# The Baby Brain: Ten Myths

1. **What happens before birth does not affect learning.** Poor nutrition and exposure to drugs and alcohol can lead to serious problems in brain development, behavior, heart health, and neural development even before birth. Stress and isolated pregnancies also affect babies before birth. Feldman et al (2000) found that social support (and other variables) accounted for 31% of the variance in fetal growth in their study (after controlling for gestational age). Women who had multiple types of social support from difference sources had infants with the highest birth weight.

2. **The brain is completely developed at birth.** Most of the brain's cells are formed before birth. But the cells actually make most of their connections with other cells and grow during the first 3 years of life based on early experiences with caregivers and their environment. And even after age 3, the brain's structure continues to change as connections are refined based on experience.

3. **Brain development is completely genetic.** Early experience is very important to brain development. The baby's day-to-day experiences help decide how her brain cells will connect to each other, triggering essential chemical releases that help brains grow and develop. And if the baby does not have certain kinds of experiences, some areas of the brain will not make the necessary connections.

4. **A bigger head is better.** Some parents mistakenly think that children with bigger heads have bigger brains and are therefore smarter. But a bigger head doesn't necessarily mean a bigger brain, and just having a bigger brain doesn't make you smarter. Humans are more intelligent because our brains have been fine-tuned to be more efficient.

5. **Brains get more active as they mature** A 3-year old's brain is twice as active as an adult's because an adult brain is more efficient. It has gotten rid of connections that it doesn't need. By about age 3, the brain's cells have made most of their connections to other cells. Over the next several years, connections are refined based on experience. The connections that are used most will become stronger. Those that are used least will eventually wither.
6. The brain grows steadily across childhood

The human brain develops in spurts. There are “prime times” when the brain is best equipped to learn certain skills. Babies and young children learn languages more easily than adults because their brains are still developing language connections.

7. We can’t learn certain skills after childhood.

There are certain prime times in development when learning is easier. The brain is especially efficient at learning during those prime times. But brain development and learning continue throughout the lifetime. Learning may be more difficult once the prime times are over; but it can still happen.

8. Learning begins when a child enters school.

Pre-kindergarten or kindergarten is the start of most American children’s formal education. But the foundations for learning develop well before a child starts school. The brain connections needed for learning begin developing even before birth. Warm, sensitive, consistent care helps babies develop a secure attachment with their caregivers. Children with this secure bond are more ready to learn. Early traumas such as abuse can slow brain development.

9. The brain’s intellectual functioning is its major function.

When a child is deprived of emotional support in daily life, he or she may be delayed in growth and development physically and mentally. This usually happens in child abuse and other distress, when the parents or the family situation is in chaos. Babies are born with various body systems and biological programs, and these programs are switched on not only by some inner mechanism but also by interaction with the environment, particularly emotionally rich and tender stimuli from daily life.

10. Children need special help and expensive toys to develop their brain power.

What children need most is loving care and new experiences. But these experiences don’t need to be expensive. They can include talking and singing to a baby, going on daily walks and pointing out new things in his environment. However, children can be overstimulated. Babies need time to process what they learn before they are ready for something new. Thus, adults need to be attune to children’s cues that they are over stimulated (i.e., “zoning out”, falling asleep, being cranky).

FOR OUR BABIES is a national movement promoting healthy development in U.S. children from conception to age 3. We advocate for the types of environments, experiences, and relationships that infants and toddlers need in order to thrive.

Help us raise our collective voice to create a brighter future FOR OUR BABIES! Our goal is to link together 1 million people who will speak in one voice demanding better treatment of our babies. Sign our pledge at forourbabies.org/pledge and make a contribution at forourbabies.org/donate.