Three Ways to Apply Central Stimulus
Objectives

1. State when to use central pressure to elicit response
2. Identify three consistent evidence-based practices for applying central noxious stimuli to elicit response
3. Define contraindications and precautions with each method of eliciting noxious response to minimize patient harm
Eliminating the Sacred Cow

NO PINCHING!!!!
WE WILL NO LONGER BE PINCHING OUR PATIENTS TO STIMULATE A REFLEX

WHY THE PINCH IS “IN A PINCH”

- Central Stimuli is needed to evaluate the patient’s brain function with a decreased level of consciousness (i.e. those in a stupor or comatose state)
  - Pinching can cause tissue damage in our patients
  - There are other means of assessing central stimuli to prevent unnecessary harm to our patients

- In addition, peripheral stimuli (i.e. nail tip pressure) should not be used since it is primarily used to elicit spinal reflexes and a peripheral response, not a central response
  - Therefore it is not an accurate assessment at times
Stuporous & Comatose State

- **Stuporous/Stupor:**
  - Lies quietly with minimal movement
  - May arouse to **vigorous** and **continuous** stimulation
  - May open eyes and respond to pain
  - May make incomprehensible sounds

- **Comatose/Coma:**
  - Absence of awareness of self and environment
  - Sleep-like state with eyes closed
  - Does not respond appropriately to bodily or environmental stimuli
  - No verbal sounds
  - Neural/motor response varies depending on the depth of coma (can range from purposeful to unresponsive)
First! Stop!
before applying painful stimuli, make sure noxious stimuli has been attempted first to wake patient.

**Tips/Tricks to Stimulate Patient:**

- Oral care
- Turn patient
- Make sure sedation has been paused for an adequate amount of time
- Turn on lights
- Talk to patient, ask to follow commands
- Look at pupils

*(when appropriate per each individual patient condition)*
The 3 Acceptable Ways to Apply Painful Central Stimuli

1. Supraorbital Pressure
2. Trapezius Squeeze
3. Sternal Pressure
SUPRAORBITAL PRESSURE

How to:

- Using a finger or thumb, feel the orbital rim under your patient’s eyebrow until you find a small notch/groove.
- With your thumb, push hard on the notch. This should trigger intense local pain (like that of a sinus headache)

**Supraorbital Notch**—about 2 Fingers lateral mid-face

**Supraorbital Nerve** (runs through notch)

**Caution:**
Do not use if patient has facial fractures
How to:

- The trapezius muscle is flat and triangular, covering the shoulder like a scarf. The muscle extends from the back of the neck to the shoulder.
- Using your thumb and two fingers, grab the muscle and twist.

**Caution:**
Do not use if patient has a clavicle fracture.
STERNAL RUB

**How to:**
- Clench fist, apply pressure with your knuckles to patient’s sternum

**Tips/Tricks:**
- May need to apply stimuli for up to 30 seconds

**Caution:**
Do not use if patient has injury/surgery to chest

**Avoid using every hour, may cause skin breakdown**
Responses to Painful Stimuli and Testing Laterality

- The responses to each of these stimuli should be equivalent to pinching. The patient will localize, withdraw, flex, extend, etc.
- In order to test if the patient’s response is equal on each side, apply supraorbital pressure and/or the trapezius squeeze to each side. Apply increasing pressure/squeeze over 10 seconds.
Minimize Tissue Damage – No Pinching!
References:

