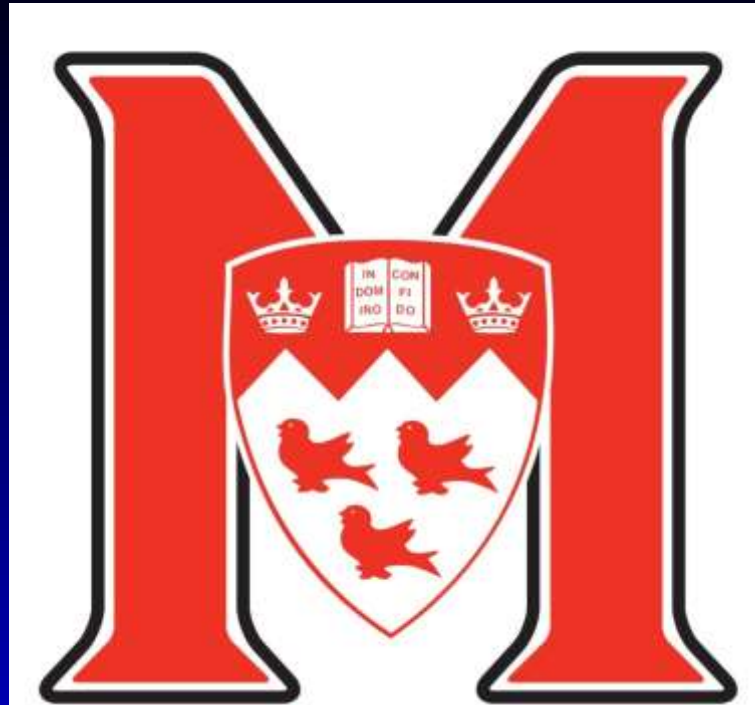


# From spectator to treating physician at a sporting event



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# FACULTY DISCLOSURE

**Dr. Delaney**

**has no affiliation with the manufacturer of any commercial product or provider of any commercial service discussed in this CME activity**



# Outline

- **Cervical Spine Immobilization and Log Roll**
- **Neck Injuries**
  - **“Burners” or “stingers”**
  - **“Bilateral burners”**
- **“My finger popped out!”**

**You are at a game...**



# Immobilization of C-spine

Immobilization of C-spine- NOT traction



# Log Roll Procedure

## 1- Control the head and neck



# Procedure

2- Team gets into position and prepares patient



# Procedure

3- Prepare to move patient as one unit





# Procedure

## 4- Roll the patient as one unit



# Procedure

**5- Place Spinal board at 45-90 degree angle**



# Procedure

**6- Roll the patient back against the board to supine**



# Helmet Removal



# Helmet Removal?



# Helmet On or Off

- Want to keep the neck in proper alignment



# Helmet On or Off



# Helmet On or Off





# 1 Person Emergency Log Roll



# 1 Person Emergency Log Roll



# McGill Fellows' Evacuation



# Non- Supine Athlete



# Non- Supine Athlete

- Work your hands backwards...



# Non- Supine Athlete

- Start with how you want your hands to finish



# Non- Supine Athlete

- Turn your hands into the patient



# Non- Supine Athlete

- Roll the patient





# Non- Supine Athlete

- Finished!



# Neck Injuries

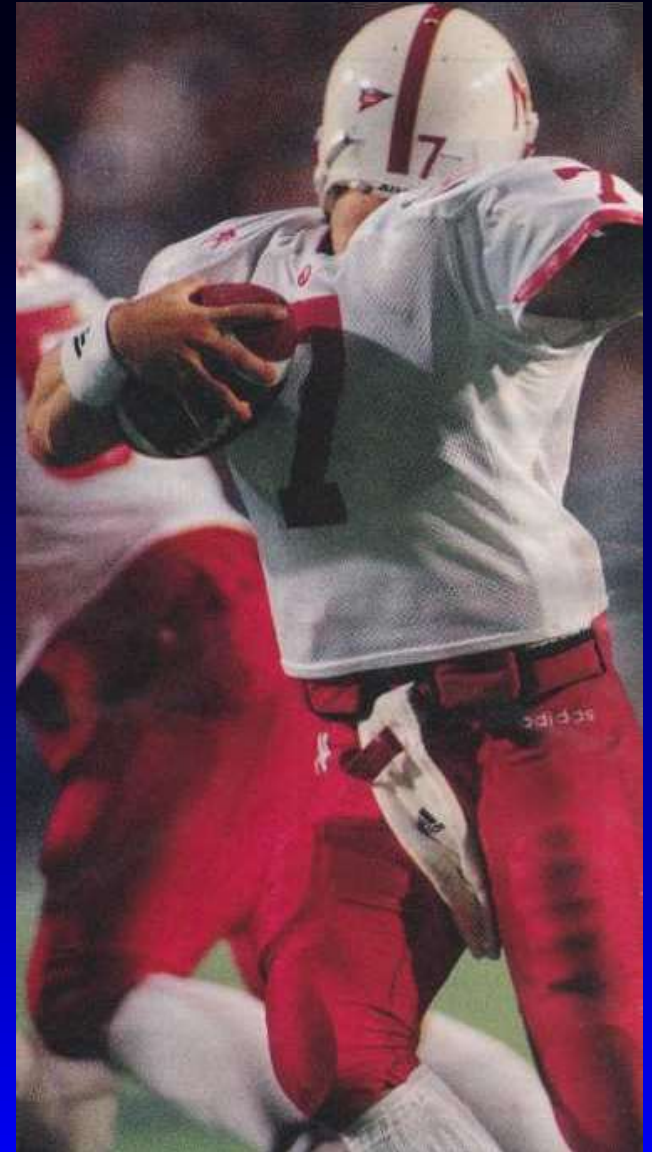


JEAN BELIVEAU will undergo therapy to treat...



# Athletic Neck Injuries

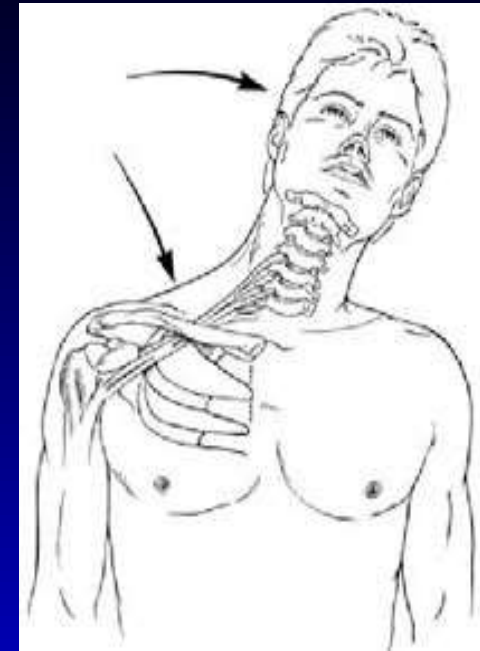
- **Burners / Stingers**
- **Spinal Cord Neuropraxia**



# “Burners” or “Stingers”

## Transient Brachial Plexopathy

- Two types:
  1. Lateral flexion to the **asymptomatic** side
    - depression of the shoulder that stretches the nerves of the brachial plexus
  2. Lateral flexion to the **symptomatic** side
    - compression of the nerve roots in the neural foramina



# “Burners” or “Stingers”

- **C5 and C6 are most common**
  - thumb and index finger numbness/burning
  - deltoid and biceps weakness
- **Usually transient**
- **May return:**
  - » no symptoms
  - » full range of motion
  - » no shoulder or arm weakness



# Spinal Cord Neuropraxia “Bilateral Burner”

- **Extension of C-spine:**
  - decreases size of spinal canal and foramina
- **Hyperextension of C-spine:**
  - decrease sagittal diameter of spinal canal up to 30%
- **Central spinal cord:**
  - contains more UE than LE fibers from the corticospinal (motor) and spinothalamic (pain and temp) tracts

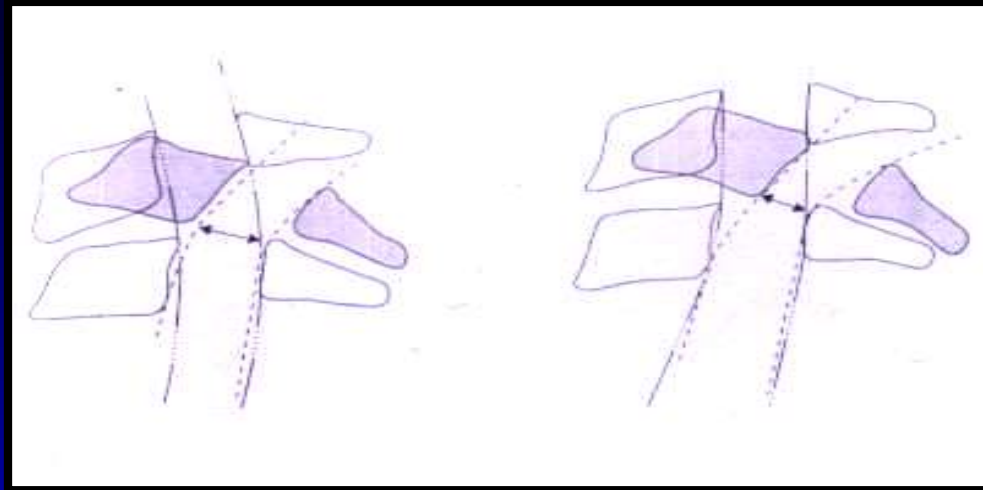
# Spinal Cord Neuropraxia

- **Spinal Stenosis**

- narrowing of spinal canal diameter
- less “buffer space” between cord and surrounding supporting structures (*functional space*)
- greater risk for cord injury at level of stenosis

# Spinal Cord Neuropraxia

- Athlete with spinal stenosis extends C-spine:



= central cord syndrome

- ***bilateral UE neuro findings***
- no ligamentous or bony disruption:
  - = normal C-spine film (SCIWORA?)
- MRI shows spinal stenosis, +/- swelling of cord



# Spinal Cord Neuropraxia

- **“Bilateral Burners”**
  - Stop contact sports
  - Refer
  - C-spine X-ray and MRI

**Note: If MRI shows spinal stenosis- NO contact sports EVER**

# “My Finger Popped out!”

- PIP dislocation
- MCP dislocation



- **Go ahead and give them a tug!**
  - If fingers do not reduce
    - may be mechanically blocked by volar plate, tendons, or ligaments
    - don't keep forcing!

# PIP Dislocation

- Dorsal PIP dislocation most common



- hyperextension injury

# Dorsal PIP



# Volar PIP



# MCP Dislocations

- Presentation



# MCP Dislocation



# Summary

- **Be prepared to Immobilize the C-spine**
- **Be prepared to log roll the patient alone**
- **Bilateral burner is a spinal cord injury**
  
- **Finger dislocations**
  - **PIP- hyper-extend and then push back in**



**Thank You**