

By Maryann LoRusso

An eye-opening  
look at your  
baby's visual  
development

# out of sight

**I**'ll never forget the first time my daughter, Ava, looked at me. Swaddled in a teddy-bear-print blanket, she was a whole five minutes old when the delivery nurse placed her in my arms. As I studied her angelic face and admired her long, dark lashes, her eyes suddenly opened wide.

For the next few minutes Ava stared right at me, as if she were making an imprint of this strange woman who had been destined to watch over her for the next 18 years. She seemed more like a wise extraterrestrial figuring out where her spaceship had landed than a newborn who couldn't see a foot in front of her. But before I could decide whether her eyes were slate blue or gray, she closed them tight and drifted off to sleep.

From those early days when your newborn has eyes only for you to the hungry stares of an older infant who's soaking up everything around him, the first six months of visual development are profound. Over the next few pages, we take an up-close look at how your



## easy eye exercises

You don't need fancy toys to stimulate your child's vision, says Dr. Ruben. "Just play with your baby and expose her to as many interesting sights as possible." Here are some simple exercises to try.

- Encourage tracking skills by holding a bright toy about 12 inches from your baby's face. Slowly move it from side to side, then up and down.
- Hold her in front of a mirror so she can make funny faces at her reflection.
- Give her a board book with photos of faces or simple black-and-white images.
- Hang a brightly colored mobile over her crib so she can follow the circular movements of smaller objects.
- Take her for walks around the neighborhood, pointing out and naming things as you go along.



baby's eyesight evolves, and offer tips on how you can help those baby blues (or browns, or hazels) reach their potential.

### The Fuzzy First Weeks

Your newborn would flunk a DMV test if she had to take one now. Right after birth, she can see light and shapes, as well as detect movement. However, her eyes may "wander," or move randomly, making her unable to fix on or follow an image. She is also extremely sensitive to bright light, which is why her pupils are constricted, and her peripheral vision (the ability to see to the sides) is limited. And don't expect your baby to recognize you from across the room: Her distance vision is poor—about 20/400, which qualifies as legally blind in the adult world, according to James Ruben, MD, a pediatric ophthalmologist at Kaiser Permanente in Sacramento, and clinical professor of ophthalmology at the University of California at Davis.

There's a Darwinian explanation for

this primitive eyesight, says Dr. Ruben. "Newborns pay attention to what is most important to their survival," he explains, and it's no coincidence that baby can see only 8 to 10 inches in front of her—that's just about the distance to your face when you cradle her in your arms and feed her.

Fortunately, your little one's vision improves considerably by the end of month one. Eventually she can focus briefly on objects as far away as three feet, so you may find her staring at the mobile hanging over her crib. As her retina (the light-sensitive tissue inside her eyeball) matures, she begins to recognize patterns. She is also attracted to toys with high-contrast stripes and checks, such as a checkerboard pattern.

But her absolute favorite image is your face. "By the time she's 6 weeks old, your baby should be looking directly at you when you hold her," says Jane Kivlin, MD, professor of ophthalmology at the Children's Hospital of Wisconsin at the University

of Wisconsin in Milwaukee. "Her attention is drawn immediately to your face, particularly your eyes and mouth."

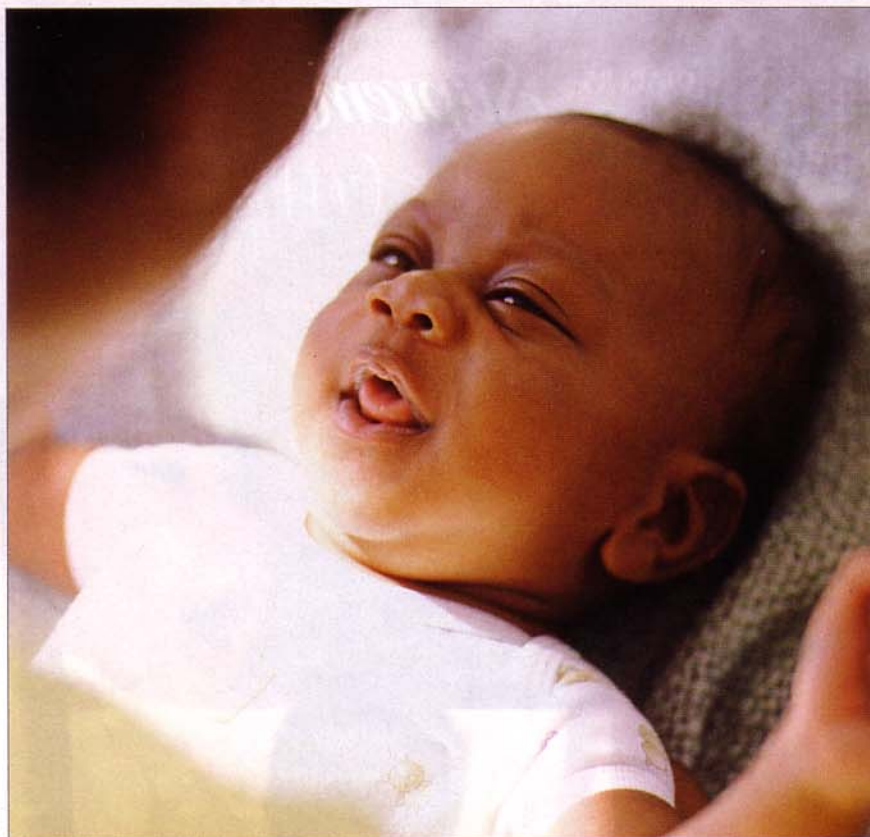
### On the Right Track

As your baby moves beyond his first month, he reaches an important milestone: the ability to track moving objects with his eyes. During the early weeks, if you waved a toy in front of your newborn, he may have seemed to stare through it. But by 2 months, his eyes work together to move and focus at the same time.

By 3 months, your little one has significantly greater eye control, says Dr. Kivlin. Baby can now follow you with his eyes, and he detects when people come and go. Maryann Ferro, a mom from Valley Stream, New York, says her younger son, Nicholas, was not yet 4 months old when he really started to notice his big brother. "His eyes would light up when he saw William come down the stairs," she recalls, "and he would stay focused on him as he moved around the room."

\* Learn about your baby's development online at [babyconnection.com/baby](http://babyconnection.com/baby) at Walmart.com





By 6 months, your infant is following faster movements with his maturing peepers. He can stay focused on a moving target; for instance, if you roll a toy car in front of him, his eyes will stay with it. But this is just the beginning: As your baby's hand-to-eye coordination improves, he will soon be able to grasp and pick up those coveted objects.

### In Living Color

Like Dorothy walking into the Land of Oz, your baby's world turns Technicolor at around 1 month. Her pupils have enlarged, so she sees colors more sharply than she did at birth. But until she's about 3 months old, she has a strong preference for certain colors. "Young babies respond more to red and blue than to green and yellow," says Dr. Kivlin. They also favor high-contrast linear patterns, such as black-and-white stripes or checkerboards.

Dr. Kivlin says babies often attach themselves to objects whose colors intrigue them (it's no coincidence Elmo is bright red). Rahkiah Frias, a mom from West New York, New Jersey, says when her son, Eric, was about 2 months old, he was mesmerized by a bright-blue

dream catcher hanging from the ceiling. "He would stare at it and smile," she says, "and I eventually figured out it was the color that caught his attention."

Don't expect your infant to help you compare paint swatches. "If you show her green and turquoise, she probably can't tell the difference," says Dr. Kivlin. But by 3 months, she recognizes all the colors an adult is able to see, and by 6 months, she is responsive to their many shades.

### A Broader View

Like a fine wine, your baby's vision improves with age. He's come a long way since he could barely focus on your lips as you blew kisses at him. At first, says Dr. Ruben, "babies are relatively disinterested in distance. Their arms are short, their world is up close." But all that soon changes. Shortly after 3 months, baby notices things that are farther away from him, and by 4 months, your child's eyesight increases by several feet, to about 20/60. That's when you may catch him giggling at the TV screen across the room, or, like San Francisco mom Ruth Lorberth's son, at distant shadows.

"It was a winter afternoon, and the leaves on a tree outside were making a pattern on our living room wall," Lorberth remembers. "As the wind blew, the pattern changed. Leo was so fascinated that he watched the wall for about 10 minutes each day."

When your baby reaches 6 months, says Dr. Ruben, he'll recognize familiar objects and faces and respond to your smile. He also has significantly better eye control, peripheral vision, and distance vision. This burst of visual development comes just in the nick of time, as baby's cognitive and motor skills are advancing at a rapid pace. Soon he'll need those sharp eyes to help him learn to sit up, crawl, and eventually walk. Look out, world!

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## KEEPING AN EYE OUT

Vision problems are often hard to detect in a newborn, says Dr. Kivlin, but she advises calling the doctor if your baby shows any of these symptoms:

- Inability to make eye contact or respond to bright, moving toys (after 4 months)
- Eyes that are crooked or crossed, turned in or out, or don't move together after 3 months
- Persistent redness, tearing, or discharge; continuous eye rubbing
- Any kind of eye injury
- Frequent squinting or extreme sensitivity to light
- Drooping eyelids or pupils of unequal size
- Inability to see objects unless he holds them close (after 3 months)
- A cloudy cornea
- A "bouncing" or "dancing" of the eyes