

HNE Area Intensive Care

Clinical Guideline

Guideline approved for : JHH ICU only

HYPERNATRAEMIA

DEFINITION: Serum Na > 150mmol/L - severe >160 - usually fatal >185

CLASSIFICATION:

- **Hypovolaemic**- predominantly free H₂O loss
- **Hypervolaemia**- predominantly excess Na⁺ intake (accompanied by H₂O)
- **Euvolaemia**

- combination of the above

TREATMENT

- Do NOT withhold fluid resuscitation (with isotonic fluid) if severe hypovolaemia or shock
- Over rapid correction of Serum Na⁺ may cause CEREBRAL OEDEMA
- Maximum correction rate 12mmol/L per day
- Establish aetiology to determine management plan e.g. DI, renal impairment, Na intake, fluid loss etc

Methods of Rx:

1. reduce Na⁺ intake (avoid saline infusions)
2. increase input of H₂O
 - PREFERRED METHOD is enteral (add water to enteral feeding bag)
 - **or** IV 5% dextrose (if able to tolerate the glucose load)
 - **or** Sterile H₂O via CVC (central venous line)
3. Loop Diuretics (to remove excess Na⁺ from the body if the patient is euvolaemic or hypervolaemic) in conjunction with H₂O input.
4. Haemodialysis may be required in severe cases, especially when there is neurotoxicity or associated renal failure.

HOW TO CALCULATE THE WATER DEFICIT (hypovolaemic patients)

Deficit (in litres) = $0.5 \times \text{weight} \times ((\text{actual serum Na}/140) - 1)$

Created: 6/2005 by Dr A Mullens Reviewed: 6/2005 by Dr A Mullens
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Disclaimer: These guidelines are intended for and to be used only by experienced critical care staff under direct supervision of Hunter Health Area Intensive Care Specialists in designated Hunter Health Area Critical Care Areas. The Authors will not be responsible for inappropriate use of these guidelines