



Al-Mustaqbal University
College of Technology & Health Sciences
Anesthesia Techniques Department

جامعة المستقبل
كلية التقنيات الطبية
قسم تقنيات التخدير



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Anesthesia & Intensive Care

Title: Positions during anesthesia

Positions during anesthesia

Goals of Surgical Positioning

All positioning schemes have 3 goals:

1. Maximum exposure to the surgical area while maintaining homeostasis and preventing injury
2. Position must provide the Anesthetist with adequate access to the patient for airway management, ventilation, medications, and monitoring
3. Promote the enhancement of a satisfactory surgical result

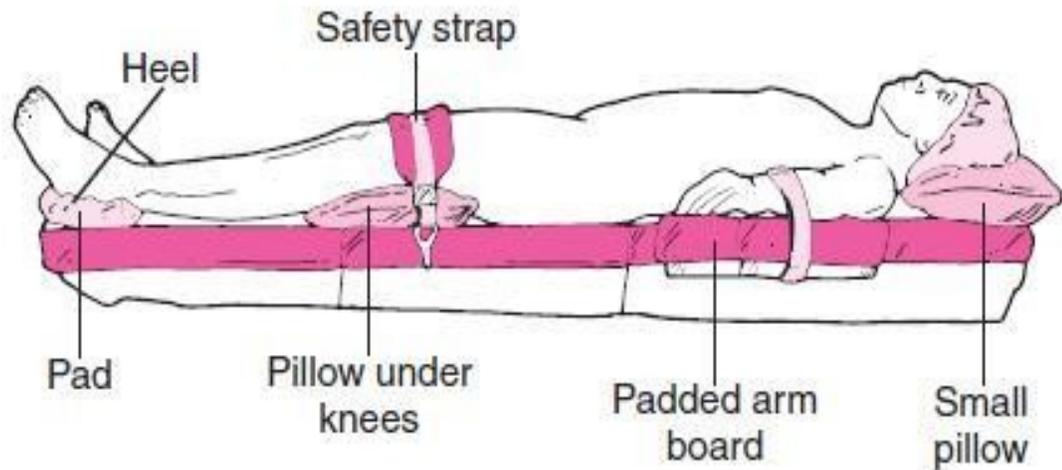
POSITIONING OF ELDERLY PATIENT

- FRAGILE SKIN SURFACES
- ARTHRITIC JOINTS
- LIMITED RANGE OF MOTION
- LIFTING RATHER THAN SLIDING OR DRAGGING
- AVOID OF ADHESIVE TAPE FOR STRAPPING
- ADEQUATE PADDING FOR BONY PROMINENCES

POSITIONING OF PAEDIATRIC PATIENT

- Think of 'appropriate size'
- Right size for bed and attachments
- May necessary to use safety strap
- Never overextended limbs or keep in one position for longer periods
- Due to small size, children are prone to and has greater risk of physiologically compromised

Supine position:



⌚ The most common surgical position, is a position of the body lying flat with the face and abdomen up with arms tucked in at the sides, when used in surgical procedures;

⌚ it allows access *to the peritoneal, thoracic and pericardial region; as well as the head, neck and extremities,*

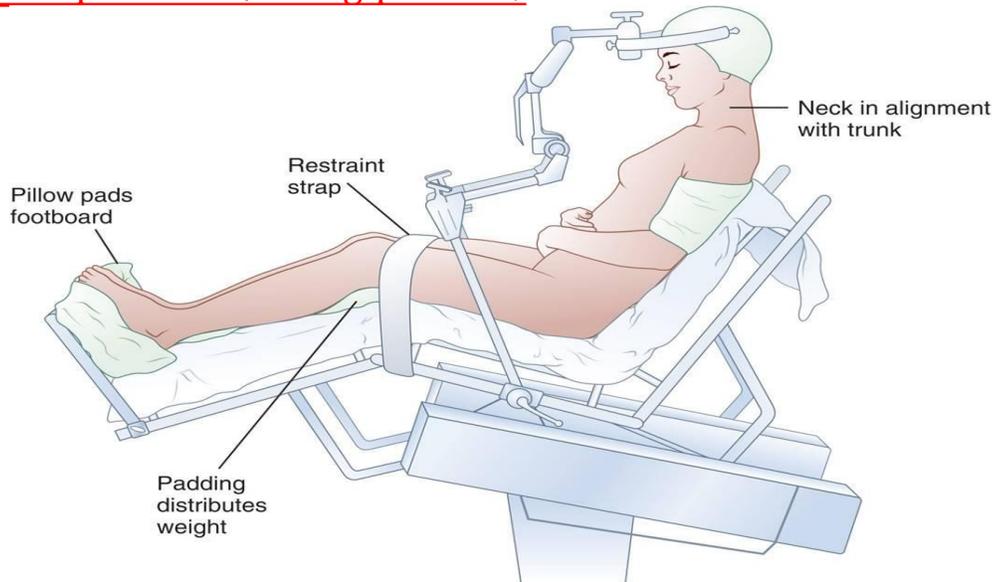
⌚ The supine position carries the risk of supine hypotensive syndrome during pregnancy or patients with a large abdominal mass.

⌚ The classic supine position leads to loss of the natural lumbar lordosis and this **is associated with postoperative low back pain.** Maintenance of the lordosis with an inflatable wedge or another suitable device should be considered in all patients.

⌚ The occiput, sacrum and heel are at risk of developing **pressure sores** and these areas should always be well padded.

⌚ If heel pads are used, it is wise to ensure that the knee still maintains some degree of flexion otherwise a hyperextension injury may result.

Seated position: (Sitting position)



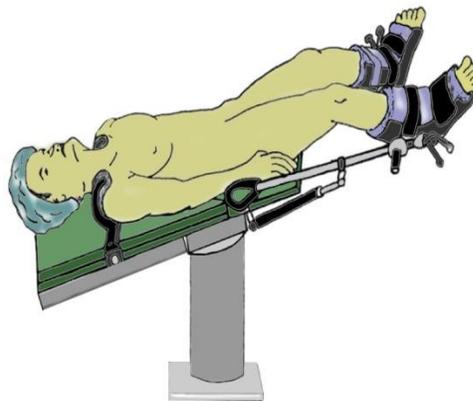
⌚ The patient sitting straight up or leaning slightly that performed in some **dental and neurosurgeries**.

⌚ That position requires careful support of the head,

⌚ in addition, venous pooling and resultant cardiovascular instability may occur (particularly, risk of **hypotension**).

⌚ **In craniotomy, air embolism** is also a severe potential problem because when the skull is opened many of veins within the bone is sub-atmospheric, air may enter the veins leading to systemic air embolism.

Lithotomy and Lloyd Davis positions:



Lithotomy position

Lloyd Davies position

⌚ The position involves positioning of the patient's feet above (Lithotomy p.) or at the same level as the hips (Lloyd Davis p.).

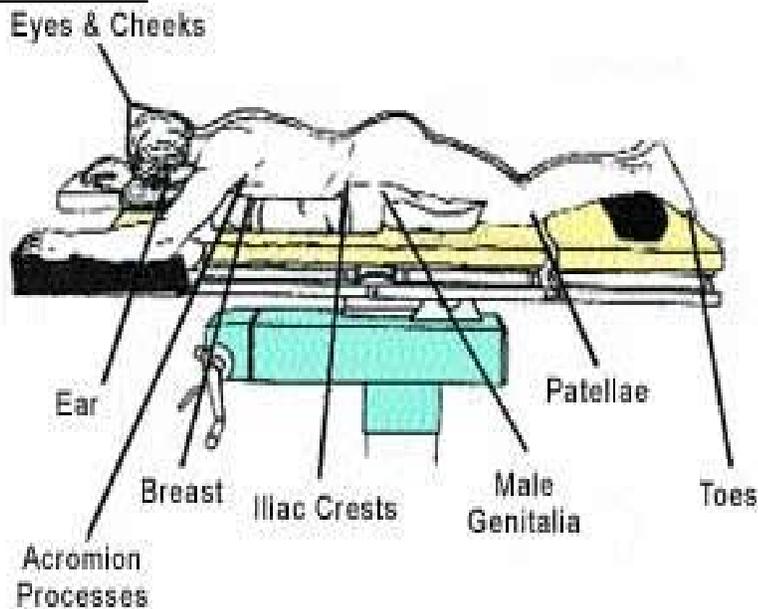
⌚ These are the common positions for surgical procedures involving **pelvis and lower abdomen (such as: anal surgeries, cystoscopy, curettage and cervical cerclage)**.

⌚ It may result in nerve damage on the medial or lateral side of the leg from pressure exerted by the stirrups, which must be wellpadded.

⌚ Care must be taken to elevate both legs simultaneously to that pelvic asymmetry and resultant backache is avoided.

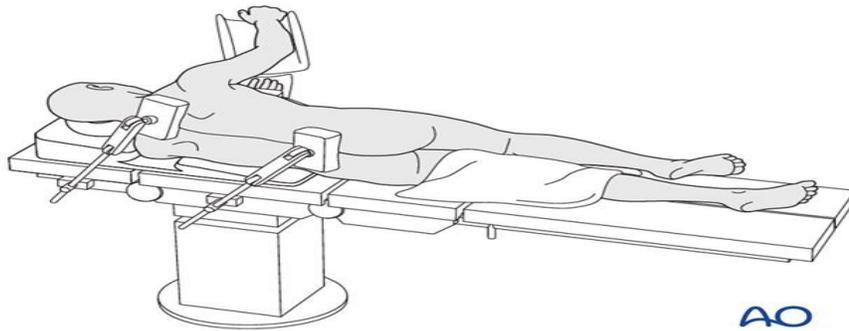
⌚ The sacrum should be supported on the operating table and not allowed to slip off the end.

Prone position:



- ⌚ A position involves in which the patient lies flat with the chest down and back up
- ⌚ performed in some operations such as laminectomy.
- ⌚ It may cause abdominal compression, to prevent this, support must be provided beneath the shoulders and iliac crests,
- ⌚ Excessive extension of the shoulders should be avoided.
- ⌚ The face, and particularly the eyes, must be protected from trauma.
- ⌚ The tracheal tube must be secured firmly in place as it almost impossible to reinsert it with the patient in this position.

Lateral position:



⌚ The patient is lying on his right or left side,

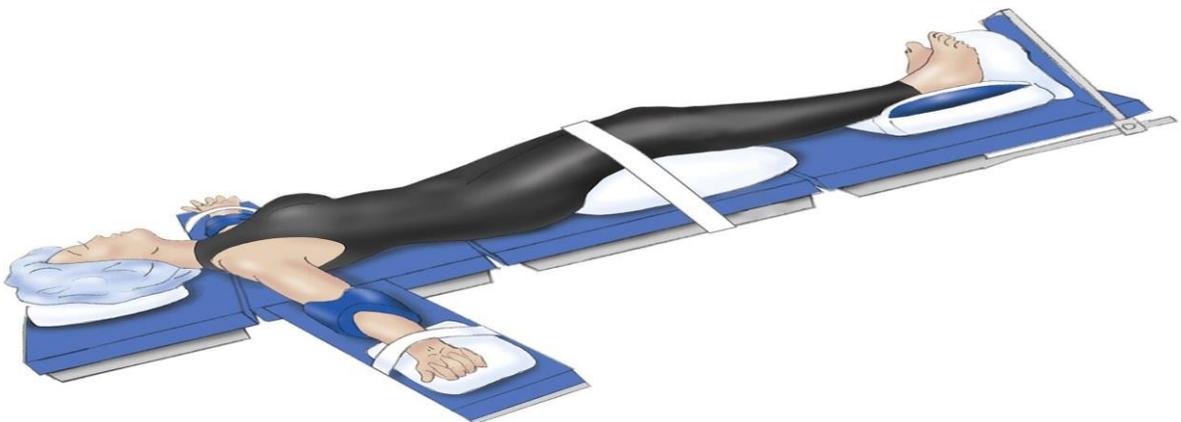
⌚ used in some operations such as kidney and thoracic surgeries.

⌚ It may result in asymmetrical lung ventilation.

⌚ Care is required with arm position and iv infusion

⌚ The pelvis and shoulders must be supported to prevent from rolling either backwards or forwards.

Trendelenburg position:



⌚ The body laid flat on the back, the head down and legs up,

• used for hypotensive or shocked patient,

• surgical reduction of an abdominal hernia,

• prevent aspiration of gastric contents due to vomiting or regurgitation

• and when placing a central venous line.

• Trendelenburg position may produce upward pressure on the diaphragm because of the weight of the abdomen.

• Damage to the brachial plexus may occur as a result of pressure from shoulder supports, especially if the arms are abducted.

Reverse Trendelenburg position:

• Reverse trendelenburg position is also used for neck and head surgery and gynecological procedures because it reduces the flow of blood to those areas.

• The reverse trendelenburg position is also used to improve surgical exposure of the prostate and minimally invasive upper abdominal procedures.



• The physiological effects of this position are similar to those associated with the seated position.

• Beneficial physiological effects include an increase in head and neck venous drainage, reduction in intracranial pressure and reduced likelihood of passive regurgitation.

• The main complications of this position are hypotension and increased risk of venous air embolism.

MCQ- TEST

1-Sitting position for anesthesia (all true except one)

- a) The most common position.
- b) Used for the head, neck and extremities surgery
- c) The classic supine position associated with postoperativelow back pain.
- d) at risk of developing pressure sores.
- e) The supine position carries the risk of supine hypertensivesyndrome during pregnancy.

2- Reverse Trendelenburg position (all true except one)

- a) hypotension and increased risk of venous airembolism.
- b) increase in head and neck venous drainage.
- c) reduction in intracranial pressure.
- d) reduced likelihood of passive regurgitation
- e) used for back

surgery.3- Which one is true?

- a) Supine position=hypertension
- b) Trendelenburg position=hypotension.
- c) Sitting position=venous air embolism
- d) Lateral position=symmetrical lung ventilation
- e) Reverse trendelengburg position=hypertension

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GOOD LUCK

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