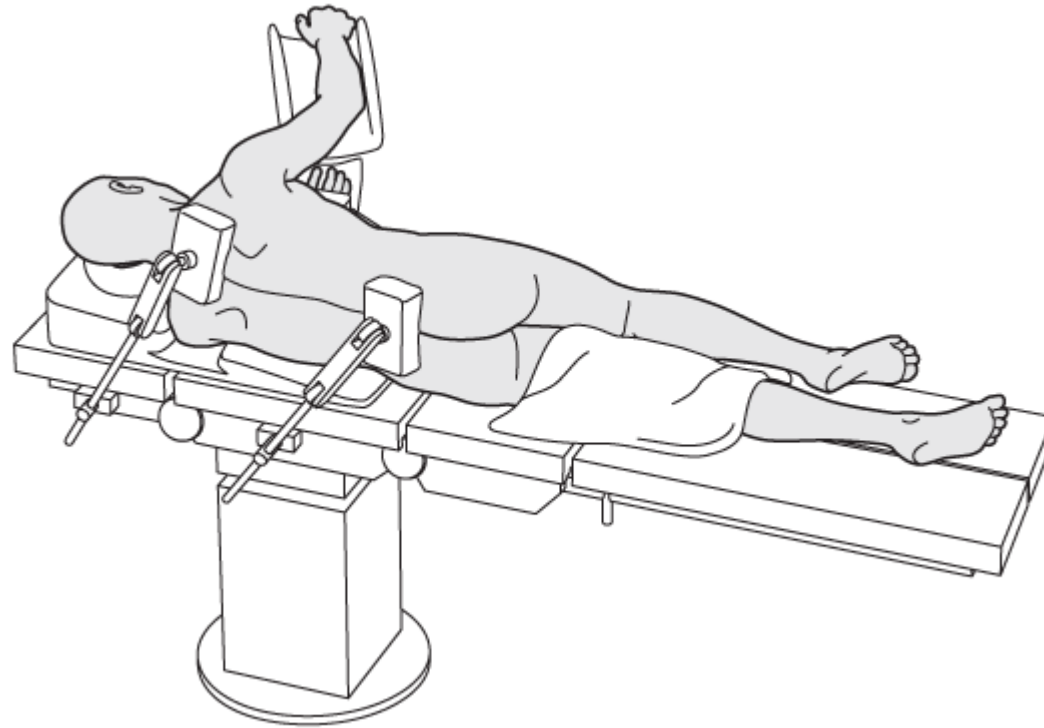


Prone – Pressure Points

- Eyes
- Cheeks
- Acromion
- Breasts
- Anterior Iliac Spine
- Male genitalia
- Patella
- Toes

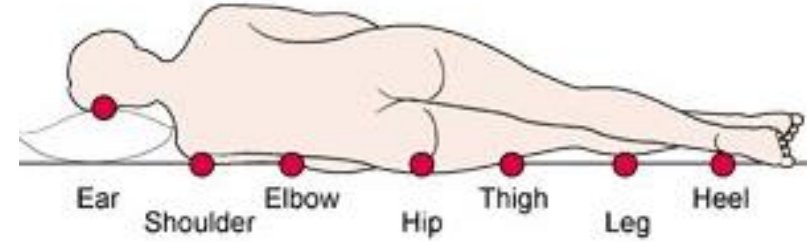


Lateral



Lateral – Pressure Points

- The ipsilateral Ear
- Acromion Process
- Olecranon
- Ribs
- Iliac Crest
- Greater Trochanter
- Medial & Lateral Epicondyles
- Medial & Lateral Malleolus



Lithotomy



Lithotomy – Pressure Points

- The Occiput
- Spinous Process of Thoracic vertebrae
- Scapula
- Olecranon
- Sacrum
- Medial & Lateral Epicondyles
- Medial & Lateral Malleolus
- Calcaneus

