

## Brachial Plexus Injuries in Athletes

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## Brachial Plexus Injuries

- Often called “Stingers” or “Burners”
- Incidence of 49-65% in a football players career
- Can last seconds...or weeks
- Contact sports like football, rugby, lacrosse, ice hockey

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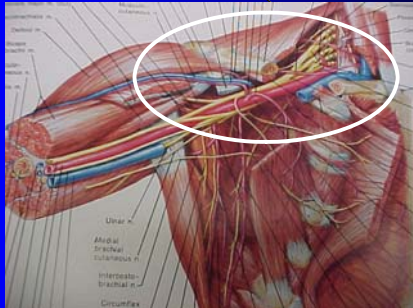
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## Brachial Plexus Anatomy



The diagram shows the brachial plexus of nerves originating from the cervical and thoracic vertebrae and passing through the neck and shoulder to innervate the upper limb. A white oval highlights the plexus area. Labels include: Ulnar n., Axillary brachial subscapular n., Intermediate brachial n., and Circumflex.

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## Anatomy

- C5-T1 nerve roots
- Trunks
- Divisions
- Cords
- Branches



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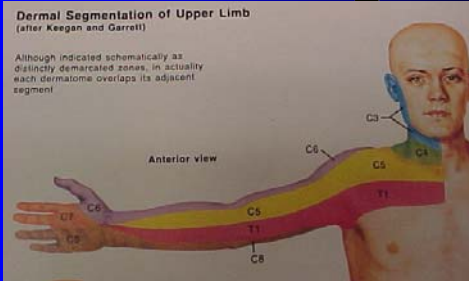
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## Anatomy

- The sensory distribution (Dermatomes)



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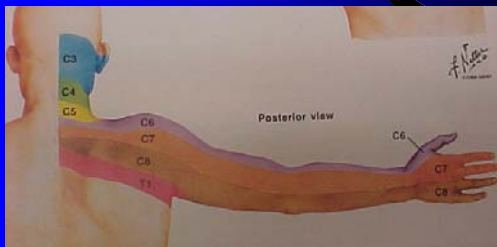
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## Anatomy

- The sensory distribution (Dermatomes)



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## The Pathology

- A stretch injury (neurapraxia) is most common



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## The Pathology

- A downward blow on the shoulder coupled with a lateral bending of the neck to the opposite side is most common



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## Other causes...

- Direct trauma



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### Other causes...

- Compression at foramen where nerves exit spine



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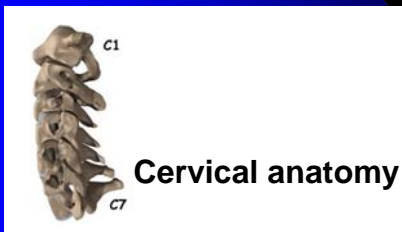
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### Beware...

- If both arms have “stingers”, a C-spine injury should be suspected



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### This is not a “Stinger”



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## Classification (Clancy)

- Grade I—lasts from seconds to a few minutes
  - Weakness resolves completely by two weeks
- Grade II—symptoms last for more than two weeks
  - Need thorough evaluation with a specialist

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## Classification (Clancy)

- Grade III
  - Rare
  - Symptoms/weakness last for more than one year
  - Needs EMG/NCV's and specialty referral

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## Differential Diagnosis

- Or...When is it more than a “Stinger”?



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### Differential Diagnosis

- Acute cervical disc herniation
- Long Thoracic Nerve Palsy
  - Scapular winging
- Spinal Accessory Nerve injury
  - Motor nerve to trapezius and sternocleidomastoid
  - Usually from direct trauma

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### Management

- Acutely, make sure it is not a C-spine injury
- Player can resume play once symptoms, including weakness, resolve completely

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### Prevention

- Better Shoulder Pads



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## Prevention

- Neck collars (“Horse collars”, “cowboy collars”)



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## “Stinger” Summary

- Usually short lived, seconds to several minutes
- Can resume play when symptoms completely gone
- Watch for more serious C-spine injuries, especially when both arms involved.

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