









Good reference Apps



Pathways.org App or CDC milestone tracker

Try CDC's FREE Milestone Tracker app today...
Because milestones matter!

-  Illustrated milestone checklists for 2 months through 5 years
-  Summary of your child's milestones to share
-  Activities to help your child's development
-  Tips for what to do if you become concerned
-  Reminders for appointments and developmental screening



cdc.gov/MilestoneTracker



Now available in Spanish!

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Child Development and You

About Me

- Pediatrician with Rush Copley Medical Group – Peds Ridge Office
- Volunteer Medical Director for Mooseheart Child City
- Chair of Emergency Department Accredited for Pediatrics Committee at Rush Copley
- Vice-Chair of Rush Copley Department of Pediatrics
- Former Chief of Staff and Chair of Pediatrics, Mercy Medical Center
- Special interests include
 - Medically Complex/Special Needs Children
 - Foster and DCFS cases
 - Child Advocacy

Baby Michael



Topics

- Foster Care and Health
- Brain Development
 - Video (brain development)
 - General
 - Adolescent
- Harms to the Developing Brain
- Developmental Milestones
 - General
 - Infant
 - Toddlers
 - Preschool
 - Middle childhood
 - Young Teen
 - Teen

Foster Children and Health

- American Academy of Pediatrics (AAP) classifies children in foster care as a population of children with special health care needs

Health

- includes medical, mental health, developmental, educational, oral, and psychosocial well-being

Health Risks

- More than 70% of kids in foster care have history of child abuse and/or neglect
- more than 80% have been exposed to significant levels of violence
- experienced multiple caregivers, limiting their ability to form a stable attachment to a nurturing caregiver
- Removal is emotionally traumatizing for almost all children although for some, it is the first time they may feel safe.

Health Care Issues for Children and Adolescents in Foster Care and Kinship Care

COUNCIL ON FOSTER CARE, ADOPTION, AND KINSHIP CARE, COMMITTEE ON ADOLESCENCE, and COUNCIL ON EARLY CHILDHOOD

Pediatrics Oct 2015, 136 (4) e1131-e1140; DOI: 10.1542/peds.2015-265

Health on Arrival

- 30% to 80% enter foster care with at least 1 medical problem
- 1/3 have a chronic medical condition
- Problems often undiagnosed and untreated before arrival
- Up to 80% enter with a significant mental health need
- almost 40% have significant oral health issues
- approx 60% of <5 year olds have developmental issues
- more than 40% of school-aged children have educational difficulties

Brain Development

<https://www.firstthingsfirst.org/early-childhood-matters/brain-development/>

The Growing Brain

4 minutes

Brain Development

- 90% of a child's brain develops during the first three years
 - Infant's brain is wired to make infinite connections between brain cells
 - by age three the brain has
 - billions of cells
 - hundreds of trillions of connections
 - connections are critical for establishing positive developmental strides
- Rapid brain development occurs in the first 5 years of life
- All structures and building blocks present by age 9
- Brain development is not complete until the late 20s

<https://www.kidshealth.org.nz/adolescent-brain-development>

https://www.huffpost.com/entry/the-importance-early-brain-development_b_4696877

Making Connections – what babies need

- Daily, repeated positive experiences with caregivers
- engage in baby talk conversations
- play activities with toddlers
 - peek-a-boo,
 - banging on pots and pans,
 - filling a box or bucket with objects to dump and fill again,
 - they're helping the development of learning through trial and error.

Adolescent Brain Development

Adolescent Brain Development

- **How does the brain develop?**
- The brain is thought to develop and connect functionally in stages.
- The emotional areas of the brain (the limbic system) are present at birth, but
- regulation of emotions moves from being more of a shared responsibility (with parents) in childhood, to an individual responsibility in adolescence. This process requires new connections to be formed between the cortical or higher level thinking and the emotional areas of the brain. It also leads to adult level decision making, planning and thinking.

<https://www.kidshealth.org.nz/adolescent-brain-development>

Which part of their brain do teenagers use most of the time?

- teens 'think with their feelings'.
- When adults and teens look at faces showing different emotions, the part of their brains that light up are different.
- Adults use their prefrontal cortex to look at faces and try to decide what emotion is happening.
- Teenagers use their amygdala - they are using their emotions to try and understand emotion

How does it feel to run on emotions?

- Imagine you have lost your keys and you are already late for work.
- Think about how many times you look for the keys in the same place – 5, 10 even 20 times.
- You panic – you no longer think with your cortex, you are thinking with your emotions.
- Remember how it feels if someone tells you to calm down and think sensibly about when you last had them.
- That is how your teenager feels when they are running on their emotions because their brain hasn't developed that linkage.

Misinterpretation of Emotions

- Often teens can misinterpret emotions and they see anger when in reality you are feeling anxious.
- This leads to many moments of **miscommunication**
- when talking to teens be careful to check what emotion they are seeing in you,
- always acknowledge their emotions first
- then help them to be able to think about what they are feeling

Birth to Adult

Harms to the Developing Brain

Harms to the developing brain

- if children experience any sort of abuse (verbal, emotional, physical, sexual or neglect)
 - it can affect how the brain is wired and functions.
 - it is very important to protect children throughout their development
 - Very important to protect at times of peak brain development
 - during pregnancy
 - first 5 years of life
 - second phase of brain development around puberty

Harms to the developing brain

- Alcohol and drugs (such as methamphetamine, marijuana) can be poisonous to the developing brain, particularly during pregnancy and adolescence.
- Alcohol, drug use, huffing, etc during Adolescence can affect memory and organization
- Brain injury
 - Concussions
 - Abuse
 - Asphyxia

Is it time for the fun stuff yet?



Developmental Milestones

Social Emotional

Language Communication

Developmental
Milestones

Cognitive

Movement
Physical Development



Infants (0-1)

- Social-Emotional
 - developing bonds of love and trust with their parents
 - The way parents cuddle, hold, and play with their baby will set the basis for how they will interact with them and others
- Language-Communication
 - making sounds (“babble”), saying “ma-ma” and “da-da”.
 - Listening, understanding, and knowing the names of people and things
- Cognitive (learning, thinking, problem solving)
- Movement-Physical Development
 - crawling, walking ,focus their vision,

Toddlers (1-2)

- Social-Emotional
 - show greater independence; begin to show defiant behavior; recognize themselves in pictures or a mirror; and imitate the behavior of others
- Language-Communication
 - recognize the names of familiar people and objects, form simple phrases and sentences, and follow simple instructions and directions.
- Cognitive (learning, thinking, problem solving)
- Movement-Physical Development
 - moving around more, and are aware of themselves and their surroundings. Their desire to explore new objects and people also is increasing

Video - 6mo motor development

- <https://pathways.org/watch/6-month-old-typical-atypical-motor-development-side-side-comparison/#.Xn1tswDYO1o.email>

Prematurity

Adjustment of Milestones for Prematurity

- Full term pregnancy average 40 weeks
- Ranging from 38 to 42 weeks
- If born at or before 36 weeks should have milestones age adjusted
- Adjust until the child reaches age 2 years

Prematurity (12% of infants)

- extremely premature – from 23-28 weeks
 - very premature – 28-32 weeks
 - moderately premature – 32-34 weeks
 - late preterm – 34-37 weeks.
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- <https://www.chop.edu/conditions-diseases/prematurity>

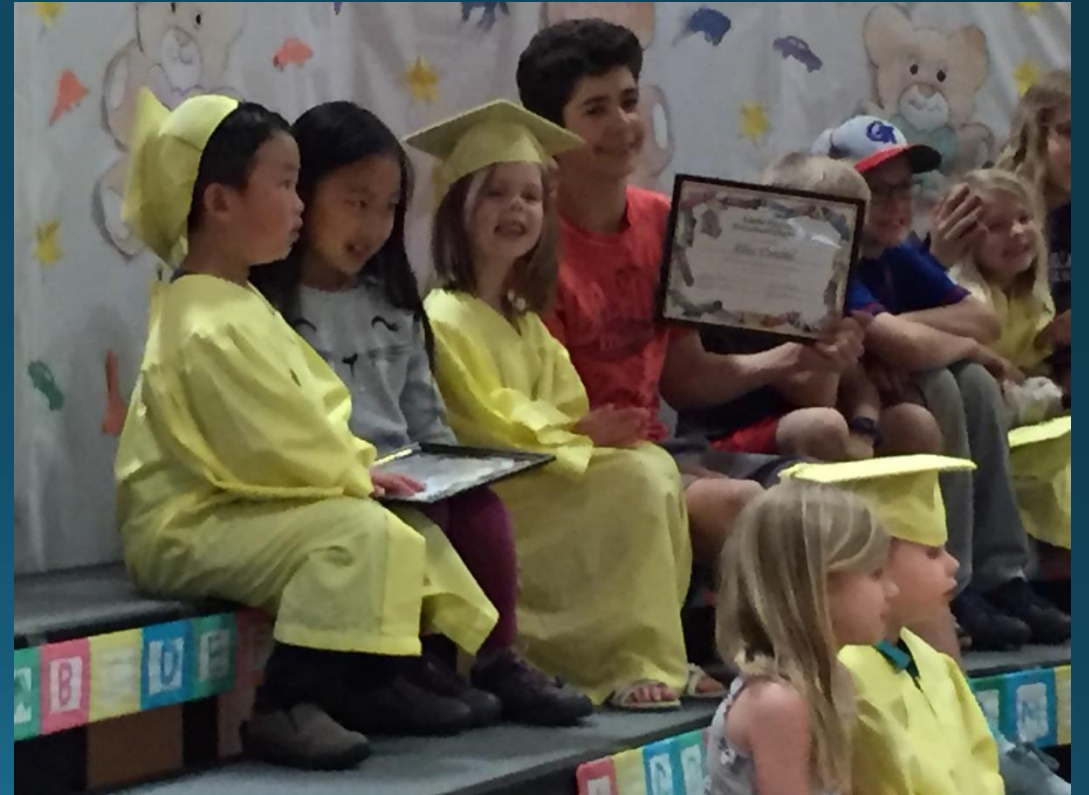
Toddlers (2-3)

- Social-Emotional
 - taking turns, playing make believe,
 - imitate the actions of adults and playmates,
 - express a wide range of emotions
- Language-Communication
- Cognitive (learning, thinking, problem solving)
 - follow two- or three-step directions,
 - sort objects by shape and color,
- Movement-Physical Development
 - kicking a ball

Video - Speech and Language Toddlers

- Speech and language toddler talking tips 0 - 1:39, 4:30
- [19-24 Months | Toddler Development Videos | Pathways.org](#)

Preschoolers



Preschoolers (3-5)

- Social-Emotional
 - showing affection
 - play with other children
- Language-Communication
 - recall part of a story, and sing a song
- Cognitive (learning, thinking, problem solving)
 - naming colors
 - notice a difference between girls and boys
- Movement-Physical Development
 - hopping on one foot
 - ride a tricycle,
 - use safety scissors
 - help to dress and undress themselves



Age/Developmentally appropriate injuries

You are not going to believe this!

Middle Childhood



Middle Childhood (6-8)

- Social-Emotional
 - Show more independence from parents and family.
 - critical time for children to develop confidence in all areas of life
 - Start to think about the future.
 - Understand more about his or her place in the world.
 - Pay more attention to friendships and teamwork.
 - Want to be liked and accepted by friends.
- Language-Communication
- Cognitive (learning, thinking, problem solving)
 - Show rapid development of mental skills.
 - Learn better ways to describe experiences and talk about thoughts and feelings.
 - Have less focus on one's self and more concern for others.
- Movement-Physical Development



Middle Childhood (9-11)

- Social-Emotional
 - forms stronger, more complex friendships and peer relationships.
 - It becomes more emotionally important to have friends, esp of the same sex.
 - Experience more peer pressure.
 - Become more aware of his or her body as puberty approaches.
 - Body image and eating problems sometimes start around this age
- Language-Communication
- Cognitive (learning, thinking, problem solving)
 - Face more academic challenges at school.
 - Become more independent from the family.
 - Begin to see the point of view of others more clearly.
 - Have an increased attention span.
- Movement-Physical Development

Young teens



Young Teens (12-14)

- Social-Emotional
 - Show more concern about body image, looks, and clothes.
 - Focus on themselves; going back and forth between high expectations and lack of confidence.
 - Experience more moodiness.
 - Show more interest in and influence by peer group.
 - Express less affection toward parents; sometimes might seem rude or short-tempered.
 - Feel stress from more challenging school work.
 - Develop eating problems.
 - Feel a lot of sadness or depression, which can lead to poor grades at school, alcohol or drug use, unsafe sex, and other problems
- Language-Communication
- Cognitive (learning, thinking, problem solving) Children in this age group might:
 - Have more ability for complex thought.
 - Be better able to express feelings through talking.
 - Develop a stronger sense of right and wrong.
- Movement-Physical Development

Teenagers



Teenagers (15-17)

- Social-Emotional
 - Have more interest in romantic relationships and sexuality.
 - Show more independence from parents.
 - Have a deeper capacity for caring and sharing and for developing more intimate relationships.
 - Spend less time with parents and more time with friends.
 - Feel a lot of sadness or depression, which can lead to poor grades at school, alcohol or drug use, unsafe sex, and other problems
- Language-Communication
- Cognitive (learning, thinking, problem solving)
 - Learn more defined work habits.
 - Show more concern about future school and work plans.
 - Be better able to give reasons for their own choices, including about what is right or wrong.
- Movement-Physical Development

Autism

Symptoms of Autism

- challenges with social skills
- repetitive behaviors
- speech
- nonverbal communication

- autism affects an estimated 1 in 44 children in the United States today
- Signs of autism usually appear by age 2 or 3

Video: Kennedy Krieger institute: neurotypical vs asd

<https://www.youtube.com/watch?v=YtvP5A5OHpU>

What you can do

- Know what's normal
- Model developmentally supportive behavior
- Remember repeated exposure and repeating activities makes brain connections. (Practice makes perfect)
- Recognize risk factors for delays (prematurity, neglect, abuse, medical conditions)
- Refer if any suspicion of delays
- Refer if any concern for autism
- Be suspicious if injuries do not match the development and refer



Any Questions?

Thank you for your dedication to
helping our children



Additional videos for reference

- Milestones in action
<https://www.cdc.gov/ncbddd/actearly/milestones/milestones-in-action.html>
- Kennedy Krieger institute nl vs asd
<https://www.youtube.com/watch?v=YtvP5A5OHpU>
- Pathways <https://pathways.org/videos/>
- [10 Early Signs of Autism \(UPDATED\) - YouTube](#)