**Hypotension/shock**

- History + physical exam
  - Assess airway
    - Adequate
      - Treat: Oxygen
        - Establish IV or IO
        - Start resuscitation fluids
      - Transfer to higher care facility
    - Inadequate
      - Treat: Reposition airway
        - Consider intubation and ventilation
      - Emergency lab profile
        - Full blood count
        - Electrolytes, urea, glucose and calcium
        - Arterial blood gas
        - Blood cross match if acute haemorrhage
  - Assess cardiac FUNCTION/OUTPUT
    - Monitor:
      - BP
      - CVP + urine output
      - Arterial blood gas

**No signs of cardiac compromise**
- Rapid 20 ml/kg isotonic fluid
- Correct electrolyte and pH

**Signs of cardiac compromise**
- Correct acidosis and electrolytes

**Good response**
- Poor response

Assess cause
- Septic
- Haemorrhage
- Hypovolaemia

**Antibiotics**
- Blood
  - Replace fluid deficit
  - Transfer to ICU

Modified from Wiggins and Berman 199

*Fig. 1. Approach to a patient with hypovolaemic shock (modified from Wiggins and Berman 199)*

**Hyernatraemia**

Hyernatraemia is defined as a serum sodium level of > 150 mmol/l. It can be euovoltaemic or hypovolaemic.

The treatment of hypovolaemic hyernatraemia involves slow rehydration (over 36 - 48 hours) with isotonic fluids and the administration of daily
<table>
<thead>
<tr>
<th>Table VI. Types of fluids available for paediatric patients</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non K</strong></td>
</tr>
<tr>
<td>Glucose</td>
</tr>
<tr>
<td>Na⁺</td>
</tr>
<tr>
<td>K⁺</td>
</tr>
<tr>
<td>Cl⁻</td>
</tr>
<tr>
<td>Ca²⁺</td>
</tr>
<tr>
<td>Mg²⁺</td>
</tr>
<tr>
<td>PO₄⁻</td>
</tr>
<tr>
<td>Lactate</td>
</tr>
<tr>
<td>HCO₃⁻</td>
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<tr>
<td>Osmolality</td>
</tr>
</tbody>
</table>

Glucose in %, electrolytes in mEq/l.

Be directed at restoring normal circulating volume, cardiac output and organ perfusion.

Table VI. Types of fluids available for paediatric patients

<table>
<thead>
<tr>
<th></th>
<th>Non K</th>
<th>Neonatally</th>
<th>1/2DD</th>
<th>Paediatric maintenance 10% fluid (PMS)</th>
<th>Maintelyte 0.9% N/S</th>
<th>Ringer’s</th>
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</thead>
<tbody>
<tr>
<td>Glucose</td>
<td>10%</td>
<td>10%</td>
<td>5%</td>
<td>5%</td>
<td>10%</td>
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<tr>
<td>Na+</td>
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<td>61</td>
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<td>12</td>
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<td>21</td>
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<td>Ca++</td>
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<tr>
<td>Mg++</td>
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<tr>
<td>Osmolality</td>
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<td>308</td>
</tr>
</tbody>
</table>

Glucose in %, electrolytes in mmol/l.

be directed at restoring normal circulating volume, cardiac output and organ perfusion.

1. Darrow DC, Pratt EL. Fluid therapy. Relation to tissue composition and the expenditure of water and electrolyte. JAMA 1950; 143: 385.