

# E•QUAL | EMERGENCY QUALITY NETWORK

Opioid Initiative Wave II –  
*Occipital Nerve Blocks & Low Paraspinous Injections*

## Presenter



Katherine Vlasica, DO

# Occipital nerve blocks and low paraspinous cervical injections

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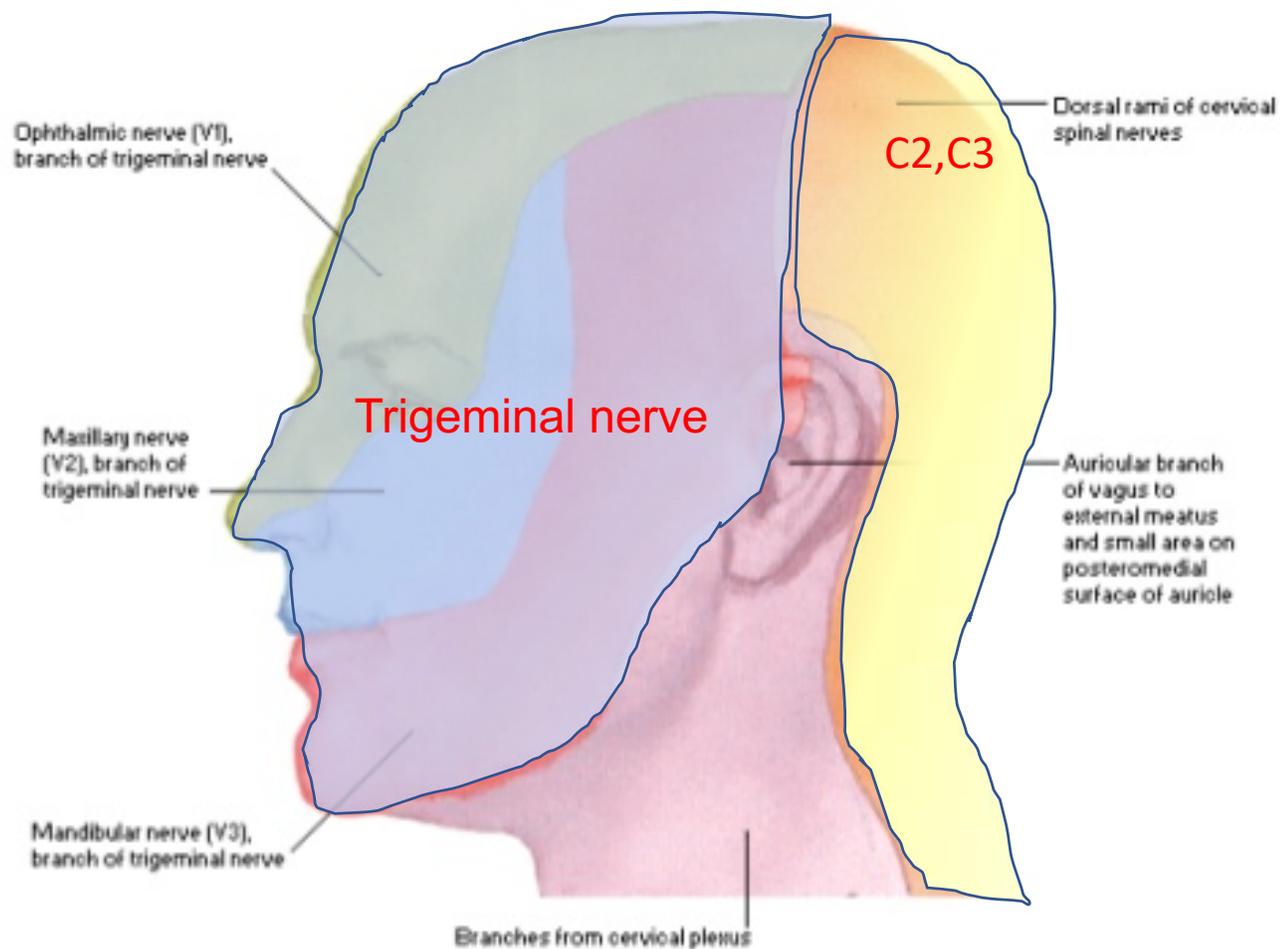


## US Epidemiology

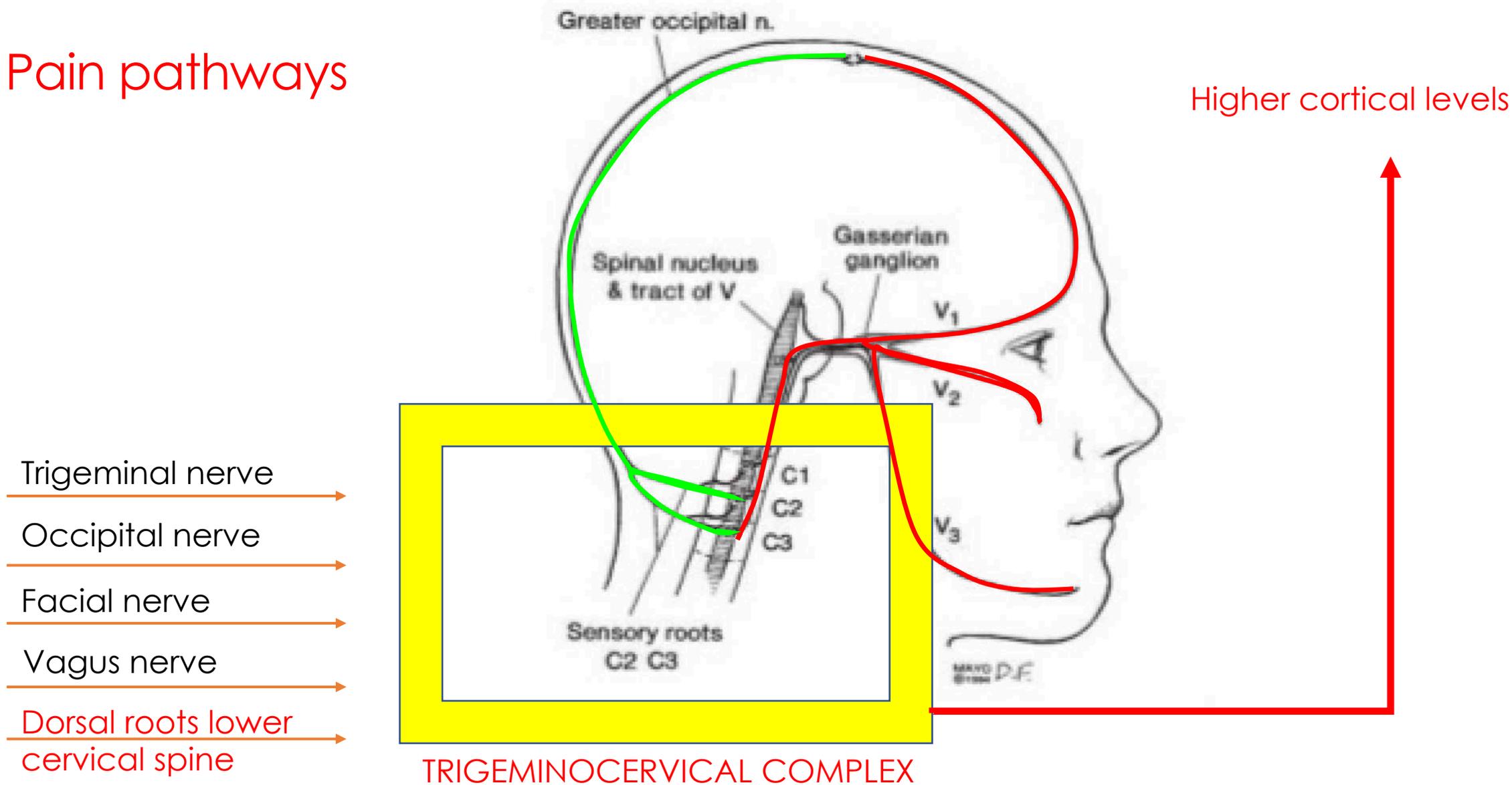
- 2-3% of all ED visits
- 9% males, 20% females
- Higher incidence in :
  - Lower socioeconomic status
  - Elderly
  - Disabled



## Dermatomes of head and face



# Pain pathways

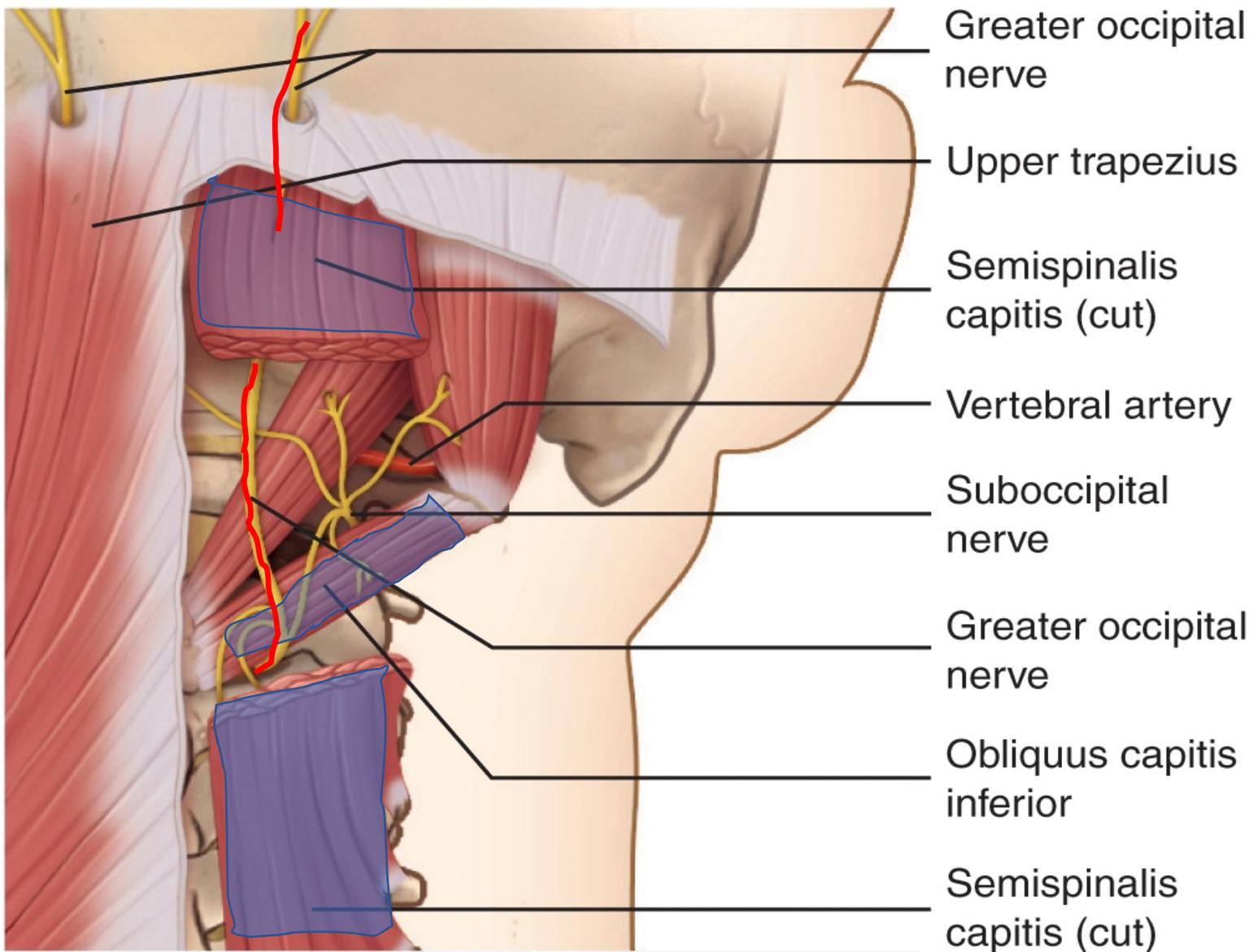


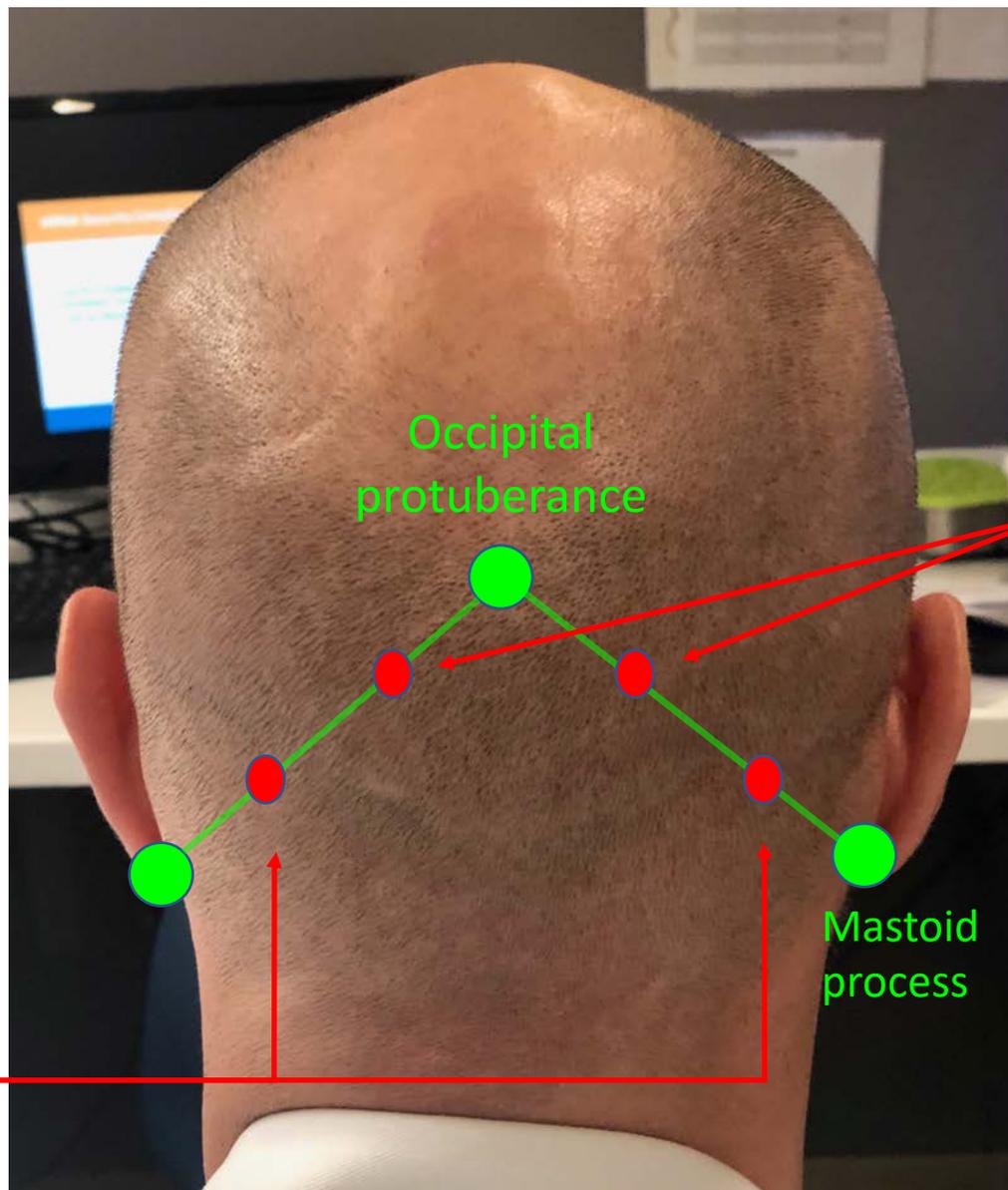
## Occipital Nerve blocks Indications

- Primary headache disorders
  - ▶ Migraine
  - ▶ Cluster
  - ▶ Chronic daily headache
- Secondary headache disorders
  - ▶ Cervicogenic
  - ▶ Post traumatic headache
  - ▶ Post Dural puncture headache
- Cranial neuralgias
  - ▶ Occipital neuralgia

## Risks and caution with:

- Allergy to local anesthetic
- Skin infection
- Injury to occipital artery
- Injury to occipital nerve
- Previous craniotomy or known skull defect
- Anticoagulant or antiplatelet use
- Pregnancy
- Prior vasovagal syncope





Greater occipital  
nerve injection site

Lesser occipital  
nerve injection site

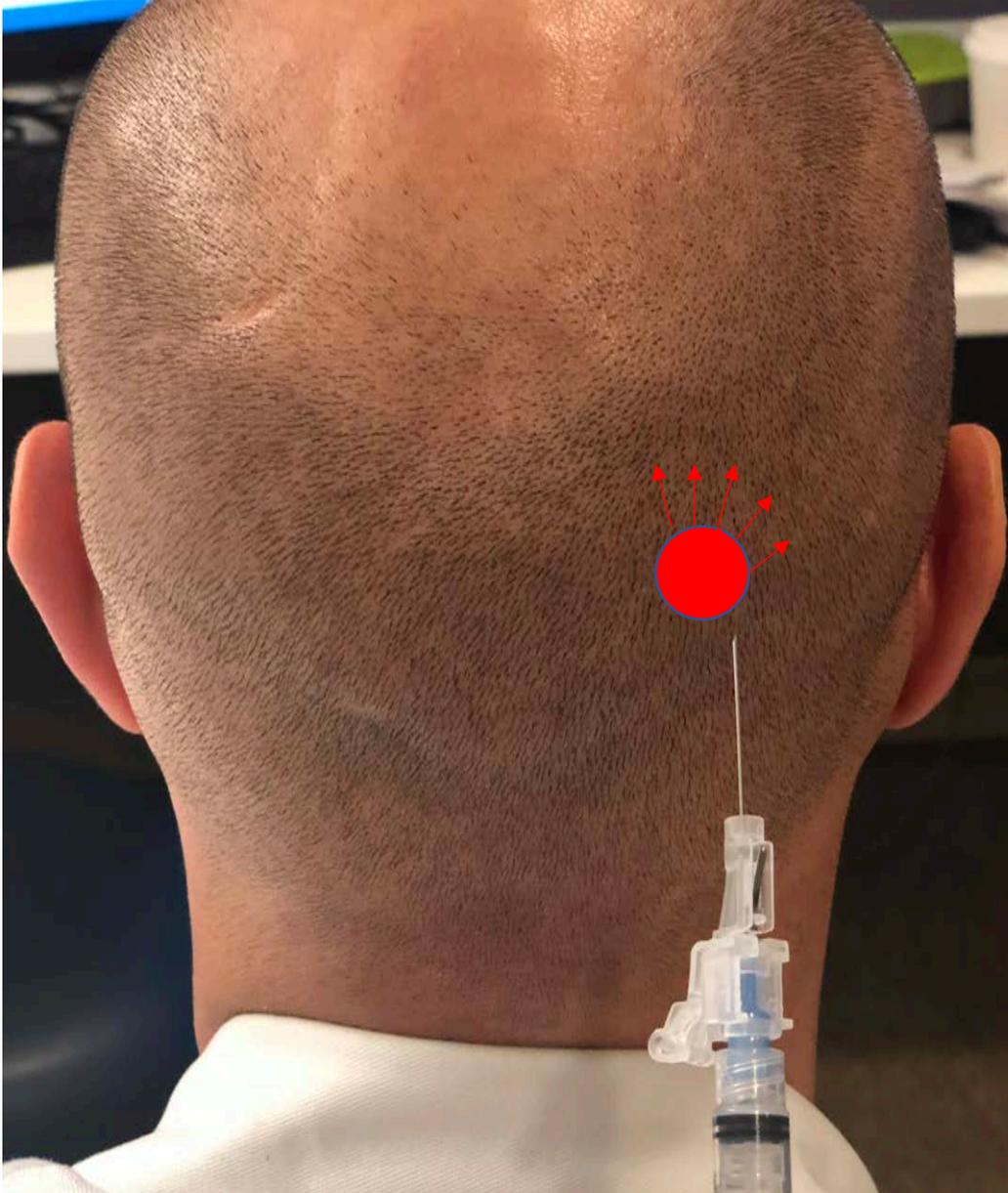
Occipital  
protuberance

Mastoid  
process

## Materials:

- 0.25% or 0.5% bupivacaine or 1-2% lidocaine
- Alcohol pad, gloves
- 5ml syringe
- 25 or 27 gauge 1.5" needle
- Consent



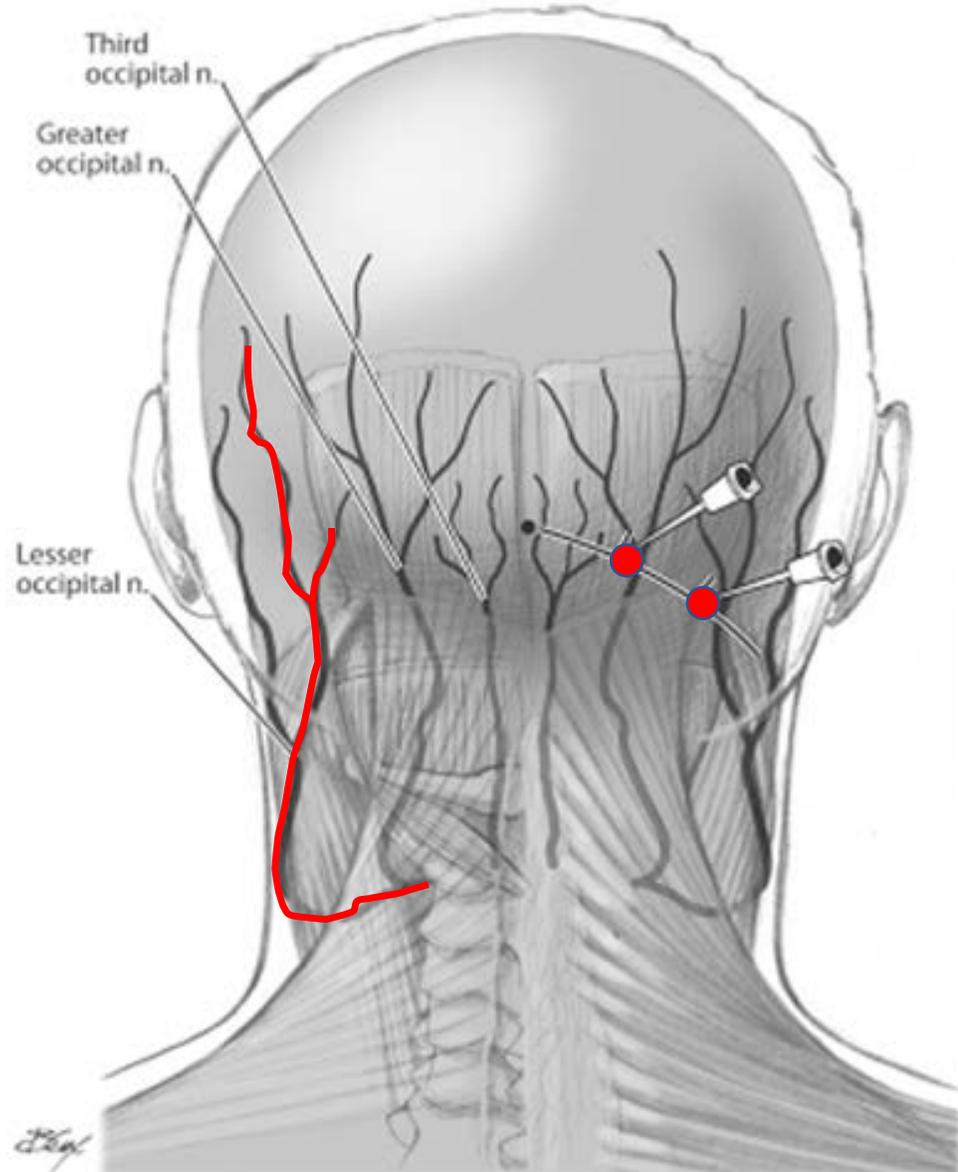


Aspirate prior to injection!

Localize point of maximum  
tenderness

Insert needle pointing upward

Inject 1.5 – 3 ml of medication  
PER nerve



## LESSER OCCIPITAL NERVE

Technique similar to GON injection

- <https://cha.com/clinician-training-materials/>



# Low paraspinous cervical injections





## Regional Head and Face Pain Relief Following Lower Cervical Intramuscular Anesthetic Injection

Gary A. Mellick DO, Larry B. Mellick MD

First published: 24 November 2003 | <https://doi.org/10.1111/j.1526-4610.2003.00586.x>

J Orofac Pain. 2008 Winter;22(1):57-64.

### Treatment of acute orofacial pain with 1-year retrospective review of 114 patients

Mellick LB<sup>1</sup>, Mellick GA.



## Treatment of Headaches in the ED With Lower Cervical Intramuscular Bupivacaine Injections: A 1-Year Retrospective Review of 417 Patients

CME

Larry B. Mellick MD, S. Timothy McIlrath MD, Gary A. Mellick DO

First published: 13 October 2006 | <https://doi.org/10.1111/j.1526-4610.2006.00586.x> | Cited by:14

For CME, visit <http://www.headachejournal.org>

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## Indications:

- Migraine headaches
- Trigeminal neuralgia
- Orofacial pain
- Corneal abrasions
- Post LP headache
- Meningitis

**NOT DIAGNOSTIC!**

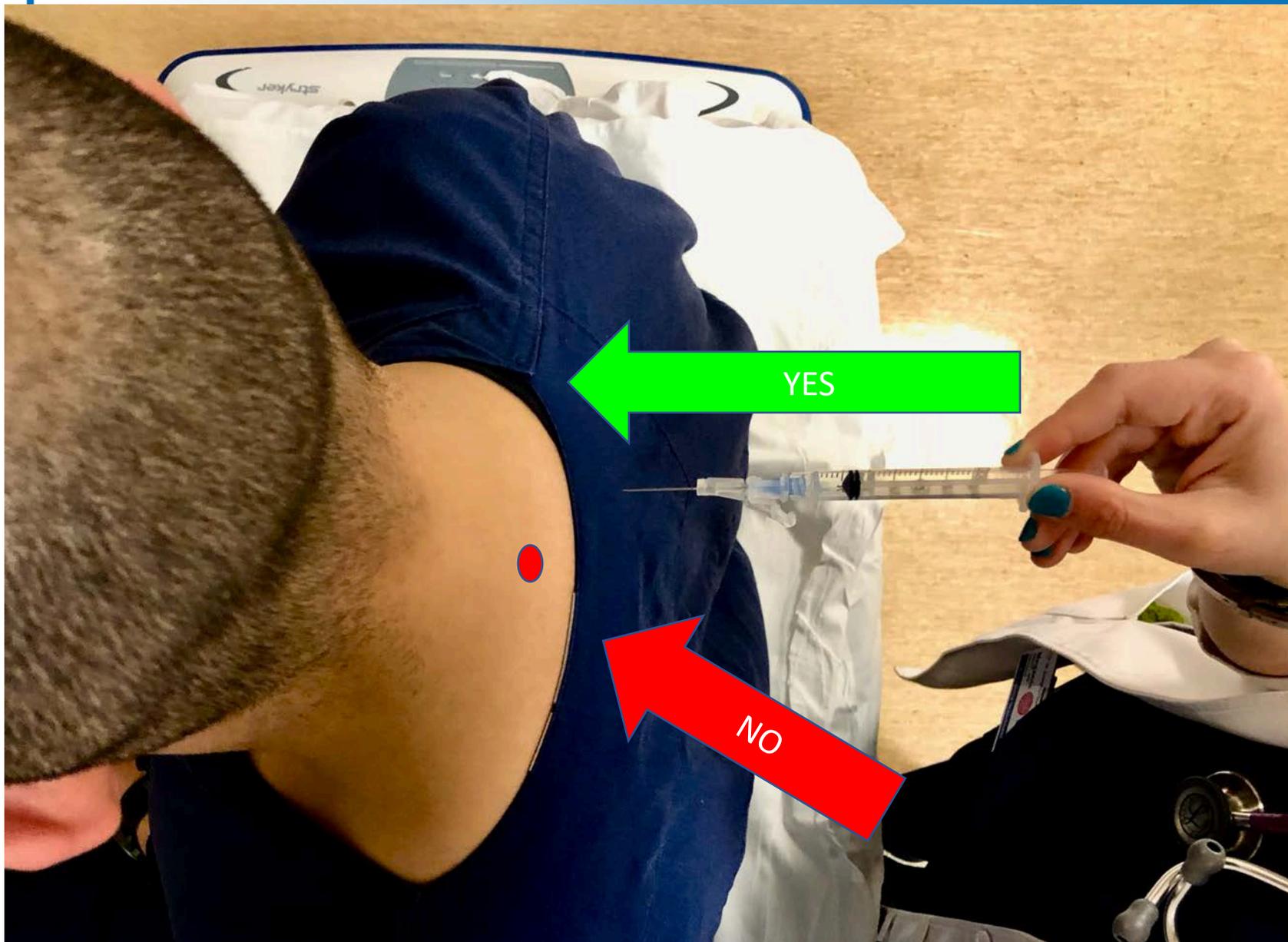


## Equipment

- 3ml 0.5% bupivacaine
- 23 or 25 gauge **1.5"** needle
- nice to have: vapocoolant spray

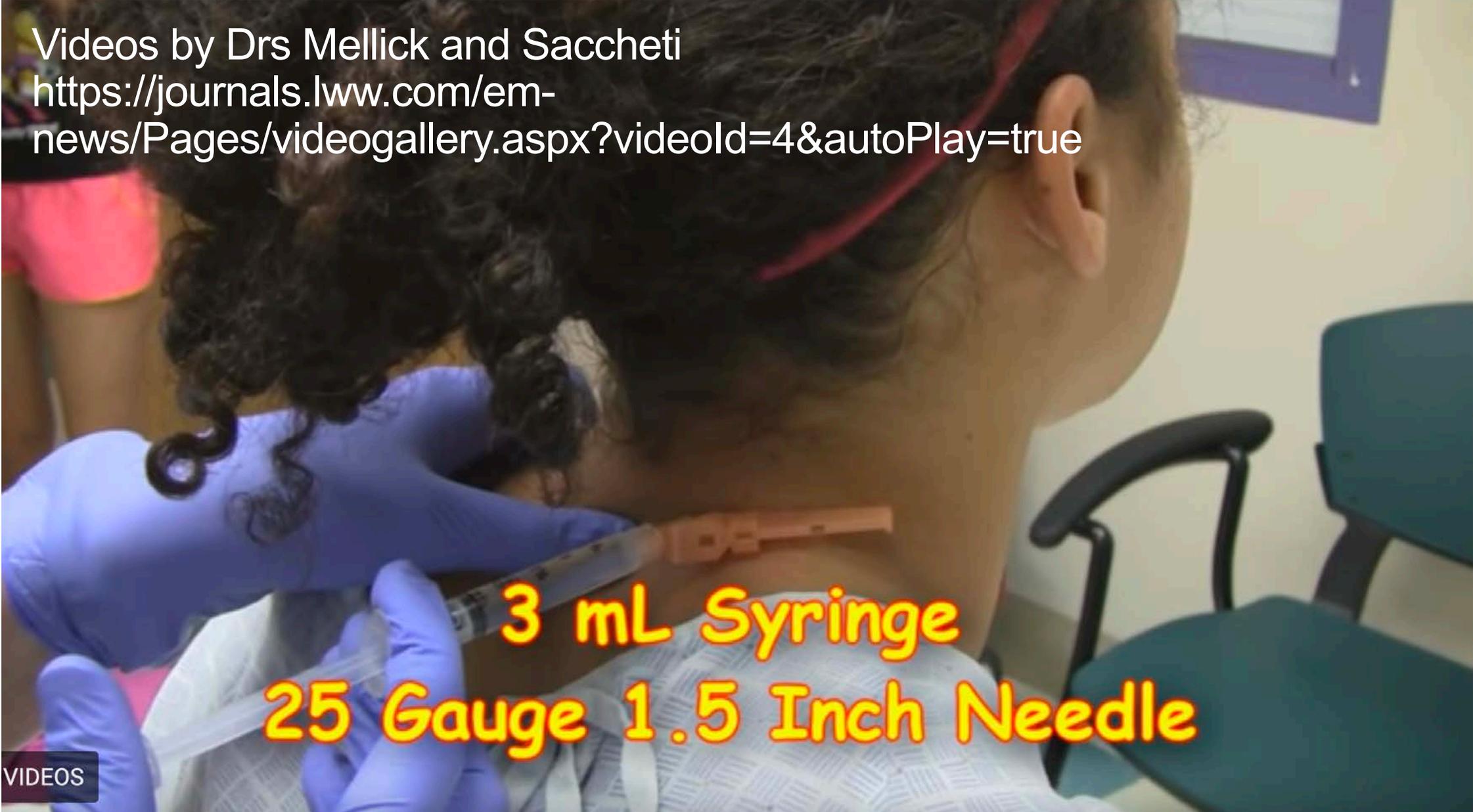








Videos by Drs Mellick and Sacchetti  
<https://journals.lww.com/em-news/Pages/videogallery.aspx?videoid=4&autoplay=true>



**3 mL Syringe**  
**25 Gauge 1.5 Inch Needle**

Thank you!

- Questions?

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## Bibliography

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## For More Information

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