HEALTH BASICS

Moro reflex

The Moro reflex is an automatic newborn movement triggered by sudden movement or lost support

WHAT IT IS
An automatic protective movement in young babies

WHERE IT COMES UP
Newborn examinations and sudden early-infant movements

WHY IT MATTERS
Helps clinicians assess early nervous system function

WHAT IT IS NOT
Not a disease or diagnosis

WHO TO ASK
A pediatrician, family doctor, or health visitor

HOW IT IS CHECKED
Observation during a newborn neurological examination

Overview

The Moro reflex is an automatic movement seen in newborn babies. It happens when a baby senses a sudden change in position, loss of support, or sometimes a loud noise.

During the reflex, the baby usually opens and extends both arms, spreads the fingers, and then brings the arms back toward the body. The baby may also cry. The whole movement is brief.

The Moro reflex is one of several primitive reflexes . These are movements controlled automatically by the developing brain and spinal cord. Babies do not decide to make them.

This reflex begins developing before birth and is usually present in full-term newborns. It becomes less noticeable as the nervous system matures, generally fading during the first 4 to 6 months of life. Timing may be different for a baby born early, so clinicians consider gestational age and overall development.

The Moro reflex is not a disease or a diagnosis. Its presence, pattern, and timing are pieces of information used during a newborn or infant examination.

How it works

A newborn's nervous system is still developing. At first, automatic reflexes control many movements. Over time, the brain develops greater control, and these early reflexes fade.

The Moro reflex can be triggered when a baby's head position changes suddenly in relation to the body. A clinician may check it by supporting the baby's head and upper body, then creating a small, carefully controlled change in position while continuing to support the head. The baby is never dropped.

A typical response has two main parts:

The legs may also move, and the baby may cry. The response should usually look similar on both sides.

The Moro reflex is often called a "startle reflex," but the terms are not exactly interchangeable. A general startle can happen at any age after an unexpected sound or touch. The Moro reflex is a specific pattern of movement mainly seen in young babies.

A baby's state can affect the examination. A very sleepy, crying, hungry, or recently fed baby may respond differently. Medicines given around birth, illness, and premature birth can also affect how clinicians interpret the response.

- The arms move outward and straighten, with the hands opening
- The arms then bend and return toward the body

Why it matters for your health

Clinicians use the Moro reflex as one part of a broader examination of a baby's nervous system, muscles, joints, and bones. They do not interpret it on its own.

A response that is present on both sides is generally expected in a full-term newborn. As the baby gains voluntary control of movement, the reflex should gradually become less obvious.

The pattern can help a clinician decide whether closer examination is needed. For example, a response that is weaker on one side may lead to checks of the arm, shoulder, collarbone, nerves, and muscle strength. A reflex that remains clear beyond the expected age may lead to a developmental and neurological assessment.

These findings do not identify a cause by themselves. A single unusual movement at home is also not the same as an abnormal examination. Clinicians consider the baby's age, birth history, alertness, movement on both sides, muscle tone, and progress with developmental skills.

The Moro reflex may briefly wake a sleeping baby. This is common in early infancy and does not mean that something is wrong. Safe sleep practices remain important even when the

reflex interrupts sleep.

What can go wrong

Differences in the Moro reflex can sometimes relate to another condition or situation. They require context and should not be used to diagnose a baby at home.

An asymmetric Moro reflex means the two sides do not move in the same way. Possible explanations include:

A response that is absent or reduced on both sides may be associated with prematurity, reduced alertness, severe illness, or a problem affecting the brain or spinal cord. It can also reflect the baby's state or the way the reflex was tested.

A Moro reflex that continues beyond the age when it would usually fade can occur with delayed nervous system development or neurological conditions such as cerebral palsy. Persistence alone does not establish a diagnosis. The baby's other movements and developmental progress matter.

Tell your baby's clinician during routine follow-up if you notice that your baby consistently uses one arm less than the other, the reflex appears clearly one-sided, or strong Moro-like movements continue after about 6 months. Arrange prompt medical assessment if an arm becomes painful, swollen, or difficult to move, especially after an injury.

Call emergency services if your baby is difficult to wake, has trouble breathing, turns blue or grey, or has repeated movements that may be a seizure. A typical Moro reflex is brief and follows a trigger; repeated rhythmic jerking, prolonged stiffening, or loss of responsiveness needs urgent assessment.

- A broken collarbone, also called a clavicle fracture
- Injury to the brachial plexus, the group of nerves supplying an arm
- Pain or reduced movement in a shoulder or arm
- Weakness affecting one side of the body

What you can do

You do not need to test the Moro reflex yourself. Deliberately allowing a baby's head to fall or shaking a baby can cause injury. The reflex is best checked by a trained clinician during a routine newborn or infant examination.

If you are concerned about movements you see at home, record useful details:

A short video may help a clinician understand what happened, as long as recording does not delay care and can be done safely.

Ask your baby's clinician whether the movement is a typical Moro reflex and whether arm strength, muscle tone, or development needs checking. If your baby was born early, ask whether age should be adjusted when assessing development.

Swaddling can reduce sudden arm movement for some babies, but it must be used safely. Always place a swaddled baby on their back on a firm, flat sleep surface. Keep loose bedding and weighted swaddles out of the sleep area. Stop swaddling as soon as the baby shows signs of trying to roll. Swaddling should allow room for the hips and legs to bend and move.

- What seemed to trigger the movement
- Whether both arms moved in the same way
- How long the movement lasted
- Whether your baby remained responsive
- Whether one arm is used less at other times

Common questions

Does every baby have a strong Moro reflex?

The response differs between babies and can change with alertness, gestational age, and examination technique. A clinician interprets it alongside the rest of the examination.

When does the Moro reflex disappear?

It usually becomes less noticeable over the first several months and generally fades by about 4 to 6 months. Babies born early may follow a different timetable.

Can normal sounds trigger it?

Yes. A sudden sound or movement can trigger a Moro-like response. Frequent reactions to ordinary household sounds are not necessarily abnormal in a young baby.

Is the Moro reflex a seizure?

No. The Moro reflex is a brief, automatic response to a trigger. Seizures may cause repeated jerking, stiffening, unusual eye movements, altered breathing, or reduced responsiveness. If you are unsure, seek medical assessment.

Should I wake my baby to check the reflex?

No. There is no need to check it at home. Routine newborn and infant examinations are the appropriate setting.

Why does my baby wake after being placed in the cot?

The change from being held to lying down may trigger the reflex. Lowering the baby slowly while supporting the head and body may help, but safe sleep guidance should always be followed.

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