

# Recognizing Early Motor Delays

## A Comparison Examination of 4 Month Old Infants

### Typical

### Atypical

#### Supine

- Exhibits midline and symmetry of head, eyes, arms and legs
- Shows visual engagement and reaches out against gravity
- Demonstrates frequent antigravity extremity movement, dissociating from a more stable trunk



- Displays asymmetry of head and extremities, with head tilted and body curved
- Does not show a balance between extension and flexion
- Moves extremities randomly, but without expected antigravity movement
- Is not visually engaged and does not track object



#### Sidelying

- Uses upper arm and dissociated lower extremities to assist in facilitated roll
- Sustains sidelying posture with a balance of trunk flexor and extensor muscles
- Lifts head and upper trunk off the surface in preparation for independent rolling

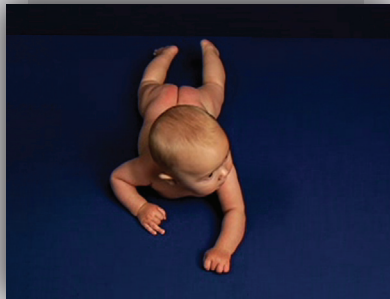


- Exhibits sluggishness in top arm during facilitated roll
- Does not sustain sidelying posture; has inadequate control in position
- Cannot lift head and upper trunk off support surface



#### Prone

- Brings shoulders and upper arms forward with elbows in front of shoulders
- Shows progression toward lower extremity extension and adduction
- Moves arms forward to reach for an object; turns head freely to follow object
- Displays extensor activity into the lumbar spine



- Has flexed hips which shifts weight forward while keeping elbows behind shoulders
- Uses only neck extension instead of forearm weight bearing; head lifting is unsustainable
- Does not have the capability to shift weight onto lower extremities



#### Pull to Sit

- Maintains head in midline without head-lag and with good chin tuck
- Lifts legs and activates trunk muscles to assist in maneuver
- Pulls forward with both arms and abdominals to assist further in pull to sit



- Demonstrates head-lag and cannot sustain head lifting once upright
- Does not pull with arms; no upper extremity participation
- Appears not to anticipate movement toward sitting



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#### Sitting

- Shows good head control and chin tuck, with head in midline
- Requires support only at hips and pelvis; has extension to mid-thoracic spine
- Begins to move in anterior-posterior planes and comes back from forward flexion at the hips into upright sitting



- Does not sustain head lifting; cannot turn head to look side-to-side
- Must be held high under the armpits for support
- Uses extremity posturing to compensate for decreased proximal strength



#### Horizontal Suspension

- Able to keep neck and trunk extended with head upright to 45 degrees, steady and in midline
- Shows trunk extension into lumbar spine and scapular adduction
- Freely moves arms and legs



- Able to hold head up briefly but cannot maintain it in midline
- Cannot sustain thoracic trunk extension and does not show hip extension
- Cannot maintain trunk extension while moving arms and legs



#### Protective Extension

- Displays extension through neck, trunk and hips that is maintained during forward tilting
- Cannot bring arms fully forward to surface because they are being used to sustain extension



- Unable to sustain strong neck, trunk and hip extension during forward tilting
- Uses excessive asymmetry and flexed arms to sustain extension to avoid hitting his head



#### Standing

- Keeps hips just behind shoulders
- Has active extension into lower thoracic and lumbar spine, but no full hip extension
- Can sustain standing posture; requires minimal support at lower trunk to aid in balance



- Requires support in the upper thoracic area to sustain standing
- Intermittent extension used to produce head lifting
- Shoulders remain well forward of hips
- Lacks adequate hip and trunk control for sustained weight bearing

