

Neuroprotective Strategies

v1.0

These are the key interventions required to implement neuroprotection as well as appropriate physiological parameters for each presentation

Pre-transfer check:

- Blood glucose
- ABG
- GCS
- Pupils

During transfer check (15 mins):

- GCS
- Pupils

Neuroprotective strategies:

- **Physical:**
 - Head up 30° and neutral head position
 - Check tube ties
- **Ventilation:** see boxes
 - Don't forget lung protection
- **Blood pressure:** see boxes
- **Sedation:** RASS -5 with propofol/alfentanil +/- paralysis
- **Blood sugar:** 6-10mmol/L
- **Serum sodium:** 140-155mmol/L
- **Temperature:** <37.5°C
- **Seizure prophylaxis:** 1g levetiracetam BD

ISOLATED TRAUMATIC BRAIN INJURY (EXCLUDING SAH)

- **PaO₂:** 10-13kPa
- **PaCO₂:** 4.5-5.5kPa
- **Systolic BP:** >110 <150mmHg
- Assume ICP 20, CPP 60-70 will be achieved with a MAP 80-90mmHg

SPONTANEOUS SAH

- **PaO₂:** 10-13kPa
- **PaCO₂:** 4.5-5.5kPa
- **Systolic BP:** >110 <160mmHg
- **Administer nimodipine** 60mg (PO/NG)

INTRACEREBRAL HAEMORRHAGE/HAEMORRHAGIC STROKE

- **PaO₂:** 10-13kPa
- **PaCO₂:** 4.5-5.5kPa
- **Systolic BP:** <150mmHg (if within 6h onset and immediate surgery not planned)

ACUTE ISCHAEMIC STROKE

- **Oxygenation:** SpO₂ >95%
- **PaCO₂:** 4.5-5.0kPa
- **Systolic BP:**
 - >140 <185 (if for/has received IV thrombolysis)
 - <220mmHg (if thrombolysis contraindicated or for thrombectomy)