

Developmental milestones

Watch out for red flags

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In infants and toddlers, skills usually develop in a predictable manner, building on previously acquired accomplishments. At the well-child visit, certain milestones can be used to identify children with developmental delay or to follow up on deviations from typical patterns of progress in the pre-school years. Parents value early detection. In certain disorders, genetic counselling will allow them options about subsequent births. In addition, the sooner the diagnosis, the faster the access to support services, often resulting in improved outcomes. The bottom line is better quality of life for the child and family.

Parents and guardians are often the first to notice a delay or a disability. Always inquire about any suspicions or concerns, and take these seriously if reported.

1 month

- fixates on faces
- is alert to sounds
- lifts head for short periods in prone position
- shows strong reflex movements and good suck

RED FLAG — failure to be alert to environmental stimuli may indicate sensory impairment

3 months

- social smile, preference for faces
- is alert to mother
- varies cries; echoes adult sounds
- bats at objects, sustained voluntary grasp of something placed in ulnar side of hand
- rests on forearms in prone

RED FLAGS — may indicate

- rolling < 3 months — hypertonia
- persistent fisting — neuromotor dysfunction
- lack of social smile — visual deficit, attachment problem or cognitive delay

6 months

- babbles “baba,” “gaga”
- interacts with others
- looks to floor when drops toy
- discriminates strangers
- transfers objects hand-to-hand
- immature rake of pellet
- sits propped on hands

RED FLAGS — may indicate

- not rolling or poor head control — neuromotor dysfunction
- absence of babbling — hearing loss

9 months

- associates words with meaning
- says “mama,” “dada,” albeit inappropriately
- imitates sounds
- bangs object on table
- uncovers object hidden under cloth
- holds cube with thumb and fingertips
- pulls to stand
- creeps on hands and knees

RED FLAGS — may indicate

- persistence of primitive reflexes — neuromotor disorder
- no interest in peek-a-boo games — cognitive delay or social impairment

12 months

- follows commands with gesture
- one word with meaning
- points for object
- removes lid to find toy
- fine pincer grasp
- marks on paper with crayon
- stands alone, may take a few steps

RED FLAGS — may indicate

- no protective reactions — neuromotor disorder
- persistent mouthing or not looking for hidden object — cognitive delay
- no “mama,” “dada” — speech, language delay

18 months

- points to self and 3 body parts
- 20-50 word vocabulary
- matches pairs of objects
- functional use of items
- scribbles spontaneously
- tower of 4 blocks
- walks confidently
- able to seat self at small table
- throws ball while standing

RED FLAGS — may indicate

- lack of imitation or of protodeclarative pointing — deficits in cognition or social development
- lack of walking — neuromuscular or neuromotor condition
- hand dominance < 18 months — contralateral weakness
- ≤ 10 words — language delay
- does not show affection — delayed social development
- doesn't play functionally with toys — delayed cognition/social development

2 years

- follows 2-step commands
- understands me, you
- 100-200 words
- combines noun + verb
- uses basic pronouns
- plays parallel to others
- matches objects to pictures
- train of cubes, no stack
- imitates vertical stroke
- jumps in place
- kicks a ball and throws overhand
- walks down stairs holding rail

RED FLAGS — may indicate

- absent symbolic play — cognitive and/or social development problems
- not climbing stairs — may reflect lack of opportunity, or neuromuscular or neurodevelopmental disorder
- not scribbling — neurodevelopmental disorder
- lack of categorizing — cognitive delay
- no novel 2-word combinations — speech, language delay

Attention to hearing loss

NEONATAL SCREEN

- positive — further testing and parental support necessary
- negative — be vigilant up to school age to detect late-onset, progressive or acquired

- 4 mo — quietens, smiles at familiar voice; shows excitement at sounds or footsteps
- 7 mo — turns immediately to familiar voice across the room
- 9 mo — listens attentively to familiar sounds; searches for sources
- 12 mo — shows response to own name and expressions like “no” or “bye” with no accompanying gesture
- 2-3 years — understands when called from another room; normal expressive language development; prompt response to novel sounds

ABSENCE OF THE FOLLOWING REQUIRES IMMEDIATE REFERRAL:

- sudden loud noise startle, e.g. hand clapping or door slamming — infant blinks or opens eyes wide, stops sucking or starts to cry
- 1 month — notices prolonged sounds, e.g. vacuum cleaner

Detecting hip dysplasia

Check at each routine visit until child walks properly

- Recheck newborn in 2 weeks if positive family history or boy born breech
- girl born breech — ultrasound at 6 weeks or x-rays at 4 mo

References:

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2. Barbaresi WJ et al. *Arch Pediatr Adolesc Med* 2006;160(11):1167-75.
3. Council on Children With Disabilities et al. *Pediatrics* 2006;118(1):405-20.