## Encephalopathy Severity (Modified Sarnat) Assessment

### Instructions
- Assess baby’s signs against each criterion.
- Record hourly the actual time of assessment during first 6 hours of life.
- Record severity for each sign (normal, mild, moderate, severe) or N/A if not assessable.

### Assessed Signs

<table>
<thead>
<tr>
<th>Assessment criteria</th>
<th>Normal (N)</th>
<th>Mild (Mild)</th>
<th>Moderate (Mod)</th>
<th>Severe (S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of consciousness</td>
<td>Alert/arouses appropriately</td>
<td>Hyperalert</td>
<td>Lethargic</td>
<td>Stupor or coma</td>
</tr>
<tr>
<td>Spontaneous activity</td>
<td>Normal</td>
<td>Normal or increased</td>
<td>Decreased</td>
<td>None</td>
</tr>
<tr>
<td>Posture</td>
<td>Normal</td>
<td>Normal or mild flexion</td>
<td>Distal flexion, complete extension</td>
<td>Decerebrate</td>
</tr>
<tr>
<td>Tone*</td>
<td>Normal</td>
<td>Normal or increased in trunk and extremities</td>
<td>Hypotonia (focal or general)</td>
<td>Flaccid</td>
</tr>
<tr>
<td>Suck reflex</td>
<td>Normal</td>
<td>Normal or incomplete</td>
<td>Weak</td>
<td>Absent</td>
</tr>
<tr>
<td>Moro reflex</td>
<td>Strong</td>
<td>Strong, low threshold</td>
<td>Incomplete</td>
<td>Absent</td>
</tr>
<tr>
<td>Autonomic system</td>
<td>Pupils equal and reacting to light; normal heart rate and respirations</td>
<td>Pupils equal and reacting to light; normal heart rate and respirations</td>
<td>Pupils constricted; bradycardia or periodic/irregular breathing</td>
<td>Pupils deviated/dilated/non-reactive; variable heart rate or apnoea</td>
</tr>
<tr>
<td>Seizures</td>
<td>None</td>
<td>None</td>
<td>Common, focal or multifocal</td>
<td>Uncommon (excluding decerebration)</td>
</tr>
</tbody>
</table>

*Assess tone in both limbs and trunk/neck – presence of hypotonia in either meets the criteria.*

### Source
- Queensland Clinical Guideline: Hypoxic-ischaemic encephalopathy (HIE)
### Therapeutic Hypothermia Criteria

Evidence of acidosis or depression at birth, as indicated by at least one of the following:

- APGAR score ≤ 5 at 10 minutes
- pH < 7.00 or a base deficit ≥ minus 12 mmol/L on a cord/arterial/venous/capillary blood gas obtained within 60 minutes of birth
- Mechanical ventilation or ongoing resuscitation for ≥ 10 minutes

**AND ONE OR BOTH OF THE FOLLOWING:**

- Evidence of moderate or severe encephalopathy* at any time from 1–6 hours of age (use modified Sarnat assessment)
- Seizures (witnessed by medical officer/nurse/midwife or as seen on an aEEG/EEG)

**AND**

Has no absolute contraindications to therapeutic hypothermia:

- Uncontrolled critical bleeding
- Uncontrolled hypoxia due to persistent pulmonary hypertension
- Imminent withdrawal of life support planned

**AND**

Meets the following criteria:

- 35 weeks**
- Birth weight 1800 grams***
- Able to begin cooling before 6 hours of age
- Assessment of relative contraindications performed (major congenital abnormalities, uncontrolled pulmonary hypertension, major surgery required in first 72 hours of life)
- Assessed as not moribund and with plans for full care

*Consult a neonatologist if:  
*Evidence of mild encephalopathy  
**Less than 35 weeks gestational age  
***Less than 1800 gram