HEALTH BASICS

Infant - newborn development

Newborn development is the early growth of a baby's movement, senses, feeding, communication, and connection with caregivers.

WHAT IT IS
Early changes in movement, senses, communication, feeding, and growth

WHERE IT COMES UP
Newborn visits, feeding, sleep, play, and screening

WHY IT MATTERS
Helps track adaptation, growth, and emerging developmental needs

WHAT IT IS NOT
Not a disease or diagnosis

WHO TO ASK
Pediatrician, family clinician, midwife, or health visitor

HOW IT IS CHECKED
Observation, physical examination, growth measurements, and hearing screening

Overview

Newborn development describes how a baby grows and adapts during the first weeks after birth. The newborn period usually means the first 28 days of life.

Development includes movement, reflexes, hearing, vision, feeding, sleep, and early communication. It also includes how a baby responds to touch, voices, faces, and comfort.

Newborn development is not a disease or diagnosis. Babies do not all develop on an exact timetable. Being born early, recovering from birth, or having a medical condition can affect what is expected.

Development is judged as a pattern rather than through one behavior. Clinicians consider the pregnancy and birth history, gestational age, growth, physical examination, feeding, hearing screening, and observations from caregivers.

How it works

A newborn's brain and nervous system are still maturing. Many early movements are

automatic reflexes rather than deliberate actions.

Common newborn reflexes include:

These reflexes help with feeding or show how the nervous system is working. Clinicians may check whether they are present and similar on both sides. Many gradually fade as controlled movement develops.

Newborn movements can look jerky or poorly coordinated. Babies often keep their arms and legs bent. Their head needs support because neck control is limited.

A newborn can see, but vision is still developing. Close faces and bold, high-contrast shapes are usually easier to notice than distant or detailed objects. Briefly looking toward a face is different from steady eye contact, which develops later.

Hearing is active from birth. A newborn may startle, blink, become still, or change their sucking pattern in response to sound. They may recognize familiar voices heard during pregnancy. A hearing screen checks for possible hearing loss, but it does not measure every part of communication development.

Crying is the main early form of communication. Babies may also change their facial expression, body movement, or alertness. Caregivers gradually learn patterns linked with hunger, tiredness, discomfort, or wanting contact.

Sleep is spread across the day and night. A newborn does not yet have a mature day-and-night rhythm. Short waking periods are often used for feeding, looking at faces, and brief interaction.

Feeding requires a baby to coordinate sucking, swallowing, and breathing. Clinicians assess feeding alongside weight and hydration because feeding ability and growth are closely connected.

- Rooting: turning toward a touch near the mouth
- Sucking: sucking when the roof of the mouth is touched
- Moro reflex: spreading the arms after a sudden movement or sound
- Grasp reflex: closing the fingers around something touching the palm

Why it matters for your health

Watching development helps show how a baby is adapting after birth. It can also identify when hearing, vision, movement, feeding, or growth needs closer assessment.

At newborn appointments, a clinician may measure weight, length, and head circumference. The pattern over time is more useful than one measurement. Some weight loss after birth is

expected, so follow-up focuses on whether feeding, hydration, and later weight gain are progressing appropriately.

Newborn screening can identify certain conditions before they are otherwise obvious. The exact screening program differs by location. It may include a blood spot test, hearing screen, oxygen measurement, and physical examination. These tests are not a complete developmental assessment.

Babies born before 37 completed weeks are premature. Their development may be considered using corrected age , which adjusts for the number of weeks they were born early. Ask which age should be used when discussing milestones.

A warm, responsive relationship supports early development. Holding, talking, singing, and responding to a baby's cues provide sound, touch, movement, and social contact. Expensive toys or formal lessons are not needed.

What can go wrong

A difference in newborn behavior does not automatically mean that something is wrong. Babies may be sleepy after birth, feed differently from one another, or show skills inconsistently.

Development or growth may be affected by situations such as prematurity, illness around birth, feeding or swallowing problems, hearing loss, vision impairment, congenital conditions, or a problem involving the muscles, nerves, or brain. A tight neck muscle, called torticollis , can make a baby prefer turning the head to one side.

A clinician may want routine follow-up if a baby:

These findings need assessment, but they do not confirm a diagnosis on their own. Repeating observations over time may be more informative than a single examination.

Some signs require urgent medical assessment because newborns can become unwell quickly. Seek urgent care for a rectal temperature of 38°C (100.4°F) or higher in a baby younger than 3 months, repeated vomiting, markedly fewer wet diapers, worsening yellow skin or eyes, unusual difficulty waking, or feeding much less than usual.

Call emergency services if a baby is not breathing normally, becomes blue or grey, has a seizure, is unresponsive, or has severe breathing difficulty. These are emergency signs, not normal developmental differences.

- Consistently moves one side less than the other
- Always holds the head turned to one side

- Has ongoing difficulty latching, sucking, or coordinating feeds
- Does not react to loud sounds, especially after an incomplete hearing screen
- Is not gaining weight as expected
- Has unusually stiff or very floppy movements

What you can do

Attend scheduled newborn and postnatal appointments. Bring the results of newborn screening if they were completed by a different service.

Ask what was found on the hearing screen and whether follow-up testing is needed. A "refer" or incomplete result does not by itself diagnose hearing loss, but it should not be ignored.

If your baby was premature, ask for the corrected age and record it. This can make later milestone discussions clearer.

You can keep a short record of:

A short video may help document an intermittent movement, unusual posture, or feeding concern. Do not delay urgent care to make a recording.

Talk, read, or sing to your baby during calm, awake periods. Offer brief, supervised time on the tummy while the baby is awake, following any individual advice given after birth. Tummy time helps the baby practise lifting and turning the head.

For sleep, place the baby on their back on a firm, flat sleep surface without loose bedding or soft objects. Tummy time is only for an awake baby who is being watched.

There is no home test that can confirm normal newborn development. If you are concerned, the useful action is to describe what you have noticed and ask whether an examination, hearing test, feeding assessment, or earlier follow-up is appropriate.

- Feeding frequency and any difficulty sucking or swallowing
- Wet diapers, especially during the early days
- Weight measurements from appointments
- Hearing and newborn screening results
- Movements or behaviors you want to show the clinician

Common questions

Should a newborn make eye contact?

A newborn may briefly look toward a nearby face, but steady eye contact is not expected immediately. Alertness, lighting, feeding, and tiredness can affect whether a baby looks at you.

Is startling at noises normal?

Startling can be part of the Moro reflex. Not every sound causes a visible response. If a baby repeatedly shows no reaction to loud sounds, or did not pass the hearing screen, ask about formal hearing follow-up.

Is a newborn smile social?

Early smiles often happen during sleep or as an automatic expression. A consistent social smile in response to another person usually develops after the newborn period.

Should I compare my baby with milestone charts?

Charts are useful guides, not exact deadlines. Use a reliable chart and consider corrected age for prematurity. Bring concerns about missing skills, loss of an ability, unusual movement, feeding, or growth to a routine appointment unless urgent signs are present.

Can development be assessed from an app or video?

An app may help you record observations, but it cannot replace an examination or validated screening. Formal developmental screening questionnaires are generally used later in infancy and childhood, while newborn assessment relies heavily on examination, growth, screening results, and caregiver observations.

Sources

- World Health Organization. WHO recommendations on maternal and newborn care for a positive postnatal experience . 2022
- Centers for Disease Control and Prevention. Milestones by 2 Months: Learn the Signs. Act Early.
- National Institute on Deafness and Other Communication Disorders. Your Baby's Hearing Screening and Next Steps
- Lipkin PH, Macias MM, Council on Children With Disabilities, Section on Developmental and Behavioral Pediatrics. Promoting Optimal Development: Identifying Infants and Young Children With Developmental Disorders Through Developmental Surveillance and Screening . Pediatrics. 2020;145(1):e20193449
- American Academy of Pediatrics. Newborn Reflexes . HealthyChildren.org

- Moon RY, Carlin RF, Hand I, Task Force on Sudden Infant Death Syndrome. Sleep-Related Infant Deaths: Updated 2022 Recommendations for Reducing Infant Deaths in the Sleep Environment . Pediatrics. 2022;150(1):e2022057990