Pediatric Case Assessment: Developmental Disorders & Milestone Markers

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Learning Objectives:

Identify and differentiate common developmental disorders in children.

Understand the neurobiological foundation of developmental challenges.

Explore holistic approaches to managing developmental disorders within chiropractic practice.

Gain proficiency in using milestone markers to assess a child's development across multiple domains.

Enhance skills in recognizing deviations from typical development and implementing appropriate interventions.

Foster collaboration with other healthcare professionals to optimize patient outcomes in pediatric chiropractic care.

Milestones Overview

Reviewed and updated a few years ago (2022)

Moved from 50th percentile to the 75th

- As in; when 75% should hit a certain milestone
- Should allow for more appropriate timing of support

Four categories:

- Social-Emotional
 - Interactions with others, regulation, empathy
- Language & Communication
 - Receptive and Expressive
- Cognitive
 - Problem Solving, Learning, Reasoning, Memory
- Motor
 - Gross and Fine motor movements

Milestone Update Reduced previous milestone list from 216 down to 159 and many were moved to later ages (75th)

Notable exclusion from the updated list:

Crawling

Milestone Recognition

Keep in Mind:

Pediatrics not simply a doctor-patient relationship

Discussions, Information should include the whole family unit and should include:

- Concerns
- Observations
- Questions that should be open ended allowing for higher quality answers

What if they can't answer your questions?/Don't know where their child is at?

- Take time to observe in the office and should be observed in a natural environment
- Everybody has a cellphone.

When assessing a child for missing a milestone:

Consistent progress:

Are the milestones being reached in a typical time frame?

Delays in one or more domains:

• Is the child missing key milestones for their age (e.g., not walking by 18 months)?

Patterns of development:

Are certain areas significantly advanced while others lag, which might indicate a need for further screening or intervention?

"Milestone checklists used in surveillance are intended to prompt conversations, review developmental history and progress, and elicit concerns. The CDC checklists should not replace universal developmental screening, provide a risk categorization, or diagnose DDs." Zubler et al.

Milestones Overview

Universal Red Flags at Any Age

Significant loss of an already developed skill

Lack of response to audio or visual stimulus

Little to no interaction with others

Lack of or limited eye contact

Asymmetrical findings from the right and left sides concerning tone, strength, or movement

Excessive low or high tone, especially when hindering milestone progression

Strong Parental Concerns

Importance of Monitoring Milestones

Early Identification

- Improves outcomes
- Prevents/Mitigates potential long-term disabilities
- Reduces Health Care Costs Reduces the need for more significant interventions later

Benefits Families

- Allows for education on how to support their child
- Builds trust

Provides more opportunities for integrative pediatric care

- Developmental changes require a multifactorial approach
- Your specialty is a necessary part of that management

Developmental Disorders

Overview Neurodevelopment Neurodevelopmental Disorder Overviews Management

Brain Development

Brain Growth:

- Greatest during first 2 years
- Brain grows from 350g at birth to ~1000g by 1 year
- By puberty: ~1250g in girls, ~1375g in boys

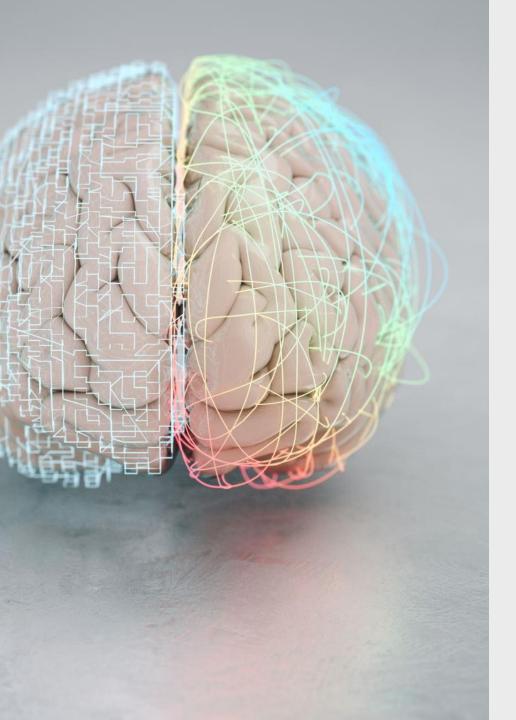
Cortical Neurons:

- Each neuron develops 1,000 to 100,000 connections in the first year
 - Can at times reach 40,000 synapses per second

"USE IT OR LOSE IT"

Stimulated pathways remain and strengthen

Neglected Pathways undergo "pruning events"



Overview of Delays

Any deviation from expected psychological and behavioral function as a result in variation of brain development:

Adverse Childhood Experiences

Adverse Childhood Experiences

Definition

 Significant Psychosocial or physically traumatic events throughout a child's developing years.

"Stressors"

- Genetic predisposition
- Prenatal Stress
- Health Events (Childhood Cancer, Congenital Heart Defects, etc.)
- Trauma (Car Accidents, NAT, etc.)
- Poor Diet
- Environmental Toxins

Multiple ACE Studies has shown conclusively that more exposure to ACEs lead to higher incidences of heart disease, cancer, chronic bronchitis and poor self-rated health in adulthood.

CNS Changes from Chronic Pediatric Stress

Sympathetic vs. Parasympathetic activity:

• Dysregulation in the central nervous system can lead to heightened "fight-or-flight" responses.

CNS Changes:

- Maladaptive Neuroplasticity
- "Limbic Lock and Load Mode" Anrig and Plaugher
- Sustained amygdala (Processing Emotions) stimulation and growth
- Decreased size of the frontal cortex (social skills, higher thought) and hippocampus (learning and memory)

Overview of Developmental Disorders

Autism
Spectrum
Disorder (ASD)

Attention Deficit
Hyperactivity
Disorder (ADHD)

Sensory
Processing
Disorder (SPD)

Attention Deficit Hyperactivity Disorder

Prevalence:

About 11% of school-aged children in the U.S.

Diagnosis:

- Symptoms must be present for at least 6 months in more than one setting (e.g., home, school).
- Three Classifications: Inattentive, Hyperactive Impulsive, Combined

Brain Structure Differences:

Frontal lobes 10% smaller, affecting decision-making and impulse control.

Important Clinical Signs:

- Inattention (dislikes tasks with sustained attention)
- Hyperactivity (fidgets, taps, or squirms)
- Impulsivity (can't wait their turn or acts without thinking)
- Dysregulation of behavior and emotions (adapting to changes in routine)
- Academic and cognitive challenges (needs frequent redirection)

ADHD Management

Maladaptive Neuroplasticity

Subluxation Considerations

- ADHD affects the **nervous system** and the **sympathetic system** (fight-or-flight state).
- Chiropractic care aims to **balance the parasympathetic system**, targeting C0–C5 and the sacrum, addressing **retained primitive reflexes** (Moro, Galant).

Prognosis

- No cure, but symptoms may improve with age.
- Early diagnosis and combined **therapy** (behavioral, psychological, chiropractic) help improve outcomes.
- Untreated ADHD may lead to higher school dropout rates, job dissatisfaction, and substance abuse.

Autism Spectrum Disorder

Core symptoms:

- social communication/interaction difficulties
- restricted/repetitive behaviors.

Diagnosed based on the DSM-V system of three support levels:

- Level 1: Requires support.
- Level 2: Requires substantial support.
- Level 3: Requires very substantial support.

Prevalence:

1 in 54 children (CDC 2020).

Co-occurring conditions:

ADHD, anxiety, sleep disorders, seizures, gastrointestinal issues.

ASD Signs

Early Signs of Autism:

- Decline in eye contact by 2-6 months of age.
- Difficulty responding to name by 12 months.
- Abnormal motor development, such as delayed or atypical crawling and rolling over.

Sensory Processing in ASD:

Hyper or hypo-reactivity to sensory stimuli (e.g., indifference to pain, fascination with lights).

Theories and Research:

- Polyvagal theory: ASD linked to a dysregulated vagal system, shifting the child into a chronic state of distress.
- New research includes the use of eye-tracking technology for early diagnosis, especially in high-risk infants.

Sensory Processing Disorder

Definition:

 SPD is a neurological condition where the brain struggles to properly process sensory information from the environment, leading to abnormal responses to sensory input.

Prevalence:

Affects approximately 1 in 20 to 1 in 6.25 children in the U.S. population

Diagnosed:

Via clinical observation and questionnaires

Types of SPD and Clinical Signs

Sensory Over-Responsivity (SOR)

- Easily over stimulated
- Bigger than expected reactions to sounds and lights
- Emotional outbursts (Meltdowns) when over stimulated

Sensory Under-Responsivity (SUR)

- Seemingly unaware to stimulus occurring like a ringing doorbell
- Clumsy or uncoordinated
- Does not react to pain appropriately

Sensory Seeking (SS):

- Constantly touching people or objects
- Frequently talks to themselves for auditory

Management - Overview

Chiropractic adjustments:

Critical

Multimodal Approach

Proper management WILL necessitate a team.

Progress Expectations:

- Progress may be slow initially, with some regression before improvement.
- Neurologic reorganization often shows delayed but sudden improvements after several months.
- Explain potential regression (e.g., temper tantrums, sleep issues) to parents to prepare them for early stages of treatment.

Team Approach (Three Ps):

- Practitioner, parents, and patient must work together.
- Tailor care recommendations to the family's comfort level to maximize compliance (e.g., starting with small dietary changes, manageable chiropractic schedules).

Chiropractic Care

Adjusting Considerations:

- Cervical proprioceptive signals, especially from the upper cervical spine, play a critical role in postural reflexes and sensory input for balance and spatial orientation.
- Upper cervical adjustments are also crucial due to their role in parasympathetic regulation.
- Focus on improving vestibular and proprioceptive integration via cervical spine adjustments.

Complementary Techniques:

 Cranial sacral therapy and myofascial release can enhance overall sensory and motor function.

A "less is more" approach is recommended to avoid metabolic overload in the CNS.

Additional Management Points

Patience and Flexibility

Childhood Experiences:

- Research shows positive childhood experiences and combat ACEs
- Particularly Safe, Stable, and Nurturing Relationships

Multi-Pronged Management Approach:

- Nutritional/Dietary considerations: Focus on improving diet, addressing sensitivities (e.g., dairy, gluten).
- Gastrointestinal health: Evaluate for issues like food intolerances.
- Environmental considerations: Minimize toxins and allergens.
- Sensory and neurorehabilitative-based exercises: Support sensory processing and neurodevelopment.

Cases

12 Months (1 year)

Social/Emotional

 Plays games with you, like pat-a-cake

Communication

- Waves "bye-bye"
- Calls a parent "mama" or "dada" or another special name
- Understands "no"
 (pauses briefly or stops when you say it)

Cognitive

- Puts something in a container, like a block in a cup
- Looks for things he sees you hide, like a toy under a blanket

- Pulls up to stand
- Walks, holding on to furniture
- Drinks from a cup without a lid, as you hold it
- Picks things up between thumb and pointer finger, like small bits of food

15 Months

Social/Emotional

- Copies other children while playing, like taking toys out of a container when another child does
- Shows you an object she likes
- Claps when excited
- Hugs stuffed doll or other toy
- Shows you affection (hugs, cuddles, or kisses you)

Communication

- Tries to say one or two words besides "mama" or "dada," like "ba" for ball or "da" for dog
- Looks at a familiar object when you name it
- Follows directions given with both a gesture and words. For example, he gives you a toy when you hold out your hand and say, "Give me the toy."
- Points to ask for something or to get help

Cognitive

- Tries to use things the right way, like a phone, cup, or book
- Stacks at least two small objects, like blocks

- Takes a few steps on their own
- Uses fingers to feed herself some food

18 Months

Social/Emotional

- Moves away from you, but looks to make sure you are close by
- Points to show you something interesting
- Puts hands out for you to wash them
- Looks at a few pages in a book with you
- Helps you dress him by pushing arm through sleeve or lifting up foot

Communication

- Tries to say three or more words besides "mama" or "dada"
- Follows one-step directions without any gestures, like giving you the toy when you say, "Give it to me."

Cognitive

- Copies you doing chores, like sweeping with a broom
- Plays with toys in a simple way, like pushing a toy car

- Walks without holding on to anyone or anything
- Scribbles
- Drinks from a cup without a lid and may spill sometimes
- Feeds herself with her fingers
- Tries to use a spoon
- Climbs on and off a couch or chair without help

Ella

In a small group, discuss:

- Red flags?
- Milestone concerns
- Management or referrals

Age: 15 months

Presenting Concern:

• Ella's parents are concerned that she is not walking independently or pulling to stand. She also does not crawl much but prefers to scoot on her bottom.

Developmental History:

- **Gross Motor**: Sat independently at 9 months, bottom scooting began at 12 months, does not pull to stand, not walking independently, rarely crawls.
- Fine Motor: Can grasp objects and pass them from one hand to another. Eats finger foods but struggles with using a spoon.
- Language: Babbles and says a few words like "mama" and "dada."
- Social: Engages well with parents and other children, smiles and makes eye contact.

Clinical Examination:

- Posture: Mild asymmetry in hip alignment, with slight preference to bear weight on the right leg.
- Muscle Tone: Generalized low muscle tone, especially in the legs.
- Reflexes: Normal for age.
- Gait: Unable to stand or walk independently. Can stand when assisted but shows poor balance.
- **Spinal Alignment**: Palpation reveals restricted motion and mild tenderness at the sacral and lower lumbar regions.

Parents report that Ella seems content sitting and scooting but lacks motivation to move around.

30 Months (2½ Years)

Social/Emotional

- Plays next to other children and sometimes plays with them
- Shows you what she can do by saying, "Look at me!"
- Follows simple routines when told, like helping to pick up toys when you say, "It's clean-up time."

Communication

- Says about 50 words
- Says two or more words together, with one action word, like "Doggie run"
- Names things in a book when you point and ask, "What is this?"
- Says words like "I," "me," or "we"

Cognitive

- Uses things to pretend, like feeding a block to a doll as if it were food
- Shows simple problemsolving skills, like standing on a small stool to reach something
- Follows two-step instructions like "Put the toy down and close the door."
- Shows he knows at least one color, like pointing to a red crayon when you ask, "Which one is red?"

- Uses hands to twist things, like turning doorknobs or unscrewing lids
- Takes some clothes off by himself, like loose pants or an open jacket
- Jumps off the ground with both feet
- Turns book pages, one at a time, when you read to her

3 Years (36 Months)

Social/Emotional

- Calms down within 10 minutes after you leave her, like at a childcare drop off
- Notices other children and joins them to play

Communication

- Talks with you in conversation using at least two back-and-forth exchanges
- Asks "who," "what," "where," or "why" questions, like "Where is mommy/daddy?"
- Says what action is happening in a picture or book when asked, like "running," "eating," or "playing"
- Says first name, when asked
- Talks well enough for others to understand, most of the time

Cognitive

- Draws a circle, when you show him how
- Avoids touching hot objects, like a stove, when you warn her

- Strings items together, like large beads or macaroni
- Puts on some clothes by himself, like loose pants or a jacket
- Uses a fork

4 Years

Social/Emotional

- Pretends to be something else during play (teacher, superhero, dog)
- Asks to go play with children if none are around, like "Can I play with Alex?"
- Comforts others who are hurt or sad, like hugging a crying friend
- Avoids danger, like not jumping from tall heights at the playground
- Likes to be a "helper"
- Changes behavior based on where she is (place of worship, library, playground)

Communication

- Says sentences with four or more words
- Says some words from a song, story, or nursery rhyme
- Talks about at least one thing that happened during his day, like "I played soccer."
- Answers simple questions like "What is a coat for?" or "What is a crayon for?"

Cognitive

- Names a few colors of items
- Tells what comes next in a well-known story
- Draws a person with three or more body parts

- Catches a large ball most of the time
- Serves himself food or pours water, with adult supervision
- Unbuttons some buttons
- Holds crayon or pencil between fingers and thumb (not a fist)

In a small group, discuss:

- Red flags?
- Milestone concerns
- Management or referrals

Lucas

Age: 3 1/2 years

Presenting Concern:

• Lucas's parents are concerned that he does not interact with other children at daycare and struggles to express emotions. He avoids eye contact, prefers to play alone, and has frequent emotional outbursts when routines change.

Developmental History:

- Social-Emotional: Lucas rarely engages in social play, avoids group activities, and doesn't seem to understand or express
 emotions effectively. He has difficulty interpreting others' emotions and often becomes upset when others try to join his
 play.
- Language: Limited vocabulary for his age, mostly uses single words, and struggles to form complete sentences.
- Motor Skills: Gross and fine motor milestones are within normal limits (walking, running, using utensils).
- Parental Concern: Parents report difficulty engaging him in conversations and a lack of interest in social activities.

Clinical Examination:

- **Behavior**: Avoids direct eye contact during exam, clings to his mother, and is visibly anxious when asked to engage with you.
- **Social Interaction**: Appears withdrawn and does not seek or respond to social cues from others.
- **Emotional Response**: Frustration if routines changed or when expectations are not clearly defined, leading to meltdowns.
- Language: Speech is minimal, and he avoids engaging in back-and-forth conversations.

18 Months

Social/Emotional

- Moves away from you, but looks to make sure you are close by
- Points to show you something interesting
- Puts hands out for you to wash them
- Looks at a few pages in a book with you
- Helps you dress him by pushing arm through sleeve or lifting up foot

Communication

- Tries to say three or more words besides "mama" or "dada"
- Follows one-step directions without any gestures, like giving you the toy when you say, "Give it to me."

Cognitive

- Copies you doing chores, like sweeping with a broom
- Plays with toys in a simple way, like pushing a toy car

- Walks without holding on to anyone or anything
- Scribbles
- Drinks from a cup without a lid and may spill sometimes
- Feeds herself with her fingers
- Tries to use a spoon
- Climbs on and off a couch or chair without help

2 Years (24 Months)

Social/Emotional

- Notices when others are hurt or upset, like pausing or looking sad when someone is crying
- Looks at your face to see how to react in a new situation

Communication

- Points to things in a book when you ask, like "Where is the bear?"
- Says at least two words together, like "More milk."
- Points to at least two body parts when you ask him to show you
- Uses more gestures than just waving and pointing, like blowing a kiss or nodding yes

Cognitive

- Holds something in one hand while using the other hand; for example, holding a container and taking the lid off
- Tries to use switches, knobs, or buttons on a toy
- Plays with more than one toy at the same time, like putting toy food on a toy plate

- Kicks a ball
- Runs
- Walks (not climbs) up a few stairs with or without help
- Eats with a spoon

30 Months (2½ Years)

Social/Emotional

- Plays next to other children and sometimes plays with them
- Shows you what she can do by saying, "Look at me!"
- Follows simple routines when told, like helping to pick up toys when you say, "It's clean-up time."

Communication

- Says about 50 words
- Says two or more words together, with one action word, like "Doggie run"
- Names things in a book when you point and ask, "What is this?"
- Says words like "I," "me," or "we"

Cognitive

- Uses things to pretend, like feeding a block to a doll as if it were food
- Shows simple problemsolving skills, like standing on a small stool to reach something
- Follows two-step instructions like "Put the toy down and close the door."
- Shows he knows at least one color, like pointing to a red crayon when you ask, "Which one is red?"

- Uses hands to twist things, like turning doorknobs or unscrewing lids
- Takes some clothes off by himself, like loose pants or an open jacket
- Jumps off the ground with both feet
- Turns book pages, one at a time, when you read to her

In a small group, discuss:

- Red flags?
- Milestone concerns
- Management or referrals

Sophia

Age: 24 months

Presenting Concern: Routine wellness visit; parents have no concerns about Sophia's development.

Developmental History:

- Gross Motor: Sophia started walking independently at 13 months
- **Fine Motor**: She can stack 4-5 blocks, turn pages in a book, and use utensils to feed herself. Sophia enjoys attempting to put on her shoes.
- Language: Sophia has a vocabulary of about 100 words and uses two-word phrases, such as "want juice" or "big truck."
- Social-Emotional: Sophia enjoys playing with other children and participates in pretend play, such as feeding her dolls or playing "kitchen." She makes good eye contact, smiles at familiar people, and enjoys taking turns in simple games.
- Cognitive: Sophia can point to body parts when asked, recognizes familiar objects and people in photos, and can identify simple shapes and colors. She enjoys exploring her environment and solving simple puzzles.

Clinical Examination:

• NAD

3 Years (36 Months)

Social/Emotional

- Calms down within 10 minutes after you leave her, like at a childcare drop off
- Notices other children and joins them to play

Communication

- Talks with you in conversation using at least two back-and-forth exchanges
- Asks "who," "what," "where," or "why" questions, like "Where is mommy/daddy?"
- Says what action is happening in a picture or book when asked, like "running," "eating," or "playing"
- Says first name, when asked
- Talks well enough for others to understand, most of the time

Cognitive

- Draws a circle, when you show him how
- Avoids touching hot objects, like a stove, when you warn her

- Strings items together, like large beads or macaroni
- Puts on some clothes by himself, like loose pants or a jacket
- Uses a fork

4 Years

Social/Emotional

- Pretends to be something else during play (teacher, superhero, dog)
- Asks to go play with children if none are around, like "Can I play with Alex?"
- Comforts others who are hurt or sad, like hugging a crying friend
- Avoids danger, like not jumping from tall heights at the playground
- Likes to be a "helper"
- Changes behavior based on where she is (place of worship, library, playground)

Communication

- Says sentences with four or more words
- Says some words from a song, story, or nursery rhyme
- Talks about at least one thing that happened during his day, like "I played soccer."
- Answers simple questions like "What is a coat for?" or "What is a crayon for?"

Cognitive

- Names a few colors of items
- Tells what comes next in a well-known story
- Draws a person with three or more body parts

- Catches a large ball most of the time
- Serves himself food or pours water, with adult supervision
- Unbuttons some buttons
- Holds crayon or pencil between fingers and thumb (not a fist)

5 Years

Social/Emotional

- Follows rules or takes turns when playing games with other children
- Sings, dances, or acts for you
- Does simple chores at home, like matching socks or clearing the table after eating

Communication

- Tells a story she heard or made up with at least two events. For example, a cat was stuck in a tree and a firefighter saved it
- Answers simple questions about a book or story after you read or tell it to him
- Keeps a conversation going with more than three backand-forth exchanges
- Uses or recognizes simple rhymes (bat-cat, ball-tall)

Cognitive

- Counts to 10
- Names some numbers between 1 and 5 when you point to them
- Uses words about time, like "yesterday," "tomorrow," "morning," or "night"
- Pays attention for 5 to 10 minutes during activities. For example, during story time or making arts and crafts (screen time does not count)
- Writes some letters in her name
- Names some letters when you point to them

- Buttons some buttons
- Hops on one foot

Ethan

In a small group, discuss:

- Red flags?
- Milestone concerns
- Management or referrals

Age: 4 years

Presenting Concern: Ethan's parents are concerned that he is having trouble with problem-solving tasks and seems behind in recognizing shapes, colors, and letters compared to other children his age. He struggles to follow multi-step instructions and does not seem interested in exploring new activities or toys.

Developmental History:

- Cognitive: Difficulty with basic problem-solving tasks (e.g., puzzles). Limited curiosity about environment. Struggles to recognize shapes, letters, and numbers.
- Language: Can speak in simple sentences but struggles to describe objects or express ideas clearly.
- Motor Skills: Gross and fine motor skills are generally on track, though Ethan has difficulty manipulating smaller objects (e.g., using crayons, stacking small blocks).
- **Social-Emotional**: Prefers solitary play and does not engage as much in imaginative play with peers.

Clinical Examination:

- Attention and Focus: Ethan has difficulty focusing on tasks over a few minutes. He frequently abandons activities before completion and shows little interest in new toys.
- Problem-Solving: Struggles to match objects by color or shape. Often needs help or becomes frustrated when asked to complete simple problem-solving tasks.
- Cognitive Engagement: Appears uninterested in learning new concepts and does not seem motivated to engage in activities that involve cognitive challenges.
- Motor Skills: Mild difficulty with fine motor tasks such as drawing or threading beads, but gross motor skills (e.g., running, jumping) are within normal limits.

18 Months

Social/Emotional

- Moves away from you, but looks to make sure you are close by
- Points to show you something interesting
- Puts hands out for you to wash them
- Looks at a few pages in a book with you
- Helps you dress him by pushing arm through sleeve or lifting up foot

Communication

- Tries to say three or more words besides "mama" or "dada"
- Follows one-step directions without any gestures, like giving you the toy when you say, "Give it to me."

Cognitive

- Copies you doing chores, like sweeping with a broom
- Plays with toys in a simple way, like pushing a toy car

- Walks without holding on to anyone or anything
- Scribbles
- Drinks from a cup without a lid and may spill sometimes
- Feeds herself with her fingers
- Tries to use a spoon
- Climbs on and off a couch or chair without help

2 Years (24 Months)

Social/Emotional

- Notices when others are hurt or upset, like pausing or looking sad when someone is crying
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Communication

- Points to things in a book when you ask, like "Where is the bear?"
- Says at least two words together, like "More milk."
- Points to at least two body parts when you ask him to show you
- Uses more gestures than just waving and pointing, like blowing a kiss or nodding yes

Cognitive

- Holds something in one hand while using the other hand; for example, holding a container and taking the lid off
- Tries to use switches, knobs, or buttons on a toy
- Plays with more than one toy at the same time, like putting toy food on a toy plate

- Kicks a ball
- Runs
- Walks (not climbs) up a few stairs with or without help
- Eats with a spoon

30 Months (2½ Years)

Social/Emotional

- Plays next to other children and sometimes plays with them
- Shows you what she can do by saying, "Look at me!"
- Follows simple routines when told, like helping to pick up toys when you say, "It's clean-up time."

Communication

- Says about 50 words
- Says two or more words together, with one action word, like "Doggie run"
- Names things in a book when you point and ask, "What is this?"
- Says words like "I," "me," or "we"

Cognitive

- Uses things to pretend, like feeding a block to a doll as if it were food
- Shows simple problemsolving skills, like standing on a small stool to reach something
- Follows two-step instructions like "Put the toy down and close the door."
- Shows he knows at least one color, like pointing to a red crayon when you ask, "Which one is red?"

- Uses hands to twist things, like turning doorknobs or unscrewing lids
- Takes some clothes off by himself, like loose pants or an open jacket
- Jumps off the ground with both feet
- Turns book pages, one at a time, when you read to her



In a small group, discuss:

- Red flags?
- Milestone concerns
- Management or referrals

Age: 2.5 years (30 months)

Presenting Concern: Ava's parents are concerned that she is not speaking in full sentences and is difficult to understand. She uses single words like "juice" or "ball" but does not combine words or use simple sentences. Ava also struggles to follow verbal instructions and often seems frustrated when trying to communicate.

Developmental History:

- Cognitive: Enjoys playing with busy board.
- Language: Limited vocabulary of about 10-15 single words. No two-word combinations or sentences. Difficulty following simple commands (e.g., "Put the toy on the table")
- Social-Emotional: Engages in play with parents and peers but often avoids verbal communication. Shows frustration when others don't understand her.
- Motor Skills: Gross and fine motor development is typical for her age (walking, climbing stairs, using utensils).

Clinical Examination:

- **Verbal Communication**: Ava responds with single words but does not string them together into simple sentences. She does not seem to attempt back-and-forth conversation, instead using gestures or pointing to indicate needs.
- Receptive Language: Struggles to follow basic instructions (e.g., "Give me the ball" or "Come here and sit down"). Often needs visual cues or repetition to respond correctly.
- Expressive Language: Ava's speech is difficult for unfamiliar adults to understand, and she frequently becomes upset when unable to make herselfunderstood.
- Social Interaction: Ava engages well in nonverbal play but avoids engaging verbally with other children, preferring solitary activities like building with blocks or watching others play.

Sources

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