Treatment of Hypotonia in Infants

Clinical Guideline

This guideline supports initial treatment of patients with Hypotonia and includes information for referral to the Children's Wisconsin Neurology Clinic.
To support collaborative care, we have developed guidelines for our community providers to use when referring to, and managing patients with, the pediatric specialists at Children's Wisconsin. These guidelines provide information and recommendations for jointly managing patient care between community providers and our pediatric specialists.

Symptoms/Diagnosis/Causes:	Referring provider's initial evaluation and management:	When to initiate or consider referral to Neurology Clinic:	How to refer and what to send to Neurology Clinic:	Specialist's workup will likely include:
Signs and symptoms The classic "frog-leg" positioning when supine or extended arms or legs at rest can give an initial sense of hypotonia and the body parts involved **Excessive head lag for age** ○ In a newborn, one can expect a lag of the head but upon presenting to the full sitting position should have a slight delay before the head will fall to one direction. This should be resolving until 2 months when the patient should have little to no head lag upon pulling to sit. **Positive scarf sign** ○ With infant in a supine position, grasp one hand and pull it across their chest. In normal tone in the shoulder of a term infant, the elbow can be brought but not cross midline of the infant's chest and chin. Hypotonia is noted if the elbow crosses midline. Not as sensitive in children born prematurely **Vertical Suspension** ○ The infant is suspended in the examiner's hands with placement of the hands in the axilla. If the infant is able to be held without significant pressure on the chest or rib cage, the tone is normal.	• Perform a thorough history and physical examination. On history pay specific attention to birth history (in particular for any factors predisposing the child to Hypoxic-Ischemic Encephalopathy [HIE]), developmental history and family history. On physical exam pay specific attention to mental status, tone, strength and reflexes • Referral to Birth to 3 if significant hypotonia or any concern for developmental delay • If strength is also decreased, reflexes decreased or absent, family history of neuromuscular disorders or other concerns for peripheral nervous system involvement consider obtaining labs for CK, CMP and CBC	• Hypotonia of unknown cause • Hypotonia due to a neurologic cause • Progressive hypotonia or weakness, urgent referral for motor and/or cognitive regression • Absent reflexes • When other neurologic signs or symptoms also present such as seizures, movement disorders, cognitive delay, etc.	**How to refer:** 1. **In Children's Epic: place an ambulatory referral to Neurology.** 2. **External providers:** • **In your instance of Epic - Place an external referral order to CHW NEUROLOGY CLINICS or** • **Fax (414-607-5288) or** • **Online ambulatory referral** **For urgent requests: Contact the Physician Consultation Line (414-266-2460).** **What to include in the referral:** • Urgency of the referral • What is the key question you would like answered? • Chief complaint, onset, frequency • Recent progress notes • Labs and imaging results • Results of newborn screen • Other Diagnoses • Office notes with medications tried/failed in the past and any lab work that may have been obtained regarding this patient's problems.	• Dependent on presentation, may include: ○ Imaging ○ Labs

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Symptoms/Diagnosis/Causes	Referring provider's initial evaluation and management:

Signs and symptoms (continued)

Vertical Suspension (continued)

- A feeling of the infant "slipping" through the fingers or need to place pressure on the infant's chest to maintain the infant illustrates low tone.

Horizontal Suspension

- Lift the infant off the table by 1 hand under the chest and abdomen. The normal tone term infant will keep the arms and legs flexed with the head lifted above horizontal for a period of time. In a term infant who indefinitely holds the body above the horizontal plane, hypertonia should be considered and in the term infant who cannot or minimally hold the body above the horizontal plane, hypotonia is a concern.

Reflexes

- Absent or decreased reflexes are concerning for a neuromuscular etiology
- Increased reflexes are more likely to be a central nervous system etiology

- Comorbid seizures or sleep/wake cycle abnormalities correlate more with central nervous system processes
- If tongue fasciculations present, consider neuromuscular etiologies, in particular SMA

Diagnosis

- A full physical examination, with specific attention to the neurologic examination, is important for any child with concerns for hypotonia. The importance of differentiating between tone and strength is important for making an appropriate diagnosis. Tone is the resistance of muscles to passive elongation or stretch. This resistance is created by the resting state of contraction in the muscle. This translates clinically to increased ease by the examiner to passively move the patient's extremity in the infant who is hypotonic. Strength is the force generated by active movement of the extremity. Hypotonia and weakness are neither mutually inclusive nor exclusive.

Causes

Hypotonia in an infant can be from various causes with a wide variety of treatments and, more importantly, outcomes for the child.

- Hypoxic ischemic or hemorrhagic injury encompasses 34% of all infantile hypotonia.
- Hypotonic infants tend to present before 1 month of age (80%) with only a small percentage (5%) after 6 months of age
- Etiology of Infant Hypotonia[1]

Cause	Percentage
• Hypoxic/Ischemic or Hemorrhagic Injury	34%
• Chromosomal	26%
• Neuromuscular	18%
• CNS Malformation	13%
• Metabolic or Endocrine Disease	9%

- If systemic features suggestive of thyroid dysfunction or abnormal newborn screening for congenital hypothyroidism, consider TSH and free T4 and/or referral to endocrinology

Treatment

- Dependent upon the history and diagnosis there may be treatments, the earlier treatments are started the more likely they are to be beneficial to the patient
- At same time evaluating etiology, refer to physical and/or occupational therapy through either the Birth to 3 program or private therapies

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References

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Please contact clinicalguidelines@childrenswi.org for questions or comments.

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Approved by the authors below on 03/02/2026

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Medical Disclaimer

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