

# Recognizing Early Motor Delays

## A Comparison Examination of 2 Month Old Infants

### Typical

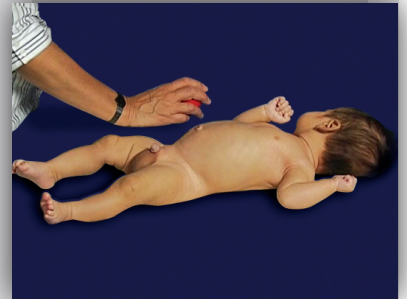
### Atypical

#### Supine

- Maintains head in midline for brief periods
- Locates objects visually and tracks from left to right
- Begins to show antigravity movements of upper and lower extremities
- Not yet able to reach and grasp toys



- May show more asymmetrical movement with predominance of head to one side; or strong asymmetrical tonic neck reflex (ATNR)
- Difficulty visually tracking, may only track to one side or only to midline
- Decreased ability to generate upper and lower extremity antigravity movements
- Longer periods of inactivity



#### Sidelying

- Able to lift head and upper trunk during facilitated roll, showing lateral headrighting
- Begins to balance activity of trunk flexor and extensor muscles
- Ability to change from predominant use of flexors to use of extensors as position requires

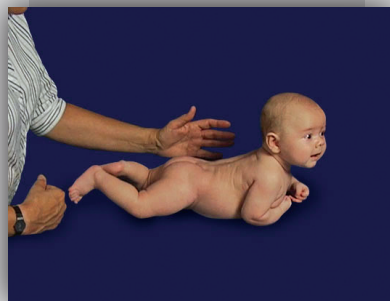


- May be unable to right head during facilitated rolling
- May look more competent in sidelying, therefore important to observe baby in all eight positions



#### Prone

- Head lifting to 45 degrees and extension through upper thoracic spine
- Hips and knees begin to move from flexed "newborn" posture into extended, abducted position, which allows head and trunk lifting
- Elbows typically not directly under the shoulders until 3 months



- Posture looks more like a newborn; infant does not show hip extension; hips and knees remain in flexed abducted posture.
- No independent head lifting; can move head only with assistance



#### Pull to Sit

- Head-lag is typical until the infant is about 15 degrees from upright.
- Uses shoulder elevation and elbow flexion to assist
- Able to engage neck muscles to sustain midline head control when upright
- Good extension through the cervical and upper thoracic spine



- May exhibit head-lag through the entire pull to sit maneuver.
- Poor head control when in upright sitting
- Little muscle activity in the upper extremities or cervical spine
- When upright, rounding of the thoracic and lumbar spine



# Recognizing Early Motor Delays

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### Typical

### Atypical

#### Sitting

- Head is aligned with ear directly over the shoulder
- Holds and sustains posture with assistance
- Head turning may or may not be present at 2 months, but should be seen by 3 months



- Needs more support to sustain sitting posture
- Inability to achieve and sustain head lifting in upright position
- Little to no antigravity arm activity



#### Horizontal Suspension

- Able to activate adequate neck and trunk extension to sustain posture
- Can maintain brief periods of head control, but may not be able to hold the head in midline



- Difficulty or inability to activate neck or upper thoracic extensors to lift head
- May try to use arm and leg movements to sustain posture



#### Protective Extension

- Aware of being tilted forward; increases head and neck extension
- Will not be fully able to bring arms forward for full protective response until 6 months



- Unable to generate antigravity head and trunk activity



#### Standing

- Able to sustain weight on lower extremities with support at the trunk
- Typically shows intermittent bouts of extension and flexion
- Good vertical alignment from head through trunk and feet



- May support little if any weight on feet
- Little or no intermittent muscle activity to attain or maintain standing

