

Selection of patient

Selection of newborn for the therapeutic hypothermia treatment is as important as the treatment process. The NICHD criteria for cooling newborns have been modified for Indian conditions and the following guidelines are used by Department of Neonatology, Christian Medical College, Vellore, India. Practicing neonatologists may adopt or modify these guidelines.

Inborn

1. GA \geq 35 wks / Birth weight \geq 1800 g/ < 6 hours of age
2. Physiological Criteria- Any 1 of the following
 - i. ABG (UC/1st postnatal hr) pH < 7.0 or ABE \geq - 12
 - ii. Apgar score \leq 5 at 5'
 - iii. Ventilation required for at least 10'
3. Neurological Criteria- Seizures OR Evidence of moderate or severe encephalopathy (3 of 6 criteria in modified Sarnat)

Modified Sarnat:

Criteria for defining moderate/severe encephalopathy – 3/6 areas should be present

Category	Moderate Encephalopathy	Severe Encephalopathy
Level of consciousness	Lethargic <input type="checkbox"/>	Stupor or Coma <input type="checkbox"/>
Spontaneous activity	Decreased activity <input type="checkbox"/>	No activity <input type="checkbox"/>
Posture	Distal Flexion Complete extension <input type="checkbox"/>	Decerebrate <input type="checkbox"/>
Tone	Hypotonia (focal or generalized) <input type="checkbox"/>	Flaccid <input type="checkbox"/>
Primitive reflexes		
Suck	Weak <input type="checkbox"/>	Absent <input type="checkbox"/>
Moro	Incomplete <input type="checkbox"/>	Absent <input type="checkbox"/>
Autonomic system		
Pupils	Constricted <input type="checkbox"/>	Deviated, dilated or non-reactive to light <input type="checkbox"/>
Heart rate	Bradycardia <input type="checkbox"/>	Variable <input type="checkbox"/>
Respiration	Periodic Breathing <input type="checkbox"/>	Apnea <input type="checkbox"/>

Outborn

1. GA \geq 35 wks / Birth weight \geq 1800 g/ < 6 hours of age
2. Physiological Criteria - Newborns who did not cry immediately after birth/required resuscitation/APGAR score \leq 5 at 5' (if available)
3. Neurological Criteria – Seizures OR Evidence of encephalopathy

Note: The newborn should fulfill criteria 1, 2 and 3 in both the inborn and outborn cases for selection