# LOW DOSE HEPARIN THERAPY

## Standard Syringe

- The standard low dose heparin mix is (500 x wt) units heparin diluted to 50ml with 5% dextrose. Maximum weight for calculation is 50kg. If ≥50kg make up as for 50kg i.e. add 25,000 units.
- 1 ml/hr = 10 units/kg/hr

## Indications

- Infants <5kg with a central venous catheter (CVC)
- All cardiac children with a single ventricle and a CVC
- All cardiac children who have had a modified BT shunt, regardless of weight
- “CVC heparin” must always be infused through the central venous catheter
- Cardiac children <5kg who also receive aspirin continue their low dose heparin while they have a CVC
- Do not stop low dose heparin for sternal closure

## Low Dose Heparin Delivery

- Ensure baseline APTT has been done
- Normal APTT varies with age
  - < 1 month: 31-55
  - > 1 month: 25-37
- No loading dose is given
- Heparin is given at a fixed dose of 10 units/kg/hr unless the APTT is prolonged. Maximum dose is 500 units/hr. There is no “goal” APTT.
- Starting infusion:
  - in children who have had surgery, start 4 hours after ICU admission if there is no significant bleeding
  - Check the APTT and if below the upper limit of normal for age start the infusion at 10u/kg/hr
- Adjusting infusion:
  - APTT is checked 4 hours after infusion started and then 12 hourly if APTT within normal range for age.
  - in children > 1 month old
    - if APTT 35-40 reduce heparin to 5 units/kg/hr and check after 4 hours
    - if APTT >40, stop heparin and check after 4 hours. If APPT <40 restart at 5 units/kg/hr
  - in children < 1 month old
    - if APTT 45-55, reduce heparin to 5 units/kg/hr and check after 4 hours
    - if APTT >55, stop heparin and check after 4 hours. If APPT <55 restart at 5 units/kg/hr
- Heparin can be run with inotropes but not with amiodarone
### Age < 1 month

<table>
<thead>
<tr>
<th>APTT</th>
<th>Heparin Infusion Rate (u/kg/hr)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 45</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>45-55</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>&gt;55</td>
<td>0</td>
<td>Recheck in 4hrs</td>
</tr>
</tbody>
</table>

### Age > 1 month

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<tr>
<th>APTT</th>
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</tr>
</thead>
<tbody>
<tr>
<td>&lt;30</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>30-40</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>&gt;40</td>
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