



The First Years Last Forever

The New Brain Research
and Your Child's
Healthy Development

THE FIRST YEARS LAST FOREVER

As a mother feeds her child, she gazes lovingly into his eyes. A father talks gently to his newborn daughter as he changes her diaper. A caregiver sings a child to sleep.

These everyday moments, these simple, loving encounters, provide essential nourishment. Just as their bodies need food to grow, science now tells us that the positive emotional, physical, and intellectual experiences that a baby has in the earliest years are equally necessary for the growth of a healthy brain.

At birth, the infant's brain has 100 billion nerve cells, or neurons. These neurons will grow and connect with other neurons in systems that control various functions like seeing, hearing, moving, and expressing emotion. These systems, activated by repeated experiences, provide the foundation for the brain's organization and functioning throughout life. The absence of appropriate activation results in the lack of development or the disappearance of these connections.

Why should parents and caregivers know about brain development?

The brain is the part of the body that allows us to feel joy or despair, to respond to others in a loving or angry way, to use reason or simply to react. These capacities don't just magically appear—they result from the interplay between a child's heredity and the experiences he or she has during childhood.

At birth, the brain is remarkably unfinished. The parts of the brain that handle thinking and remembering, as well as emotional and social behavior, are very underdeveloped. The fact that the brain matures in the world, rather than in the womb, means that young children are deeply affected by their early experiences. Their relationships with parents and other important caregivers, the sights, sounds, smells, and feelings they experience, the challenges they meet—these don't just influence their moods. These experiences actually affect the way children's brains become “wired.”

In other words, early experiences help to determine brain structure, thus shaping the way people learn, think, and behave for the rest of their lives.

Principles of Brain Development

- The outside world shapes the brain’s wiring.
- The outside world is experienced through the senses—seeing, hearing, smelling, touching, and tasting—enabling the brain to create or modify connections.
- The brain operates on a “use it or lose it” principle.
- Relationships with other people early in life are the major source of development of the emotional and social parts of the brain.

How can parents and caregivers make a difference?

Families and caregivers have always known that they are important. The new research on brain development helps to explain why. It shows that children’s early attachments have a vital influence on their brain development, and that everyone who cares for young children—parents, family, friends, teachers, child care providers—can make a difference.

Essential to all of these efforts, of course, is a child’s basic health and safety. Children need to be well-nourished (with breast milk at first, if possible), and have regular check-ups and timely immunizations. A doctor or nurse should be consulted when children are ill, and the places where they spend time need to be safe and “child-proofed.” And when young children ride in cars, they should always be in the back seat and strapped securely into a car seat.

Research in brain development and school readiness suggests the following ten guidelines that can help parents and other caregivers raise healthy, happy children and confident, competent learners:

Promoting Young Children's Healthy Development and School Readiness: Ten Guidelines

- Be warm, loving, and responsive
- Respond to the child's cues and clues
- Talk, read, and sing to your child
- Establish routines and rituals
- Encourage safe exploration and play
- Make TV watching selective
- Use discipline as an opportunity to teach
- Recognize that each child is unique
- Choose quality child care and stay involved
- Take care of yourself

1. Be warm, loving, and responsive.

When children receive warm, responsive care, they are more likely to feel safe and secure with the adults who take care of them. Researchers call these strong relationships “secure attachments,” and they are the basis of all the child’s future relationships. We have always known that children thrive when they feel secure; now we know that children’s early attachments actually affect the way their brains work and grow.

If I just love my child, will that change her brain?

Not exactly. It is the expression of your love—touching, rocking, talking, smiling, singing—that affects how your young child’s brain is “wired” and helps to shape later learning and behavior. Children experience relationships through their senses. Babies experience the way you look into their eyes; they see the expressions on your face; they hear you cooing, singing, talking, and reading; they feel you holding or rocking them, and they take in your familiar smells. Touch is especially important; holding and stroking stimulates the brain to release important hormones necessary for growth.

Research on Attachment

- L. Alan Sroufe, Ph.D., and his colleagues at the University of Minnesota have found that children who receive warm and responsive caregiving and are securely attached to their caregivers cope with difficult times more easily when they are older. They are more curious, get along better with other children, and perform better in school than children who are less securely attached.

2. Respond to the child’s cues and clues.

Infants can’t use words to communicate their moods, preferences, or needs, but they send many signals to the adults who care for them. Among the cues and clues they send are the sounds they make, the way they move, their facial expressions, and the way they make (or avoid) eye contact. Children become securely attached when parents and other caregivers try to read these signals and respond with

sensitivity. They begin to trust that when they smile, someone will smile back; that when they are upset, someone will comfort them; that when they are hungry, someone will feed them. Parents who pay close attention to their children's needs for stimulation as well as quiet times help them form secure attachments.

But won't my newborn get spoiled with all of this attention?

You might think so, but studies show that newborns who are more quickly and warmly responded to when crying typically learn to cry much less and sleep more at night.

After all, newborns have just come from a warm, snug place where they could hear and feel the rhythmic beating of their mother's heart, and where they were never hungry or cold. Before birth, everything was regulated. After birth, when the baby is hungry, uncomfortable, or upset in his new environment, the brain's stress-response systems turn on and release stress hormones. The baby expresses his distress by crying. When the caregiver responds and provides food or warmth or comfort, the baby tends to be calmed. The stress-response systems in the brain are turned off and the infant's brain begins to create the networks of brain cells that help the baby learn to soothe himself.

You cannot spoil a newborn baby by responding to his needs.

Caregiving and the Stress Response

- Megan Gunnar, Ph.D., from the University of Minnesota has shown that by the end of the first year, children who have received consistent, warm, and responsive care produce less of the stress hormone cortisol, and when they do become upset, they turn off their stress reaction more quickly. This suggests that they are better equipped to respond to life's challenges.
- Bruce Perry, M.D., and his colleagues at Baylor College of Medicine have shown that infants and young children exposed to abuse and neglect are more likely to produce a strong stress response, even when exposed to minimal stress.

3. Talk, read, and sing to your child.

Making up stories about daily events, singing songs about the people and places they know, describing what is happening during daily routines—all of these “conversations” give your child a solid basis for later learning.

Why talk or read to infants before they can talk?

It may seem that very young children can't take in what you're saying, but in important ways they do. Infants don't yet grasp the meaning of words, but it is through these early “conversations” that language capacity grows. When babies hear you say words over and over, the parts of the brain that handle speech and language develop. The more language they hear in these conversations, the more those parts of the brain will grow and develop. Talking, singing, and reading to your child is not only important for brain development, but a wonderful opportunity for closeness with your child.

You can read picture books and stories to very young children, even to infants. By about six months, infants show their excitement by widening their eyes and moving their arms and legs when looking at a book with pictures of babies or other familiar objects.

Studies find that the way you read to children makes a difference. Read stories in a way that encourages older babies and toddlers to participate—by answering your questions, by pointing out what they see in a picture book, by telling you what they think will happen next in the story, and by repeating the rhymes and refrains. Telling the same stories and singing the same songs over and over may feel boring to you, but not to children. They learn through repetition. And that doesn't only apply to language.

4. Establish routines and rituals.

One toddler knows it is nap time because his mom sings a song and closes the curtains, as she always does. Another toddler knows it is nearly time for her dad to pick her up because her child care provider gives her juice and crackers. Daily routines and rituals associated with pleasurable feelings are reassuring for children, as caregivers have long known.

Repeated positive experiences, which form strong connections between neurons in the brain, provide children with a sense of security. They also help a child learn what to expect from his environment and how

to understand the world around him. Children who have safe and predictable interactions with others have also been found to do better in school later on.

5. Encourage safe exploration and play.

In the first months of life, the parents will be the child's whole world. Interactions between parent and child form the basis of all subsequent learning. As infants grow and are able to crawl and walk, they begin to explore the world beyond their caregivers. Parents should encourage this exploration, and be receptive when the child needs to return to them for security.

Play is equally important as a learning experience. While many of us think of learning as simply acquiring facts, children actually learn through playing. Just watch a toddler at play, and it is easy to see how much he or she is learning.

6. Make TV watching selective.

Television by itself can't teach an infant language, and it can't teach him how to communicate. Studies show that children who learn best in school have families who limit the amount of time they spend in front of the TV and are selective as to the kinds of shows they watch. Very young children are still learning about the difference between what is real and what is pretend. Some TV images strike them as delightful, but many other images can be confusing or even frightening.

Be selective and involved in your children's TV habits. Don't use TV as a baby-sitter. Whenever possible, sit and watch programs together with your child, and talk about what you are viewing.

7. Use discipline as an opportunity to teach.

As children grow, they become capable of even more exploration, discovery, and experimentation. In the process, they often experience more confusion and frustration. At times, their feelings can become very intense.

As children explore their ever-expanding world, they need limits and consistent, loving adult supervision. Studies reveal that the way in which adults provide discipline—which really means to teach—is crucial to their children's later development.

How can I discipline my young child?

Don't expect young children to do what you say all the time. Young children are normally impulsive and will hit, yell, or fall apart at times because their feelings of frustration and anger exceed their ability to control themselves. Helping them learn self-control is a long-term process. It is also normal for children to "test" a rule by breaking it. When you respond in a supportive, consistent way, you are helping your child to feel safe in the world.

Many approaches to setting limits can work, as long as they are intended to help and teach children, rather than to punish them. Keep these ideas in mind:

- Communicate to your child what needs to be done at that moment: "I know you're having fun at the park, but it's time to get ready to go now."
- Redirect your child's attention or activity by using neutral or positive language: "It's not OK to draw on the wall, but here is some paper you can use."
- Say no while maintaining love: "I love you, but I don't love what you're doing."
- Give the reason for your rule: "Don't run with scissors—you might fall and hurt yourself."
- Give limited tasks and be specific in your request: "Please pick up your stuffed animals" (instead of "Please clean up your room").
- Acknowledge children's feelings, but set limits: "I know you're angry, but no biting."
- Help children see how their actions affect others: "Your sister is upset because you pinched her. How would you feel if she hurt you?"
- Help children see how they can use their words to communicate their feelings: "Tell your brother you don't like it when he hits you."
- Acknowledge positive behavior: "You did a good job picking up your stuffed animals. Thank you."

NEVER HIT OR SHAKE YOUR CHILD. Brain research has shown that these forms of “discipline” can have long-term negative effects. Discipline is about learning, and the only things a child can learn from this kind of interaction are fear, humiliation, and rage. And they are far more likely to feel that violence is an acceptable way of reacting. Take a time out for yourself. Count to ten, or call a friend or relative for support. Do not harshly criticize and shame the child. Direct your comments to their behavior, not to who they are as people.

Disciplining your children will inevitably cause moments of disconnection, where they will feel upset by your disapproval. It is important for parents to repair this ruptured connection in order for a child to continue to feel loved and supported. If you feel you have overreacted or disciplined your child in a way that you wish you hadn't, you can tell him that you made a mistake and are sorry.

8. Recognize that each child is unique.

Children have different temperaments: One child is outgoing, while her brother is more bashful and slow to warm up. Children also grow at different rates. Their ideas and feelings about themselves reflect, in large measure, your attitude toward them.

How can I help my children feel good about themselves?

When children master the challenges of everyday life, they feel good about themselves, particularly when you acknowledge their accomplishments with specific praise: “You climbed those stairs all by yourself.” When children receive concrete praise, they begin to see the connections between their actions and your response. Parents who are sensitive to their particular child's cues and clues will have children with positive self-esteem.

9. Choose quality child care and stay involved.

Choosing a child care provider is one of the most important decisions families make. Research shows that high-quality child care and early education can boost children’s learning and social skills when they enter school. But it is often difficult to decide which programs are good enough.

What should we look for in a child care setting?

To make a good choice, visit and observe how providers respond and interact with the babies and children in their care. Seek a provider who responds warmly and responsively to the baby’s needs. Select someone who cares about children, is eager to learn about their development, and will give children individual attention and engage them in creative play and exploration. Find a setting that is clean and safe. Make sure that there are enough caregivers so that your child can get individualized attention. Carefully check the provider’s references.

After choosing your child care provider, stay involved. Drop in unannounced occasionally so you can see what your child’s world is like during the day. Ask for frequent “progress reports.” And don’t be afraid to offer constructive suggestions to improve your child’s experience. Studies show that the children who achieve better in school have families who stay involved in their care and education.

10. Take care of yourself.

Finally, parents and caregivers need care, too. Taking care of our children is the most important, most wonderful, and often the most challenging job in our society. Because you provide the primary environments for infants and young children, your health and welfare are extremely important. When you are exhausted, preoccupied, irritable, depressed, or overwhelmed, you will probably have a harder time meeting the needs of young children.

When mothers and caregivers get help for depression, children benefit

- Caring for young children can be draining, physically and emotionally. Moreover, many mothers suffer from various degrees of depression after giving birth. When the depression eases in the first six months, children are generally not affected, but Geraldine Dawson, Ph.D., and her colleagues at the University of Washington have found that mothers who are significantly depressed throughout their children's first year and a half are less likely to respond sensitively to their children's cues and clues. This can have long-lasting effects on their babies' development.
- The good news is that when mothers get help and the depression lets up, the impact on the children also lessens—or goes away altogether. Treatment can help both mothers and children.

When you feel overwhelmed, take care of yourself. Reach out and get some help. Family, friends, neighbors, pediatricians, child care providers and others—all can assist you in fostering your child's healthy development and school readiness. And bear in mind that there are many ways to reach this goal. When you make a mistake, as all parents and caregivers do, you have many opportunities to make up for it.

The new brain research informs us of the vital importance of the relationship between caregiver and child in the first years of life, and affords us a wonderful opportunity to enrich the lives of our children and help them realize their full potential.

The first years truly last forever.

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