

CHOP INTEND (Children's Hospital Of Philadelphia Infant Test Of Neuromuscular Disorders)

This is a 16-item scale developed specifically for evaluating motor function in infants with SMA.

- Each of the 16 items is graded on a scale of
 - 0 to 4: 0=No response; 4=Complete response
- Total possible score ranges from 0 to 64
- It was initially validated in children aged 1.4 to 37.9 months

The scale uses terms that may not be familiar but if you could see what the movement involves it would make sense. You may want to ask your child's physio to demonstrate what they mean. We have explained one or two of the terms used at the bottom of the table

The table below shows a simplified summary:

Item	Lowest item grade (0)	Highest item grade (4)
1. Spontaneous arm movement	No movement of arms	Moves elbow off surface when lying flat on back
2. Spontaneous leg movement	No movement of legs	Moves feet / knees off surface when lying flat on back
3. Hand grip	No attempt to maintain grasp	Maintains hand grip with shoulder off bed
4. Head in midline with visual stimulation Holding head steady and looking at something straight ahead	Head falls to side; no attempts to regain midline	Rotates from maximum rotation to midline
5. Hip adductors (hip muscles)	No attempt to lift and maintain knees of surface	Keeps knee off surface of bed >5 seconds or lifts foot off surface
6. Rolling from legs	Pelvis lifted passively off support surface	When traction is applied at the end of manoeuvre, rolls to prone with lateral head righting
7. Rolling from arms	Head turns to side; body remains limp or should lifts passively	Rolls to prone with lateral head righting
8. Shoulder and elbow flexion and horizontal abduction	No attempt	Clears hand from surface with antigravity arm movement
9. Shoulder and elbow flexion	No attempt to lift arm	Abducts or flexes shoulder to 60°
10. Knee extension	No visible knee extension	Extends knee to >45°
11. Hip flexion and foot dorsiflexion	No active hip, knee or ankle motion	Hip flexion or knee flexion >30°
12. Head control	No response; head hangs	Attains head upright from flexion and turns head side to side
13. Elbow flexion score with item 14	No visible contraction	Flexes elbow
14. Next flexion score with item 13	No muscle contraction	Lifts head off bed
15. Head / neck extension	No head extension	Extends head to horizontal plane or above
16. Spinal incurvation	No response	Twists pelvis toward stimulus off axis

Some of the terms:

Abduction: The movement of a limb or other part away from the midline of the body, or from another part.

Dorsiflexion: movement at the ankle joint where the toes are brought closer to the shin, curling upwards, and decreasing the angle between the dorsum of the foot and the leg

Flexion: the bending of a particular joint so that the bones that form that joint are pulled closer together.

Prone: lying on front

Supine: lying on back