

Developmental Stages of Children

What is Child Development?

Child development refers to how a child becomes able to do more complex things, as they get older. Development is different than growth. *Growth* only refers to the child getting bigger in size. When we talk about normal development, we are talking about developing skills like:

- **Gross motor:** Using large groups of muscles to sit, stand, walk, run, etc., keeping balance, and changing positions.
- **Fine motor:** Using hands to be able to eat, draw, dress, play, write, and do many other things.
- **Language:** Speaking, using body language and gestures, communicating, and understanding what others say.
- **Cognitive:** Thinking skills: including learning, understanding, problem-solving, reasoning, and remembering.
- **Social:** Interacting with others, having relationships with family, friends, and teachers, cooperating, and responding to the feelings of others.

What are Developmental Milestones?

Developmental milestones are a set of functional skills or age-specific tasks that most children can do at a certain age range. Pediatricians use milestones to help check how your child is developing. Although each milestone has an age level, the actual age when a normally developing child reaches that milestone can vary quite a bit. Every child is unique!

Developmental Milestones by the End of the First Month

Movement

- Makes jerky, quivering arm thrusts
- Brings hands within range of eyes and mouth
- Moves head from side to side while lying on stomach
- Head flops backward if unsupported
- Keeps hands in tight fists
- Strong reflex movements

Visual

- Focuses 8- to 12-inches away
- Eyes wander and occasionally cross
- Prefers black-and-white or high-contrast patterns
- Prefers the human face to all other patterns

Hearing

- Hearing is fully mature
- Recognizes some sounds
- May turn toward familiar sounds and voices

Smell and Touch

- Prefers sweet smells
- Avoids bitter or acidic smells
- Recognizes the scent of his own mother's breast milk
- Prefers soft to coarse sensations
- Dislikes rough or abrupt handling

Developmental Health Watch

If, during the second, third or fourth weeks of a baby's life, she shows any of the following signs of developmental delay, parents should notify their pediatrician:

- Sucks poorly and feeds slowly
- Does not blink when shown a bright light
- Does not focus and follow a nearby object moving side to side
- Rarely moves arms and legs; seems stiff
- Seems excessively loose in the limbs, or floppy
- Lower jaw trembles constantly, even when not crying or excited
- Does not respond to loud sounds

Developmental Milestones by the End of 3-Months

Movement

- Raises head and chest when lying on stomach
- Supports upper body with arms when lying on stomach
- Stretches legs out and kicks when lying on stomach or back
- Opens and shuts hands
- Pushes down on his legs when his feet are placed on a firm surface
- Brings hand to mouth
- Takes swipes at dangling objects with hands
- Grasps and shakes hand toys

Visual

- Watches faces intently
- Follows moving objects
- Recognizes familiar objects and people at a distance
- Starts using hands and eyes in coordination

Hearing and Speech

- Smiles at the sound of your voice
- Begins to babble
- Begins to imitate some sounds
- Turns head toward direction of sound

Social/Emotional

- Begins to develop a social smile
- Enjoys playing with other people, and may cry when playing stops
- Becomes more communicative and expressive with face and body
- Imitates some movements and facial expressions

Developmental Health Watch

Although each baby develops in her own individual way and at her own rate, failure to reach certain milestones may signal medical or developmental problems requiring special attention. If you notice any of the following warning signs in an infant at this age, discuss them with the child's parents.

- Still has Moro reflex after 4-months
- Does not seem to respond to loud sounds
- Does not notice her hands by 2-months
- Does not smile at the sound of your voice by 2-months
- Does not follow moving objects with her eyes by 2- to 3-months
- Does not grasp and hold objects by 3-months
- Does not smile at people by 3-months
- Cannot support her head well at 3-months
- Does not reach for and grasp toys by 3- to 4-months
- Does not babble by 3- to 4-months
- Does not bring objects to her mouth by 4-months
- Begins babbling, but doesn't try to imitate any of your sounds by 4-months
- Does not push down with her legs when her feet are placed on a firm surface by 4-months
- Has trouble moving one or both eyes in all directions
- Crosses her eyes most of the time (Occasional crossing of the eyes is normal in these first months.)
- Does not pay attention to new faces, or seems very frightened by new faces or surroundings
- Still has the tonic neck reflex at 4- to 5-months

Developmental Milestones by the End of 7-Months

Movement

- Rolls both ways (front to back, back to front)
- Sits with, and then without, support of her hands
- Supports her whole weight on her legs
- Reaches with one hand
- Transfers object from hand to hand
- Uses raking grasp (not pincer)

Vision

- Develops full color vision
- Distance vision matures
- Ability to track moving objects matures

Language

- Responds to own name
- Begins to respond to "no"
- Distinguishes emotions by tone of voice
- Responds to sound by making sounds
- Uses voice to express joy and displeasure
- Babbles chains of consonants

Cognitive

- Finds partially hidden object
- Explores with hands and mouth
- Struggles to get objects that are out of reach

Social/Emotional

- Enjoys social play
- Interested in mirror images
- Responds to other people's expressions of emotion

Developmental Health Watch

Because each baby develops in his own particular manner, it's impossible to tell exactly when or how a child will perfect a given skill. The developmental milestones will give you a general idea of the changes you can expect, but don't be alarmed if a baby's development takes a slightly different course. Alert your parents, however, if a baby displays any of the following signs of possible developmental delay for this age range.

- Seems very stiff with tight muscles
- Seems very floppy like a rag doll
- Head still flops back when body is pulled up to a sitting position
- Reaches with one hand only
- Refuses to cuddle
- Shows no affection for the person who cares for him
- Does not seem to enjoy being around people
- One or both eyes consistently turn in or out
- Persistent tearing, eye drainage or sensitivity to light
- Does not respond to sounds around him
- Has difficulty getting objects to his mouth
- Does not turn his head to locate sounds by 4-months
- Does not roll over in either direction by 5-months
- Seems inconsolable at night after 5-months
- Does not smile spontaneously by 5-months
- Cannot sit with help by 6-months
- Does not laugh or make squealing sounds by 6-months
- Does not actively reach for objects by 6- to 7-months
- Does not follow objects with both eyes at near (1-foot) and far (6-feet) ranges by 7-months
- Does not bear some weight on legs by 7-months
- Does not try to attract attention through actions by 7-months
- Does not babble by 8-months
- Shows no interest in games of peek-a-boo by 8-months

Developmental Milestones by the End of 12-Months

Social and Emotional

- Shy or anxious with strangers
- Cries when mother or father leaves
- Enjoys imitating people in his play
- Shows specific preferences for certain people and toys
- Tests parental responses to his actions during feedings (What do you do when he refuses a food?)
- Tests parental responses to his behavior (What do you do if he cries after you leave the room?)
- May be fearful in some situations
- Prefers mother and/or regular caregiver over all others
- Repeats sounds or gestures for attention
- Finger-feeds himself
- Extends arm or leg to help when being dressed

Movement

- Reaches sitting position without assistance
- Crawls forward on belly
- Assumes hands-and-knees position
- Creeps on hands and knees
- Gets from sitting to crawling or prone (lying on stomach) position
- Pulls self up to stand
- Walks holding on to furniture
- Stands momentarily without support
- May walk two or three steps without support

Language

- Pays increasing attention to speech
- Responds to simple verbal requests
- Responds to "no"
- Uses simple gestures, such as shaking head for "no"
- Babbles with inflection
- Says "dada" and "mama"
- Uses exclamations, such as "Oh-oh!"
- Tries to imitate words

Cognitive

- Explores objects in many different ways (shaking, banging, throwing, dropping)
- Finds hidden objects easily
- Looks at correct picture when the image is named
- Imitates gestures
- Begins to use objects correctly (drinking from cup, brushing hair, dialing phone, listening to receiver)

Developmental Health Watch

Each baby develops in his own manner, so it's impossible to tell exactly when a child will perfect a given skill. Although the developmental milestones will give you a general idea of the changes you can expect as your child gets older, don't be alarmed if his development takes a slightly different course. Alert your parents if a baby displays any of the following signs of possible developmental delay in the 8- to 12-month age range.

- Does not crawl
- Drags one side of body while crawling (for over one month)
- Cannot stand when supported
- Does not search for objects that are hidden while he watches
- Says no single words ("mama" or "dada")
- Does not learn to use gestures, such as waving or shaking head
- Does not point to objects or pictures

Developmental Milestones by the End of 2-Years

Movement

- Walks alone
- Pulls toys behind her while walking
- Carries large toy or several toys while walking
- Begins to run
- Stands on tiptoe
- Kicks a ball
- Climbs onto and down from furniture unassisted
- Walks up and down stairs holding on to support

Hand and Finger Skills

- Scribbles spontaneously
- Turns over container to pour out contents
- Builds tower of four blocks or more
- Might use one hand more frequently than the other

Language

- Points to object or picture when it's named for him
- Recognizes names of familiar people, objects and body parts
- Says several single words (by 15- to 18-months)
- Uses simple phrases (by 18- to 24-months)
- Uses two- to four-word sentences
- Follows simple instructions
- Repeats words overheard in conversation

Cognitive

- Finds objects even when hidden under two or three covers
- Begins to sort by shapes and colors
- Begins make-believe play

Social

- Imitates behavior of others, especially adults and older children
- Increasingly aware of herself as separate from others
- Increasingly enthusiastic about company of other children

Emotional

- Demonstrates increasing independence
- Begins to show defiant behavior
- Episodes of separation anxiety increase toward midyear then fade

Developmental Health Watch

Because each child develops at his own particular pace, it's impossible to tell exactly when a child will perfect a given skill. The developmental milestones will give you a general idea of the changes you can expect, as a child gets older, but don't be alarmed if he takes a slightly different course. Alert your parents, however, if he displays any of the following signs of possible developmental delay for this age range.

- Cannot walk by 18-months
- Fails to develop a mature heel-toe walking pattern after several months of walking, or walks exclusively on his toes
- Does not speak at least 15 words by 18-months
- Does not use two-word sentences by age 2
- By 15-months, does not seem to know the function of common household objects (brush, telephone, bell, fork, spoon)
- Does not imitate actions or words by the end of this period
- Does not follow simple instructions by age 2
- Cannot push a wheeled toy by age 2

Developmental Milestones by the End of 3-Years

Movement

- Climbs well
- Walks up and down stairs, alternating feet
- Kicks ball
- Runs easily
- Pedals tricycle
- Bends over easily without falling

Hand and Finger Skills

- Makes vertical, horizontal and circular strokes with pencil or crayon
- Turns book pages one at a time
- Builds a tower of more than six blocks
- Holds a pencil in writing position
- Screws and unscrews jar lids, nuts and bolts
- Turns rotating handles

Language

- Follows a two- or three-component command
- Recognizes and identifies almost all common objects and pictures
- Understands most sentences
- Understands physical relationships ("on," "in," "under")
- Uses four- and five-word sentences
- Can say name, age and sex
- Uses pronouns (I, you, me, we, they) and some plurals (cars, dogs, cats)
- Strangers can understand most of her words

Cognitive

- Makes mechanical toys work
- Matches an object in her hand or room to a picture in a book
- Plays make-believe with dolls, animals and people
- Sorts objects by shape and color
- Completes puzzles with three or four pieces
- Understands concept of "two"

Social

- Imitates adults and playmates
- Spontaneously shows affection for familiar playmates
- Can take turns in games
- Understands concept of "mine" and "his/hers"

Emotional

- Expresses affection openly
- Expresses a wide range of emotions
- By age 3, separates easily from parents
- Objects to major changes in routine

Developmental Health Watch

The developmental milestones give you a general idea of the changes you can expect, as a child gets older, but don't be alarmed if her development takes a slightly different course. Each child develops at her own pace. Do consult your parents, however, if a child displays any of the following signs of possible developmental delay for this age range.

- Frequent falling and difficulty with stairs
- Persistent drooling or very unclear speech
- Inability to build a tower of more than four blocks
- Difficulty manipulating small objects
- Inability to copy a circle by age 3
- Inability to communicate in short phrases
- No involvement in "pretend" play
- Failure to understand simple instructions
- Little interest in other children
- Extreme difficulty separating from mother

Developmental Milestones by the End of 4-Years

Movement

- Hops and stands on one foot up to five seconds
- Goes upstairs and downstairs without support
- Kicks ball forward
- Throws ball overhand
- Catches bounced ball most of the time
- Moves forward and backward with agility

Hand and Finger Skills

- Copies square shapes
- Draws a person with two to four body parts
- Uses scissors
- Draws circles and squares
- Begins to copy some capital letters

Language

- Understands the concepts of "same" and "different"
- Has mastered some basic rules of grammar
- Speaks in sentences of five to six words
- Speaks clearly enough for strangers to understand
- Tells stories

Cognitive

- Correctly names some colors
- Understands the concept of counting and may know a few numbers
- Approaches problems from a single point of view
- Begins to have a clearer sense of time
- Follows three-part commands
- Recalls parts of a story
- Understands the concept of same/different
- Engages in fantasy play

Social

- Interested in new experiences
- Cooperates with other children
- Plays "Mom" or "Dad"
- Increasingly inventive in fantasy play
- Dresses and undresses
- Negotiates solutions to conflicts
- More independent

Emotional

- Imagines that many unfamiliar images may be "monsters"
- Views self as a whole person involving body, mind and feelings
- Often cannot distinguish between fantasy and reality

Developmental Health Watch

Because each child develops in his own particular manner, it's impossible to tell exactly when or how he'll perfect a given skill. The developmental milestones will give you a general idea of the changes you can expect, as a child gets older, but don't be alarmed if his development takes a slightly different course. Alert your parents, however, if a child displays any of the following signs of possible developmental delay for this age range.

- Cannot throw a ball overhand
- Cannot jump in place
- Cannot ride a tricycle
- Cannot grasp a crayon between thumb and fingers
- Has difficulty scribbling
- Cannot stack four blocks
- Still clings or cries whenever his parents leave him
- Ignores other children
- Does not respond to people outside the family
- Does not engage in fantasy play
- Resists dressing, sleeping, using the toilet
- Lashes out without any self-control when angry or upset
- Does not use sentences of more than three words
- Does not use "me" and "you" appropriately

Developmental Milestones by the End of 5-Years

Movement

- Stands on one foot for 10 seconds or longer
- Hops, somersaults
- Swings, climbs
- May be able to skip

Hand and Finger Skills

- Copies triangle and other geometric patterns
- Draws person with body
- Prints some letters
- Dresses and undresses without assistance
- Uses fork, spoon and (sometimes) a table knife
- Usually cares for own toilet needs

Language

- Recalls part of a story
- Speaks sentences of more than five words
- Uses future tense
- Tells longer stories
- Says name and address

Cognitive Milestones

- Can count 10 or more objects
- Correctly names at least four colors
- Better understands the concept of time
- Knows about things used every day in the home (money, food, appliances)

Social

- Wants to please friends
- Wants to be like her friends
- More likely to agree to rules
- Likes to sing, dance and act
- Shows more independence and may even visit a next-door neighbor by herself

Emotional Milestones

- Aware of sexuality
- Able to distinguish fantasy from reality
- Sometimes demanding, sometimes eagerly cooperative

Developmental Health Watch

Because each child develops in her own particular manner, it's impossible to predict exactly when or how a preschooler will perfect a given skill. The developmental milestones will give you a general idea of the changes you can expect, as a child gets older, but don't be alarmed if her development takes a slightly different course. Alert your parents, however, if a child displays any of the following signs of possible developmental delay for this age range.

- Exhibits extremely fearful or timid behavior
- Exhibits extremely aggressive behavior
- Is unable to separate from parents without major protest
- Is easily distracted and unable to concentrate on any single activity for more than five minutes
- Shows little interest in playing with other children
- Refuses to respond to people in general, or responds only superficially
- Rarely uses fantasy or imitation in play
- Seems unhappy or sad much of the time
- Does not engage in a variety of activities
- Does not express a wide range of emotions
- Has trouble eating, sleeping or using the toilet
- Cannot differentiate between fantasy and reality
- Cannot understand two-part commands using prepositions ("Put the cup on the table"; "Get the ball under the couch.")
- Cannot correctly give her first and last name
- Does not use plurals or past tense properly when speaking
- Does not talk about her daily activities and experiences
- Cannot build a tower of six to eight blocks
- Seems uncomfortable holding a crayon
- Has trouble taking off clothing
- Cannot brush her teeth efficiently
- Cannot wash and dry her hands

Developmental Aspects of School-Age Childhood

Social and Emotional Development

- There are signs of growing independence. Children are becoming so "worldly" that they typically test their growing knowledge with back talk and rebellion.
- Common fears include the unknown, failure, death, family problems, and rejection.
- Friends may live in the same neighborhood and are most commonly the same sex.
- Children average five best friends and at least one "enemy", which often change from day to day.
- Children act nurturing and commanding with younger children but follow and depend on older children.
- Children are beginning to see the point of view of others more clearly.
- Children define themselves in terms of their appearance, possessions, and activities.
- There are fewer angry outbursts and more ability to endure frustration while accepting delays in getting things they "want".
- Children often resolve conflict through peer judges who accept or reject their actions.
- Children are self-conscious and feel as if everyone notices even small differences (new haircut, facial hair, a hug in public from a parent).
- Tattling is a common way to attract adult attention in the early years of middle childhood.
- Inner control is being formed and practiced each time decisions are made.
- Around age 6-8, children may still be afraid of monsters and the dark. These are replaced later by fears of school or disaster and confusion over social relationships.
- To win, lead, or to be first is valued. Children try to be the boss and are unhappy if they lose.
- Children often are attached to adults (teacher, club leader, caregiver) other than their parents and will quote their new "hero" or try to please him or her to gain attention.
- Early in middle childhood, "good" and "bad" days are defined as what is approved or disapproved by the family.

- Children's feelings get hurt easily. There are mood swings, and children often do not know how to deal with failure.

Physical Development

- Growth is slower than in preschool years, but steady. Eating may fluctuate with activity level. Some children have growth spurts in the later stages of middle childhood.
- In the later stages of middle childhood, body changes (hips widen, breasts bud, pubic hair appears, testes develop) indicate approaching puberty.
- Children recognize that there are differences between boys and girls.
- Children find difficulty balancing high-energy activities and quiet activities.
- Intense activity may bring tiredness. Children need around 10 hours of sleep each night.
- Muscle coordination and control are uneven and incomplete in the early stages, but children become almost as coordinated as adults by the end of middle childhood.
- Small muscles develop rapidly, making playing musical instruments, hammering, or building things more enjoyable.
- Baby teeth will come out and permanent ones will come in.
- Permanent teeth may come in before the mouth has fully grown, causing dental crowding.
- Eyes reach maturity in both size and function.
- The added strain of schoolwork (smaller print, computers, intense writing) often creates eye-tension and leads some children to request eye examinations.

Mental Development

- Children can begin to think about their own behavior and see consequences for actions. In the early stages of concrete thinking, they can group things that belong together (for instance babies, fathers, mothers, aunts are all family members). As children near adolescence, they master sequencing and ordering, which are needed for math skills.
- Children begin to read and write early in middle childhood and should be skillful in reading and writing by the end of this stage.

- They can think through their actions and trace back events that happened to explain situations, such as why they were late to school.
- Children learn best if they are active while they are learning. For example, children will learn more effectively about traffic safety by moving cars, blocks, and toy figures rather than sitting and listening to an adult explain the rules.
- Six- to 8-year-olds can rarely sit for longer than 15-20 minutes for an activity. Attention span gets longer with age.
- Toward the beginning of middle childhood, children may begin projects but finish few. Allow them to explore new materials. Nearing adolescence, children will focus more on completion.
- Teachers set the conditions for social interactions to occur in schools. Understand that children need to experience various friendships while building esteem.
- Children can talk through problems to solve them. This requires more adult time and more sustained attention by children.
- Children can focus attention and take time to search for needed information.
- They can develop a plan to meet a goal.
- There is greater memory capability because many routines (brushing teeth, tying shoes, bathing, etc.) are automatic now.
- Child begins to build a self-image as a "worker". If encouraged, this is positive in later development of career choices.
- Many children want to find a way to earn money.

Moral Development

Moral development is more difficult to discuss in terms of developmental milestones. Moral development occurs over time through experience. Research implies that if a child knows what is right, he or she will do what is right. Even as adults, we know that there are often gray areas when it comes to making tough decisions about right and wrong. There are a lot of "it depends" responses depending on the particular situation.

Most adults agree that they should act in a caring manner and show others they care about them. People want to come into contact with others who will reinforce them for who they are. It is no different for children. To teach responsible and

caring behaviors, adults must first model caring behaviors with young children as they do with other adults. While modeling this behavior, focus on talking with children. This does not mean talking at children but discussing with them in an open-ended way. Work to create an air of learning and a common search for understanding, empathy, and appreciation. Dialogue can be playful, serious, imaginative, or goal oriented. It can also provide the opportunity to question why. This is the foundation for caring for others.

Next, practice caring for others. Adults need to find ways to increase the capacity to care. Adults generally spend time telling children what to do or teaching facts. There is little time to use the newly developed higher order thinking and to practice caring interactions and deeds.

The last step to complete the cycle of caring is confirmation. Confirmation is encouraging the best in others. A trusted adult who identifies something admirable and encourages the development of that trait can go a long way toward helping children find their place in this world. Love, caring and positive relations play central roles in ethics and moral education.

Practical Advice for All Adults Working with School-Age Children

Social and Emotional Development

- Encourage non-competitive games, particularly toward the beginning of middle childhood, and help children set individual goals.
- Give children lots of positive attention and let them help define the rules.
- Talk about self-control and making good decisions. Talk about why it is important to be patient, share, and respect others' rights. Adults must pick battles carefully so there is limited nagging and maximized respect while children build confidence in their ability to make decisions.
- Teach them to learn from criticism. Ask, "How could you do that differently next time?"
- Always be alert to the feelings associated with what children tell you.
- Give children positive feedback for successes.

Physical Development

- It is important to help children feel proud of who they are and what they can do. Avoid stereotyping girls into particular activities and boys into others. Let both genders choose from a range of activities.
- Encourage children to balance their activities between high energy and quiet activity. Children release tension through play. Children may be extremely active when tired. Encourage quiet reading, painting, puzzles, or board games before bedtime.
- Regular dental and physical check-ups are an important part of monitoring a child's growth and development. This allows parents to screen for potential problems. If a child accidentally loses a permanent tooth, finding the tooth and taking it and the child to the dentist may save the permanent tooth.

Mental Development

Rapid mental growth creates many of the positive as well as negative interactions between children and adults during middle childhood. Some of the ways adults can help children continue to develop their thinking skills are:

- Adults can ask "what if..." or "how could we solve this" questions to help children develop problem-solving skills.
- Reading signs, making lists, and counting prices are all exercises to practice sequencing skills.
- Asking children if you can help them think about ways to talk with other children can provide limited guidance as they negotiate social relationships.
- Picking focused times to talk - without distractions - allows adults and children to converse and listen.

Reflections

Each stage in life is a time of growth. Middle childhood is a time to bridge dependence with approaching independence. The time of wonder and spontaneity is fading, replaced by feeling self-conscious and on guard. The new ways children act are ways they are exploring their future potential. Some behaviors will pass, but they must be experienced in order for the child to grow and be ready to face the stage of finding his or her identity during adolescence.

Television

A few cautions about TV: Too little physical activity can affect weight in children. Too many aggressive acts on TV can affect mood and actions, and children can begin to think that what they see on TV is the "norm". Limiting the amount of television watched and monitoring what is watched can help parents assure that the TV that is seen relates to their family's values.

Self-Care

There is no magic age at which a child is ready to be left alone. Parents should consider carefully the child's willingness to be left alone, the child's day-to-day responsibility, and the child's ability to anticipate and avoid unsafe situations.

Chores

Children want to feel useful and have a sense that they are contributing to the family. To help children learn household responsibilities, parents might allow children to choose from a list of chores. Paid chores should be in addition to what is generally expected. For example, brushing teeth, taking a bath, and keeping a room clean may be expected. Drying dishes, putting away folded clothes, or emptying trashcans may be chores that earn allowance and contribute to the family.

Money becomes more important since children now understand how it is valued in our society. Earning an allowance is a two-way agreement; children do agreed upon work with little reminders in exchange for agreed upon money or goods. Charts with pictures to check-off chores help children remember what to do. The older children get, the more capable they are, but remember to choose age-appropriate duties.

Differences Between Boys and Girls

The following chart describes differences between male and female growth. Teachers should be aware of the differences in how each gender develops.

Pre-Birth

Male

- ⦿ Develops testosterone
- ⦿ Same structural brain first six weeks
- ⦿ Set male brain immune to female hormones
- ⦿ Fetus generally more active, restless
- ⦿ Male cortex develops slower
- ⦿ At 6 weeks, sex is identified, and brain changes
- ⦿ Brain is more lateral than females
- ⦿ Less flexible
- ⦿ Greater idling in brain stem
- ⦿ Brain 10% larger than girls

Female

- ⦿ Develops estrogen
- ⦿ Same structural brain first six weeks
- ⦿ Set female brain immune to male hormones
- ⦿ Fetus is less active
- ⦿ Female cortex develops faster
- ⦿ Normal brain appears to be female
- ⦿ Brain is less lateral than males
- ⦿ More flexible
- ⦿ Greater idling in cingulate gyrus
- ⦿ Brain is 10% smaller than males

Infants

Boys

- ⊙ Prefers mechanical or structural toys
- ⊙ Looks at objects for shorter, but more active, periods
- ⊙ Gazes at mother half as long as girls does
- ⊙ Motor activity more vigorous than girls
- ⊙ At one week, cannot distinguish another baby's cry from background noise
- ⊙ At four-months of age cannot distinguish faces of people in photos
- ⊙ Sensitive to salty foods
- ⊙ Less sensitive to physical sensation on skin
- ⊙ More easily angered
- ⊙ Better narrow vision and depth perception
- ⊙ Superior perception at blue end of color spectrum
- ⊙ Take in less sensory proximal data
- ⊙ Left eye dominate
- ⊙ Less bothered by loud noises
- ⊙ Less interested in soft, cooing words and singing
- ⊙ 25% higher mortality rate

Girls

- ⊙ Prefers soft, cuddly toys
- ⊙ Plays with objects for longer periods, but less activity
- ⊙ Play is more sanguine
- ⊙ At one week, able to distinguish another baby's cry from background noise
- ⊙ At four-months of age able to recognize faces of people known in photos
- ⊙ Sensitive to bitter taste, prefers sweets
- ⊙ More sensitive to physical sensation on skin
- ⊙ More easily saddened
- ⊙ Better peripheral vision
- ⊙ Superior perception at red end of the color spectrum
- ⊙ More attuned to sensory input
- ⊙ Equal visual skill with either eye
- ⊙ Less tolerant of loud noises
- ⊙ More comforted by soft, cooing words and singing
- ⊙ Expresses emotions through words
- ⊙ More sensitive to social and personal context

Preschool

Boys

- ⊙ Speaks first words later than girls
- ⊙ By age four and a half, 99% of speech is comprehensible
- ⊙ Shows greater interest in exploring once standing is mastered
- ⊙ Greater muscle mass already evident by age three
- ⊙ Less able to multi-task
- ⊙ Hears better in right ear
- ⊙ Better auditory memory
- ⊙ More likely to ignore voices, even parents
- ⊙ More physically impulsive

Girls

- ⊙ Develops better vocabulary earlier than boys
- ⊙ By age three, 99% of speech is comprehensible
- ⊙ Even after mastering standing, does not roam as freely as boys
- ⊙ Greater concentration of fatty tissue still more evident than muscle at age three
- ⊙ Better ability to multi-task
- ⊙ Better visual memory
- ⊙ Less likely to ignore voices, especially those familiar

Pre-Kindergarten

Boys

- ⊙ One-directional, less cross-talk, more focused
- ⊙ Occupies larger space on playground
- ⊙ Playground activities involve more running
- ⊙ Playground games are rough and vigorous, competitive, and aggressive
- ⊙ Playing with blocks, builds high structures likely to topple over
- ⊙ Newcomers to group ignored until they prove their worth and value
- ⊙ Stories filled with excitement and action, ignoring victims
- ⊙ Games involve bodily contact, tumbling, continuous flow of action
- ⊙ Primarily interested in objects and things
- ⊙ Saying goodbye to mom takes approximately 30 seconds
- ⊙ Uses dolls for attack weapons and warfare
- ⊙ More speech problems
- ⊙ Picks same gender peers for friends
- ⊙ Expresses emotions through actions
- ⊙ Less sensitive to social and personal context
- ⊙ Less attention span and empathy

Girls

- ⊙ More cross-talk as shown by approach to activities
- ⊙ Congregates in groups of other girls in smaller spaces, often huddling together
- ⊙ Playground games are quieter and less active, more cooperative
- ⊙ Playing with blocks, tends to build low and long structures
- ⊙ Newcomers greeted more warmly
- ⊙ Stories pay attention to human dynamics, particular concerns with victim's feelings
- ⊙ Games involve turn taking and indirect competition most of the time
- ⊙ Primarily interested in people and relationships
- ⊙ Saying goodbye to mom takes approximately 90 seconds
- ⊙ Uses dolls for playing out domestic scenes
- ⊙ Fewer speech problems, seems to differentiate sounds better
- ⊙ Picks same gender peers for friends
- ⊙ Expresses emotions through words
- ⊙ More sensitive to social and personal context
- ⊙ Greater attention span and empathy

Kindergarten

Boys

- ⦿ Takes longer to attain reading mastery
- ⦿ Superior at certain visual tasks in bright light
- ⦿ Better at test requiring circling the answer
- ⦿ Better in math
- ⦿ Better at three dimensional reasoning
- ⦿ More rule-bound than girls
- ⦿ 95% of hyperactive children
- ⦿ More able to separate emotion from reason

Girls

- ⦿ Reads better and sooner than boys
- ⦿ Superior at seeing in low light
- ⦿ Superior at hearing
- ⦿ Better at test requiring listening to questions being read
- ⦿ Better verbal abilities
- ⦿ Better at grammar and vocabulary
- ⦿ Less bound by arbitrary rules
- ⦿ Only 5% of hyperactive children
- ⦿ Less able to separate emotions from reason
- ⦿ 3 times better at reading as auditory activity