

CHILDREN'S DEVELOPMENT THE FIRST YEAR

While reading this information, please keep in mind that all children are unique. While the sequence of development is practically the same for all children (for example, most children learn to crawl before they learn to walk), each child's rate of development is different. There is a wide variation in normal development. Some children reach developmental milestones earlier than others. Some reach them later than others. Rarely does a delay in reaching a developmental milestone mean that there is a problem. In most cases, delays turn out to be normal. Remember that premature infants generally reach developmental milestones later than other infants of the same birth age. Parents with any questions or concerns about their children's development should contact their children's health care provider.

BIRTH TO TWO MONTHS

***Appearance.** Newborn infants do not usually resemble the dimpled, softly rounded bundles that are often seen in television commercials. Many parents are surprised when they are presented with a wrinkled, puffy faced, lumpy headed, oddly colored, crooked shaped little creature. The infants shown in most television commercials are in fact closer to five or six months in age. New parents, thus, should not expect their newborns to be raving beauties.

***Sleep.** The average sleeping time for babies during their first month of life is 16-1/2 hours, taken in 7 to 8 daily naps. It is important for parents to remember

that 16-1/2 hours is an **average**, and the hours infants sleep can range from eight hours a day to 24 hours a day. Babies who sleep more or less than average are just as normal as the ones who sleep the average of 16-1/2 hours per day. It seems that some babies, like adults, appear to need more sleep than others, and some less.

Newborn babies may frequently appear to be in a twilight state between sleeping and waking. During the first months, most infants are alert about one out of every ten hours. Many babies during this early phase of life do not follow a rigid schedule. Daily patterns of sleeping, crying, and eating will probably be very disorganized and unpredictable.

***Feeding/Bodily Functions.** During the first week of life, most infants require about seven to eight feedings per day. By the end of the first month, the frequency of feedings will decrease to about five to six daytime feedings and two night feedings.

During the first week of life, most infants will move their bowels often and sporadically, but by the end of the first month, bowel movements will occur about three to four times per day.

Senses

At birth newborns are especially sensitive to the sights and sounds of other human beings. For most infants, their senses are working at birth, but not as completely and accurately as an adult's.

Highlights in Physical Development

***Vision.** Vision is a very important sense in the developing infant. Intellectual development and learning begin with eye contact and visual tracking. At birth, infants have blurred vision, but by the end of the first month, they can see their parents' faces and distinct patterns. During the first month of life, infants learn to focus at a distance of 8-10 inches. At one month of age, infants are able to follow objects with their eyes, and by two months they will prefer to look at people rather than objects. At this time infants are able to watch a person alertly and directly, and they will be able to follow a moving person with their eyes.

***Hearing.** The sense of hearing is fairly well developed in infants at birth. In fact, it is thought that infants are able to hear sounds in the womb up to four months before birth. Studies have shown that infants seem to prefer the sound of the human voice over any other sound, and that they prefer higher toned (usually female) voices. It is important, therefore, for parents to talk to their newborns, even though they cannot understand, to stimulate hearing development. By the end of the first month, most infants will be able to respond physically to sounds in some way, such as by startling, crying, or quieting.

***Taste/Smell.** Newborns are probably as sensitive to taste stimulation as they will ever be at any time in their lives. Sense of smell is present at birth, too.

***Reflexes.** During the first week of life infants' whole bodies respond to sudden changes in the environment. At this time infants' arm, leg, and hand movements will be primarily controlled by reflexes. As children grow older, these reflexes will begin to disappear. By two months of age most actions will be voluntary, not reflexive.

One such reflex that infants have at birth is the grasp reflex. During the first month of life, infants will grasp objects put into their hands when their fingers are pried open, but this reflex will begin to disappear after the first month, and grasp will later become voluntary.

***Head/Neck.** The development of head and neck strength is a continuous process. At birth, most infants are able to turn their heads from side to side while lying on their backs. When on their stomachs, they can usually lift their heads a few centimeters into the air. When placed in a sitting position, infants' heads will wobble uncontrollably if not supported. As infants grow and develop, they will be able to control their head and neck movements more and more. At about one month of age, infants' heads will still be unsteady when they are held or pulled into a sitting position. By two months of age, most infants are able to lift their heads for a few seconds to about a 45 degree angle.

***General Physical Development.** One of the first developmental milestones reached by infants is the ability to roll over. At about one month of age, many infants are able to roll part way to the side when lying on their backs. During the first month, infants begin to move their arms and legs in an energetic manner.

Highlights in Cognitive/Language Development

***Language.** At birth, the only way infants can communicate is through crying. At birth, crying is a reflexive behavior, but the crying reflex begins to disappear during the first month of life, and infants then begin to cry deliberately for assistance. Between one and two months of age, infants will start to make gurgling and cooing noises as a mark of pleasure and contentment. At this age, infants may begin to grunt and sigh, too.

***What Baby Understands.** Many parents are unaware of how much their newborns are able to do and to understand. For example, newborn infants can tell their mother's voice from all others, and when they hear their mother's voice, their eyes will move in its direction. Newborn infants will also try to follow their mother's face with their eyes (track) if it's less than twelve inches away. By one month of age infants will watch their mothers while they are talking, and if their faces are close enough, infants will mimic speaking by opening and closing their mouths. By one month of age, infants will also imitate movements of

their mother's face. Infants this age will probably stop crying when they are picked up by their mother, because they know that their mother is a source of comfort.

TWO TO FOUR MONTHS

Senses

***Vision.** By two months of age, infants are much more attentive to visual stimuli and may be able to track briefly (follow moving objects with their eyes). By two and a half months, the focusing distance of most infants is about twelve inches. If something brightly colored is placed within twelve inches of them, they will focus on it, and then follow it as it's moved from side to side.

***Hearing.** The sense of hearing in infants is fairly well developed at birth. There is evidence that infants respond more positively to the human voice than to any other auditory stimulus. This preference for the human voice increases over the first four months of life.

Highlights in Physical Development

***Head/Neck.** Between two and four months of age, the ability to control head and neck movements continues to improve. By three months of age infants, when placed on their backs, will probably be able to lift their heads to a 45 degree angle. When placed on their stomachs, they will probably be able to lift their heads 90 degrees, with their weight supported by their arms from the elbows

to the wrist. When lying on their stomachs, two to four month old infants will be able to raise their heads and hold them in this position for a few minutes at a time, and they may even look around.

***Grasp.** At about two months of age, the grasp reflex in most infants begins to disappear. Also, infants don't clench their hands as tightly as they once did. During this period, infants will also begin to hold their hands open more often. By three months of age infants' hands will generally stay open, though they may not be able to grasp anything for long.

Between two and four months of age, many babies begin to play with their own hands, and they may clasp them or stare at them. Grabbing is now a voluntary act, though infants may not be able to grasp anything for very long.

***Rolling.** At about three to four months of age infants are getting more and more adept at rolling, and they will probably be able to roll over one way completely.

Highlights in Cognitive/Language Development

During the period from two to four months infants are gradually becoming more and more alert and expressive. During this age range infants are learning how to gurgle, coo, babble, and make other noises in addition to crying. The lip and tongue movements that infants make are their first attempts to reply to verbal stimulation.

Two to four month old infants begin to use their mouths as a means of exploration. It is also at this age that many infants begin to touch everything in sight as a way of learning how to measure distances using the hands and eyes. Infants will first look at an object and then attempt to confirm distances by trying to reach it.

Highlights in Social Development

By the end of the second month, most infants will begin to smile easily and spontaneously. This is called indiscriminate smiling, and it is one of the first social responses that infants make. Indiscriminate smiling is spontaneous smiling that is not in response to any stimuli. By the end of the third month, the indiscriminate smile gives way to the social smile. Infants will now smile in response to the human voice, to express pleasure, and they will smile when adults smile at them.

During the period from two to four months, most infants will show obvious signs of curiosity and interest in what's going on around them. Infants will begin to express pleasure when others are present by smiling, kicking, and waving their arms. It is at this time that crying usually decreases dramatically.

Between three and four months of age, infants may begin to show fear of strangers by

turning away and possibly crying. It is at this time that many infants begin to react

differently to their mothers than they do to others. Infants this age may begin to protest when left alone and will cry differently when their mothers leave them than when others do.

FOUR TO SIX MONTHS

Highlights in Physical Development

***Rolling.** Due to the increase in head, neck, and back strength, and also in coordination, most infants are able to roll from the stomach to the back by four months of age. By six months of age, most infants will be able to roll over from the back to the side.

***Head/Neck.** By four months of age, most infants can turn their heads in all directions when seated or lying down. By this time, most infants can hold their heads steady and erect for short periods of time, and can hold their heads steady, without bobbing, when pulled by the arms up into a sitting position. When lying on the stomach, most infants can lift their heads to a 90 degree angle by four months of age.

Due to the great increase in head and neck strength by four months of age, many infants can now sit propped up for ten to fifteen minutes. Many are also able to sit in a high chair with a fair amount of success.

By six months of age, most infants have full head control and can hold their heads in a steady position, even while sitting up. However, many infants will still need support to stay in the sitting position.

***Grasp.** During the period from four to six months, most infants will be learning how to grasp, and they will begin to grasp and hold objects for longer and longer periods of time. As their grasp becomes better, many infants can hold a bottle with one or both hands. Many grasping infants soon discover their legs and feet, and they enjoy sucking on their own feet this way.

Grasp will become more and more steady, and as this happens, many infants begin picking up objects using the index and second fingers. By six months of age, many infants are able to hold an object between the index finger and the thumb and can reach with one hand to grasp objects. As infants approach six months of age, they will finally begin to transfer objects from hand to hand.

***Sitting/Standing/Crawling.** At about four months of age, many infants will be able to raise both their chests and legs off the floor while making swimming movements with their arms. This is the beginning of crawling behavior. Many infants at this age will be able to move themselves by rolling and twisting while lying on their backs and by kicking against flat surfaces.

During the fifth month, many infants are easily pulled into a standing position, and many are able to stand firmly when held.

***Vision.** During the period from four to six months, most infants gradually become able to focus on objects at any

distance, and they will follow any moving object that catches their attention.

***Bodily Functions.** By four months of age, most infants establish a predictable amount of time between feeding and bowel movements. At this age most infants sleep about ten to eleven hours per night. During the fourth month of life, eating and sleeping patterns become more regular in most infants.

Highlights in Cognitive/Language Development

At four months of age, most infants are gradually becoming more and more vocal. Many begin introducing sounds and imitating several tones. It is at this time that many infants begin to laugh. Another great achievement at this stage is the ability to squeal. Some parents may be disturbed by the loud noises their infants make, and they may think it's a form of crying, but actually, it's an important new vocal ability. As infants approach six months of age, they will probably be able to say "aah goo" or some similar vowel-consonant combination and will begin to make wet, razzing sounds with their mouths.

Most infants at this age are still very interested in exploring objects with their mouths, but they are now beginning to be more and more interested in looking at objects. In fact, by five months of age, many infants will actually lean over to look for a fallen object. This is an important step in development because it signals that infants are beginning to understand

distance and that objects still exist when they disappear from sight. Memory skills are also improving in infants at this age, and many infants begin to recognize familiar objects.

Highlights in Social Development

Most infants begin to show an interest in toys and playthings at about four months of age, and they may show a preference for one or two toys. It is also at this age that infants begin to tell different faces apart. Most infants at this age know their mothers and other family members, and they will probably begin to resent or object to strangers. As their vocal abilities increase, many infants will begin to vocalize to get the attention of other people, either by making sounds or by coughing or clicking the tongue. Many at this age can vocalize their moods, laughing when they're happy and yelling when they're angry. As infants continue to vocalize in a social manner, they may begin to interrupt the conversations of others by vocalizing.

Infants approaching five and six months of age will become more and more wary of strangers. At this age, many will greet familiar people with a smile and strangers with recognizable expressions of fear.

This period is a very important one for the social development of the child. Infants at this age enjoy being propped up so they can see what's going on around them.

SIX TO NINE MONTHS

Highlights in Physical Development

***Eye/Hand Coordination.** By six months of age many infants will begin reaching for objects quickly without jerkiness and may be able to feed themselves a cracker or similar food. Not only do infants this age try to get objects within their reach but also objects out of their reach. Many infants are also able to look from hand to object, to hold one object while looking for a second object, and to follow the movements of their hands with their eyes. At this age many infants begin to poke at objects with their index fingers. After six months many infants may be able to manipulate a cup and hold it by the handle. Many infants this age begin to reach for objects with one arm instead of both. At about eight months of age, as dexterity improves, many infants will use a pincher movement to grasp small objects, and they will begin to clap and wave their hands. After they begin to clap their hands, they will then begin to transfer objects from hand to hand, and bang objects together.

***Feeding/Eating.** During about the sixth month of age, most infants begin to chew. This new ability, combined with increasing eye/hand coordination, allows infants to begin feeding themselves. At about six months of age, many children begin to develop preferences for certain foods, and by eight months, many insist on feeding themselves most of the time.

***Rolling.** After six months of age, many infants are able to twist and turn

themselves in all directions, and many can roll over from their backs to their stomachs.

***Sitting.** At six months of age, the ability to sit is gradually improving. At this age infants may be able to sit unsupported for a few seconds, and by the seventh month most infants will be able to sit for longer periods of time, though they will still be unsteady and may have to bend forward to balance themselves. By eight months most infants will be able to sit up completely unsupported, and they will be able to turn around while sitting.

***Crawling/Walking.** At six months of age, most infants begin to support the top half of their bodies on their outstretched arms. One of the first signs of crawling behavior is the ability to bend the knees below the body. After six months of age, many infants will begin to creep by propelling on the stomach with the legs and steering with the arms. Infants may begin to crawl forward, backward, or both. As infants practice and perfect the art of creeping and crawling, they will begin to push up on their knees and rock back and forth, usually during the seventh month. At this time, most infants are also able to creep with an object in one or both hands. Between seven and eight months, some infants may be able to pull themselves up to a standing position from a sitting position, get into a sitting position from lying on the stomach, and walk holding on to furniture.

Highlights in Cognitive/Language Development

By six months of age most infants begin babbling with active vocalization, and these vocalizations will be in increasingly speech-like syllables. It is during this stage that infants listen to their own vocalizations, and many will amuse themselves by making sounds. As language skills develop, infants will respond to their own names, and they will be able to tell different voices apart. At this age, many infants will appear to recognize words like "Daddy," "Mama," and "bye-bye," and they may be able to say these words during the seventh month, but without meaning. By eight months of age, most infants will continue to babble, but they will also be able to shout to attract attention.

At six months of age, many infants will begin to show preferences for certain foods. Some will be able to sleep through the night by this time.

During the seventh month of age, many children begin to learn the implications of familiar acts. As they approach the eighth month of age many will be able to recall a past event or action of their own.

Highlights in Social Development

By six months of age, social behavior in infants becomes much more active. Infants begin to pay much more attention to detail, and they are very interested in the people around them. Infants at this age may pull the hair of people who are

holding them, rub their noses or pat their faces.

During the sixth month, many children will smile and laugh spontaneously. As children approach seven months of age, they will begin to smile at familiar people, and will often stop crying when someone speaks to them.

Six months of age is the time when many infants begin to cry when left by their mothers. This is because infants are beginning to recognize that there is a difference between parents and strangers. This is one of the first stages of stranger anxiety. Separation anxiety also begins after six months of age, and children often protest and become upset whenever they are left by their mothers. This is a very important period for the social development of children. It is at this age that many infants begin playing simple games like pat-a-cake, and waving bye-bye. Many children begin to show a great desire to be included in social interaction, and will probably wiggle and squeal with delight in anticipation of play. Children this age seem to enjoy mirror play, and they may smile at their own images.

NINE TO TWELVE MONTHS

Highlights in Physical Development

***Hands/Grasp.** After nine months of age, many children become increasingly better at using the thumb and index finger to grasp objects and transfer them from one hand to another. It is at this time

that many children begin to use their index fingers to poke into holes. By this time, many children are also able to manipulate two objects, one with each hand, and they may drop one of two objects to get a third. During the tenth month, many children begin to prefer one hand and side of the body to the other. During the eleventh month, as children become better and better at grasping and picking up objects, they can pick up very small objects. Also during the eleventh month, many children start to hold and use crayons, place and remove objects into and from a container, lift lids off of boxes, and turn the pages of a book, though probably not one at a time.

***Self-feeding.** After nine months of age, many children are able to feed themselves finger foods and many can hold their own bottles. During the tenth month, many babies can drink from a cup when it's held, and by eleven months, many will probably be able to drink from a cup without help. By eleven months, also, many children can carry a spoon to their mouths.

***Sitting.** After nine months of age, most children can sit erect with good control and can sit alone steadily for long periods of time.

***Crawling/Walking/Standing.** Babies between nine and twelve months of age are getting increasingly better at moving themselves around, and it is very important for parents to make sure their children are monitored constantly. It is unwise to leave them alone for even a

short period of time. During the ninth month, most infants make a determined effort to crawl, and by ten months, many will be able to crawl with straight arms and legs. It is also during the period from nine to ten months that many babies begin to pull themselves into a standing position, either holding on to furniture or someone's hands or legs. Soon afterwards, between ten and eleven months, many children can get down from a standing to a sitting position. Between eleven and twelve months, many children are able to hold on to a piece of furniture, like a couch, and move along side of it. By the end of the tenth month, many children will probably be able to stand alone momentarily, progressing to standing alone quite well by eleven to twelve months of age.

Highlights in Cognitive/Language Development

Between nine and ten months of age, many infants will uncover a toy they have seen someone else hide. Many infants are also able to remember games played the previous day. During the period from eleven to twelve months, most babies begin to explore space by throwing things down. This game may be annoying to some parents, but it is a game thoroughly enjoyed by many infants this age. Many children are also learning to follow simple instructions, and they may anticipate a reward for the successful completion of an act or a command. As children approach eleven months of age, they begin to associate properties with things (for example, they may be able to

associate a bark with a dog, a coffee cup with the word hot).

By nine months of age most babies have begun vocalizing to toys, people, and animals in sentence-like syllables. Many children this age seem to listen carefully to the conversations of other people. They may also imitate sounds they hear in these conversations. The first word-like sounds made by babies are usually of the consonant sounds p, b, m, t, and d.

Most babies say their first words between ten and eleven months of age. Most of what is said is still gibberish, but sounds will be increasingly more intelligible as children approach eleven to twelve months. Most babies are able to say two words besides "mama" and "dada" by the time they reach one year of age.



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