

# POSITIONING RELATED SSEPs CHANGES

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## DEFINITIONS

- ❖ **Nursing:** Defined as deliberate placement of the patient or a body part to promote physiological and/or psychological well-being.
- ❖ **Wheelchair positioning :**Defined as the placement of a patient in a properly selected wheelchair to enhance comfort, promote skin integrity, and foster independence.
- ❖ **Neurologic positioning :**Defined as the achievement of optimal, appropriate body alignment for the patient experiencing or at risk for spinal cord injury or vertebral irritability.
- ❖ **Intraoperative positioning :**defined as moving the patient or body part to promote surgical exposure while reducing the risk of discomfort and complication.

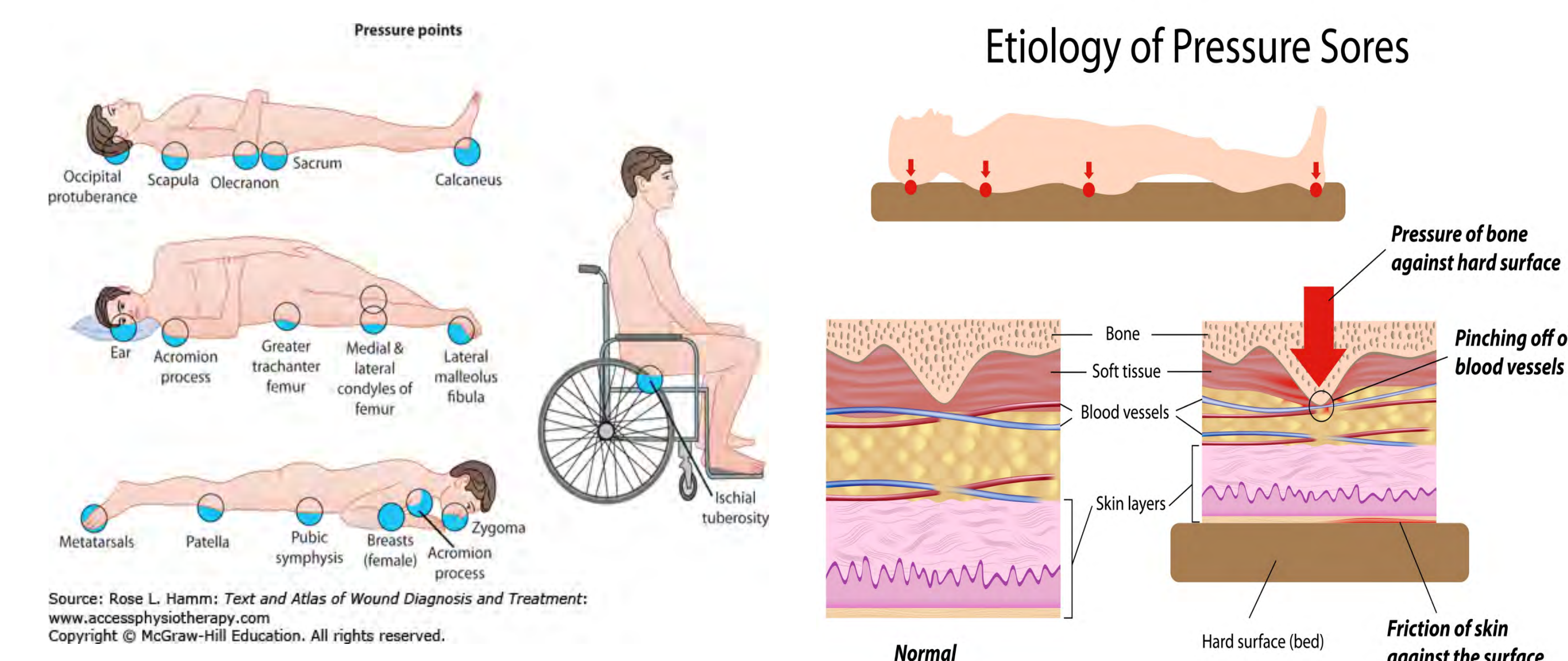
## SURGICAL POSITIONING

- **Surgical positioning** :is the practice of placing a patient in a particular physical position during surgery .
- The goal in selecting and adjusting a particular surgical position is to maintain the patient's safety while allowing access to the surgical site . Often a patient must be placed in an unnatural position to gain access to the surgical site.

- Surgical Positions:
  - Supine
  - Prone
  - Trendelenburg
  - Reverse Trendelenburg
  - Lithotomy
  - Fowler's position
  - Jackknife
  - Lateral
  - Knee-chest
  - Lloyd-Davies
  - Sims' position
  - Fracture Table Position
  - Semi-Fowlers position

## SURGICAL POSITIONS PROBLEMS

- The risk of pressure ulcers (ischemia) /skin lacerations in surgical patients can be greatly reduced through proper positioning that keeps weight off bony areas.
- Three components of safe positioning must be applied when a surgical patient is on an OR table : knowledge, planning, and teamwork.
- **Surgical Positions versus Pressure points:**



## WHY IS POSITIONING IMPORTANT...?

- Rozet and Vavilala (2007) wrote In the article “Risks and Benefits of Patient Positioning During Neurosurgical Care,” that “ideal patient positioning involves balancing surgical comfort against the risks related to the patient position. Therefore, patient positioning during surgery should be considered during the preoperative evaluation.”
- Importance of positioning in the Operating Room:
  - Comfort to the patient
  - Avoiding Injuries
  - Reducing Stress
  - Provide Exposure to the site of surgery
  - safe outcome.
- Improper Positioning results:
  - Respiratory Problems
  - Circulatory Problems
  - Pressure Ulcers/Skin Problems
  - Neurological Problems

## SSEPS

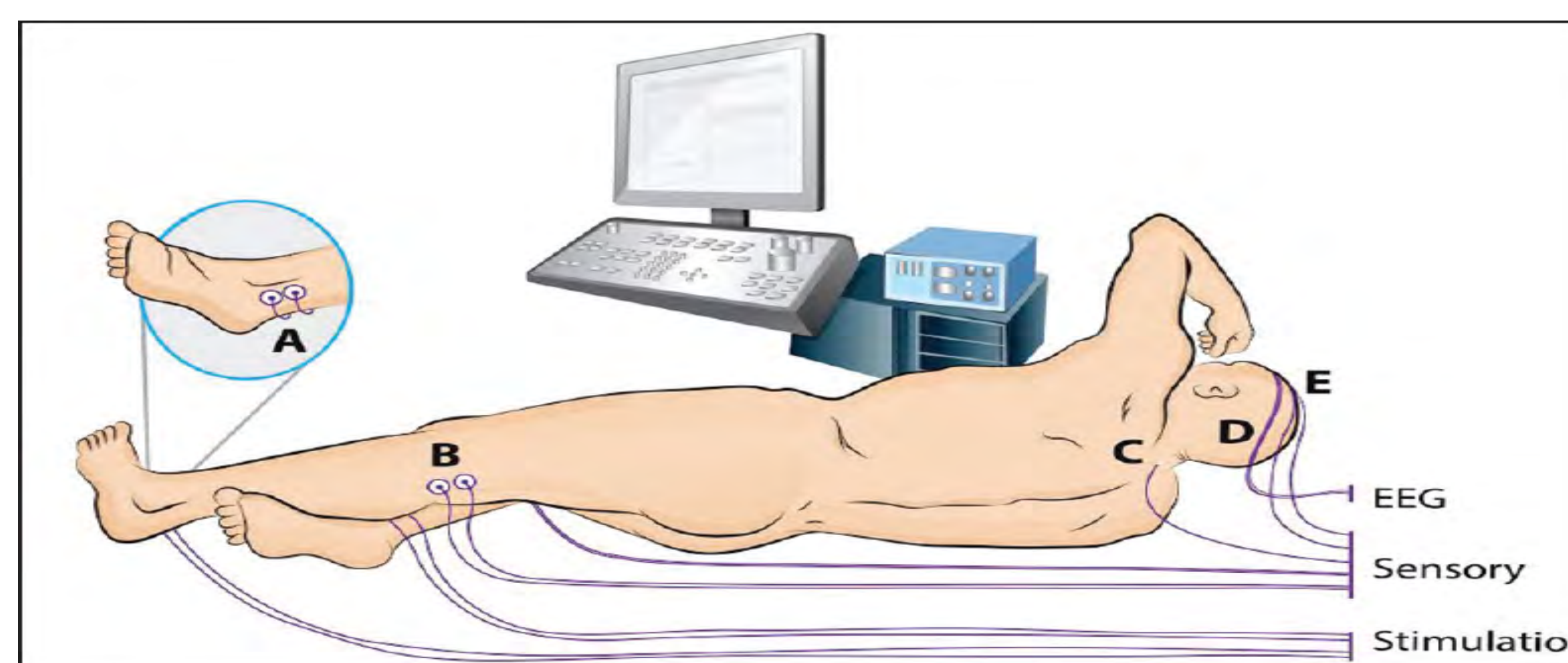
### Somatosensory Evoked Potential.

Commonly used in spine surgeries for monitoring the Integrity of the Dorsal Column, including peripheral nerves, spinal cord and sensory cortex.

### Stimulating Sites:

Upper Extremities: Ulnar and Median Nerves

Lower extremities: posterior Tibial, Popliteal ,Peroneal Nerves



## CASE STUDIES/DATA

### SSEPs Change Due to Positioning Problems by Year/Solved vs Unsolved

	2011	2012	2013	2014	2015	2016	2017
<b>Pre-Baselines</b>	0	1	0	0	0	1	2
<b>RTB</b>	13	15	19	51	37	79	42
<b>NRTB</b>	2	6	3	7	4	10	4
<b>After Decomp.</b>	10	10	5	4	37	79	40
<b>Solved bf Closing</b>	13	15	19	55	41	83	42
<b>Solved aft Closing</b>	0	2	1	3	0	2	2
<b>Unsolved</b>	2	6	2	0	0	4	4
	15	21	22	58	41	89	56