Emergency Department NUH

Cervical Spine Injury in Adults

Barts Health NHS
NHS Trust

Immobilise C spine if any of:
Significant mechanism of injury
GCS < 15 on initial assessment
Midline bony tenderness tenderness
Focal neurological deficit or paraesthesia
Any other clinical suspicion of C spine injury
eg distracting injury, intoxication

STOP! THINK!
Is a trauma call required?

1. Can range of neck movement be safely assessed?

- Involved in simple read-end RTC
- Comfortable in sitting position in ED
- Ambulatory at any time since injury
- No midline cervical spine tenderness
- Presents with delayed onset neck pain
- No neurological symptoms arms or legs

Yes → **Can patient actively rotate neck to 45° left and right?**

Yes → **No imaging required**
Re-evaluate if clinical picture changes

No (from 1) / No (from rotate) → 2

2. Is imaging required?
Patient alert & stable with clinical suspicion of cervical spine injury where **ANY** of following present:

1. Age > 65 yrs
2. Unable to safely assess range of movement
3. Unable to rotate neck 45° as above
4. Dangerous mechanism of injury:
   - fall > 1m or 5 stairs
   - axial load to head eg diving
   - High speed RTA
   - Ejection from vehicle
   - Rollover RTA
   - Bicycle collision

5. Focal peripheral neurological deficit
6. Paraesthesia in upper or lower limbs

No → Discharge Criteria
Yes (1–4) → 3
Yes (5–6) → Request Immediate CT

3. Is a CT scan required? Admit to CDU to complete scan if no exclusions

- GCS < 13 on initial assessment with head injury
- Patient has been intubated
- Definitive diagnosis of C spine injury needed urgently (eg before surgery)
- Patient having other body areas scanned for head injury or multi-region trauma

No →

Request X-ray
3 view C spine XRs to be carried out within 1 hour of request

MRI Cervical Spine:
May be indicated in addition to CT if neurological signs and symptoms
Discuss with ED Senior

4. Is a CT scan required after x-ray?

- Plain x-ray suspicious or definitely abnormal
- Plain x-ray technically inadequate
- Strong clinical suspicion of injury despite normal x-ray

Yes → **Request Immediate CT**
Imaging to be carried out within 1 hour of request

Provisional written report should be available within 1 hour of scan being completed

No → Discharge Criteria

Major Trauma

Discuss with ED Consultant RLH #6116 bleep 1115 or 0203 594 5722

The ED Consultant RLH will liaise with neurosurgery as required and if necessary identify a suitable bed

Discharge Criteria

- Normal imaging or imaging not indicated
- No other condition requiring admission
- No persisting neurology
- Able to mobilise to normal level

Trauma Transfer
0207 902 2511 or #6209

Critical Transfer = **within 10 minutes**
eg cord compression

Immediate Transfer = **within 1 hour**

The receiving hospital for spinal injury as part of the major trauma network in East London is Stanmore Hospital **#6225**

Lead Author

Consultant Emergency Medicine

Co-Authors / Collaborators

Reference Documents

Triage, assessment, investigation and early management of head injury in children, young people and adults, NICE CG176, January 2014