

A GUIDE TO VISION HEALTH FOR YOUR NEWBORN, INFANT, AND TODDLER



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Congratulations on your new baby!



Just as infants are not born walking, talking, and eating solid food, a baby's vision system develops over time.

As a newborn, your baby's best distance for seeing is 8 to 15 inches, or about the distance from your face to your baby's face when you nurse or bottle-feed your baby.

You probably received cute, cuddly, colorful toys as gifts to celebrate the birth of your baby. In the next few months, your baby will enjoy playing with and "talking" to those toys. For now, though, your newborn prefers black-and-white or high-contrast patterns, such as contrasting stripes. Your newborn will also prefer to look at your face, especially your eyes.

During the coming months, and years, your baby's vision will continue to change and should become clearer.

This brochure gives you information about how your baby's vision will develop. This guide also helps you understand when there might be a problem with your child's vision that you should discuss with your baby's health care provider.

For today, however, this brochure will focus on your baby's vision milestones during the time between those newborn photos and that first birthday cake photo.



DON'T IGNORE A POSSIBLE VISION PROBLEM

A West Virginia mother shared a story about her 2-year-old son who wears prescription glasses. After her son participated in an eye exam and received glasses, she realized what she had missed seeing earlier. She remembered he would turn his head to look out of one eye when playing with a train. At the time, she saw nothing unusual about that behavior. Now, she knows that turning his head to look out of one eye was a sign that something was not quite right with his vision.



BABY'S MILESTONES FOR VISUAL DEVELOPMENT

Your baby's development and learning can be impacted if your baby can't see well. Look for these vision milestones in your child.



➤ **Between birth through the 1st month:** Your baby should begin to focus on lights, faces, and objects 8 to 15 inches (20.32 to 38.1 cm) away from his or her face.



➤ **During the 2nd and 3rd months:** Your baby should:

- Begin to notice his or her hands,
- Make eye contact with you,
- Follow moving lights, faces, people, and objects with both eyes moving together, and
- Your baby should smile at you when you smile at him or her first (this is called a social smile.)



➤ **During the 3rd and 4th months:** Your baby should:

- Begin watching his or her hand movements,
- Reach for objects or your face,
- Grasp and hold objects in his or her hands,
- Bring objects to his or her mouth, and
- Move his or her eyes from person to person or object to object.



➤ **By the 5th month:** Your baby's eyes should be straight and neither eye should turn up, down, in, or out for several minutes at a time either constantly (all of the time) or occasionally (only for a short time).

- Sometimes the structure of your baby's face around the eyes may cause you to think one of your baby's eyes is turning in toward the nose, even when the eyes are aligned well. Your baby's health care provider (e.g., pediatrician) may refer you to a pediatric ophthalmologist or pediatric optometrist to determine if your baby has strabismus (eye misalignment) that may require treatment, such as prescription glasses, or if it is a condition

<http://www.pediatrics.com/services/child/pseudostrabismus>



called pseudostrabismus (false eye turning.) In pseudostrabismus, the eyes are well aligned even when an eye appears to drift or turn in and treatment is not required.

- It is important to make and attend an eye examination appointment if your child's health care provider refers your child to a pediatric ophthalmologist or pediatric optometrist. Only the eye doctor can diagnose whether or not your baby has pseudostrabismus, that will not require treatment, or true strabismus, which will likely require treatment.



➤ **During the 6th and 7th months:** Your baby:

- Should purposefully reach for objects, such as favorite toys, and
- Follow objects with both of his or her eyes at near distances (1 foot [30.48 cm]) and far distances (greater than 6 feet [182.88 cm].)



➤ **During the 8th, 9th, or 10th months:** Your baby:

- Should recognize family faces, and
- Should look at and reach for small objects, such as cereal or a raisin.



➤ **During the 11th and 12th months:** Your baby:

- Should use his or her index finger to point to pictures in a book.
- Should look for an object, such as a favorite toy, dropped into a container.

The time that each of these milestones occur may vary by 6 weeks.

Visit your child's health care provider if you notice a delay in any of the listed milestones and ask for a referral to an eye doctor (preferably one who is trained and experienced with working with young children) for an eye examination.

HOW TO HELP YOUR BABY'S VISION TO DEVELOP

Birth through 1st Month:

Holding your face 8 to 15 inches (20.32 to 38.1 cm) from your baby's face, slowly move your head back and forth to help strengthen your baby's skill of following objects.

- » Using the same distance, slowly move a black and white patterned object, such as a rattle, up and down and side to side in front of your baby's face.
- » If bottle-feeding, hold and feed your baby from alternating sides to promote visual development of both eyes.
- » Place your baby in the crib from different directions.
- » Also, periodically change the location of the crib so your infant can see the world from different viewpoints.
- » Hang a mobile off to the side so your baby can see it through the slats of the crib. Change the position of the mobile every other day.

2nd and 3rd Months:

- » Look at your baby with his or her face about 8 to 15 inches (20.32 to 38.1 cm) from your face, wait for your baby to look at your face, and smile, sing, or talk to your baby.
- » Hold a favorite toy, bottle, or patterned and high-contrast object within 8 to 15 inches (20.32 to 38.1 cm) of your baby's face and slowly move the object up and down or side to side.
- » Allow your baby to explore objects, such as clean toys, with his or her hands. Touching different textures, sizes, weights, and forms will help your baby learn about his or her world.
- » Place a rattle in your baby's hands and help your baby shake the rattle or move the rattle in a half circle in front of his or her face to help with developing depth perception.



3rd and 4th Months:

- » Allow your baby to bat at objects moving in front of his or her face, such as a crib mobile, to help develop hand-to-eye coordination. (Remember to remove crib or playpen mobiles as soon as your baby is able to pull up or stand upright alone.)
- » Continue allowing your baby to bring clean age-appropriate baby toys to his or her mouth for exploring and learning.
- » Hold a toy in one hand toward the right side of your baby's face and shake the toy. Repeat with a different toy in the other hand toward the left side of your baby's face.
- » Switch between toys, shaking one toy at a time. Begin playing "peek-a-boo" with your baby to help him or her develop visual memory.

4th, 5th, 6th, and 7th Months:

- » Your baby is developing full color vision and will begin to respond to objects of many colors. Red or blue may be the favorite colors. Perhaps you've read to your baby the last few months. Now is a good time to hold your baby in your lap and explore brightly colored pictures in baby books with board, cloth, or vinyl pages. Read to your child daily.
- » Your baby can now follow faster movements. Roll a ball across the room. Begin playing "patty cake."
- » Continue giving your baby clean and age-appropriate toys that can be explored with the hands and mouth. Encourage your baby to reach for favorite toys.
- » Begin playing on the floor with your baby every day.
- » Your baby can see at farther distances. Carry your baby through your home, down the block, or around the neighborhood to give your baby different "things" to see.
- » To help your baby develop and learn, talk to your baby about, and name, the "things" you see while walking through your neighborhood, a store, or your house. Give your baby an unbreakable mirror to help develop visual awareness.



8th, 9th, 10th, 11th, and 12th Months:

- » Talk to your baby often to help your baby link objects they see to names of those objects.
- » Place soft objects on a high chair tray that can be pushed off and dropped to the floor.
- » Give your child a container and objects, such as blocks, to put into and take out of the container.
- » Allow your baby to finger-feed.
- » Begin encouraging your baby to point to pictures in a book as you ask, "Where is X?"
- » Sit on the floor and roll a ball to your baby, perhaps a ball that makes noise as it rolls.
- » Continue playing "peek-a-boo" to help strengthen object permanence skills, as well as hiding toys under objects, such as blankets or plastic buckets.

WHAT ARE SOME SIGNS THAT YOUR CHILD MAY HAVE VISION PROBLEMS?

If you see one or more of the following signs, take your child to your child's health care provider as soon as possible. Talk about the need for your child to see an eye doctor—if possible, an eye doctor who is trained and has experience working with young children.

What do your child's eyes look like?



- A pupil (the circle in the middle of the eye that is traditionally black in appearance), appears to be white in one or both of your child's eyes. Look closely at photographs of your baby. If the red glow is not the same in both eyes or is white or yellow in one eye, this may indicate a vision problem. Show photographs to your child's health care provider.



- Eyes don't line up or don't move together (one eye appears to turn in, out, up, or down) at any age, and especially after age 4 months. If your baby's eyes constantly seem to look in different directions, visit an eye doctor right away.



- Eyelids are red-rimmed, crusted, or swollen for more than 24 hours.
- Eyes are watery or red with tears running down the cheeks when your child is not crying.
- One or both eyelids droop, nearly covering the colored part of the eye (iris).



- One pupil looks larger than the other pupil.
- Eyes seem to bounce, dance, shake, or wobble.
- One or both eyes look cloudy.

How does your child act?

- Rubs eyes often.
- Closes or covers one eye when looking at a book or toy.
- Always tilts head to one side, especially when playing with toys, or pushes head forward or backward in an effort to see objects better.
- Blinks eyes more than usual or more than other children.
- Frequently squints, as if trying to focus on an object.
- Seems clumsy or frequently bumps into objects.
- Holds books or toys close to eyes.
- Avoids looking at people or objects that are held close (within 8 to 15 inches; 20.32 to 38.1 cm) to the face.

WHEN SHOULD YOU TAKE YOUR CHILD TO AN EYE DOCTOR?

If you see any of the signs and symptoms above, visit your child's health care provider to talk about a referral to an eye doctor (pediatric ophthalmologist or pediatric optometrist). The referral should go to an eye doctor trained and experienced with working with infants and young children.

Most vision problems can be corrected if they are detected and treated early. Appropriate eye care is important to help your child have the best vision possible to learn and develop.

Some vision problems, if left untreated – even for a short amount of time – can result in **permanent** vision loss. **Do not take a “wait and see” approach to vision problems in children!**

Newborn infants should have his or her eyes checked while still in the hospital nursery. During every regular well-baby health visit, from birth to age 6 years, your child's health care provider should use family history and special tests to check for vision and eye problems. Beginning at age 12 months, vision screenings may include instruments that look like cameras.



ARE SOME CHILDREN MORE LIKELY TO HAVE VISION PROBLEMS THAN OTHER CHILDREN?

Yes. Your child's health care provider should be aware of the following health history that may make your child more likely to develop a vision problem:

- Your child was born prematurely (less than 32 weeks completed gestation.)
- You, or an immediate family member, have a family history of vision disorders, such as childhood cataract, amblyopia (may also be called lazy eye), misaligned eyes, eye tumors, or wore glasses before first grade.
- Your child had an eye injury (problems resulting from childhood eye injuries may develop much later in life.)
- Your child has been diagnosed with a problem that could affect his or her physical, mental and/or, emotional development.

If your child has any of these factors, visit your child's health care provider and talk about the need for a referral to an pediatric ophthalmologist or pediatric optometrist.



HOW WOULD YOUR CHILD'S VISION DISORDER BE TREATED IF TREATMENT IS REQUIRED?

- Your child may have to wear glasses to help him or her see up close or far away. Specially designed eyeglass frames for small children, including babies, are available.
- Medication, such as eye drops or ointments, may be used to treat infections and other eye conditions, including allergies.
- Eyeglasses may be prescribed to correct a crossed or misaligned eye (also called strabismus.)
- One eye may be patched or eye drops may be used in one eye to help strengthen the other eye, which is common in the treatment of amblyopia (lazy eye.)
- Surgery may be needed to remove a lens with a cataract or to reduce pressure inside the eye for glaucoma. Surgery can also correct a crossed or misaligned eye.
- Eye exercises may be used to help the eyes work together better.
- Many infants have a problem with his or her tear ducts and require treatment if the problem lasts after more than a few months of age.

Being aware of your baby's overall health and development will help you to know if there is a medical need. Visit www.preventblindness.org for more information on your child's sight.



DON'T IGNORE A VISION PROBLEM

“When Javi was born he had a brain hemorrhage and I knew that he was going to have some complications – but I had no idea that the brain hemorrhage had impaired his vision. I knew that every baby can’t see very well at first and their eyes do funny things when they’re born, but I noticed it a lot with

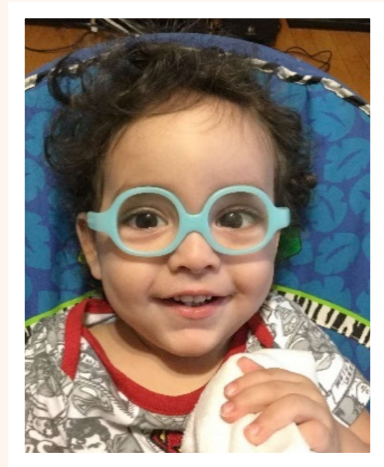
him. I noticed he wasn’t focusing very much but thought ‘he’s a brand new baby and it will fix itself.’ I knew his development would be delayed because he was premature. When he turned 4 months, his primary doctor said Javi’s eyes weren’t moving together at all, and even with his slight delay for prematurity he should have had some sort of vision going on, but he didn’t at all. I felt Javi was looking through me, because even when I thought he would be looking at me it was kind of a blank look or stare. He only smiled if you tickled him, but he had a very surprised reaction to even being touched. Now that I think about it, it’s because he didn’t see that it was coming.

We took Javi to an ophthalmologist, who told me the hemorrhage definitely affected Javi’s vision. We were going to have to get used to the idea that our son might be blind, and we started Javi in Early Intervention Services to help him with his development and poor vision. Our Early Intervention service coordinator asked if we’d like to try to get enrolled with our state school for visually impaired children. I said even if it’s going to help him slightly I want to do it, to give him a chance to do his best. That’s what all parents want for their child, to have everything and anything for their child to succeed in life.

Javi’s Teacher of the Visually Impaired (TVI) started working with him and it was one of the only things that helped because I was finally told that while Javi’s sight’s not good, there were things we could be working on. When his TVI first came and showed him a pom-pom, it was one of the first times he looked at things consistently. Everything she had was super shiny and bright, she had lots of lights and wands that he would reach for and try to grab, like ‘Gimme gimme I want that.’ It was the first time I’d seen him look at something and be interested in it.

Then the TVI got us an eye appointment on a mobile eye examination van that was coming to our area to provide pediatric vision services. The eye doctor on the mobile clinic explained that Javi had a high refractive error and that glasses would help him. It was insane when the eye doctor on that van put the glasses on Javi because, for the first time, his eyes opened really wide and he looked at me and had a confused look on his face. He heard my voice but saw the eye doctor! He knew the man with the beard wasn't me, though he didn't really know what my face looked like, only my voice. It was also the first time he'd looked at me with a confused expression on his face and I knew he was learning right there – that I am mom and I don't look like the eye doctor!

I'm thankful that we did everything we could to help Javi's vision. For months I was depressed and angry, because my son didn't smile at me and all I could think of was that he doesn't know what it is to see someone's face. I was thinking he wouldn't even know what it's like to see his mom. The first time he ever smiled at us was when he looked at us through his glasses and his TVI was there, taking his picture – the picture you see here. I finally knew for a fact that he was able to see what was around him. He wasn't going to be blind or have very little vision his whole life.



When we put his glasses on at home I knew he was starting to understand what was around him because there were noises that he had heard, but never seen. Now he could look and see what was making the noises, and he started looking around the whole room all the time. I remember crying because I thought, my baby is able to see his mommy for the first time. Now he knows his world and he can understand, 'OK this is a person's face, and I can look this way.' Before you would talk to him and he would turn his head and not know where you were. Now he knows where his hand is, a face, toys, and he can tell what objects are. And I'll take that. I'm more than happy to know that my baby can interact with his environment. Small isn't in Javi's vocabulary and we expect great things to happen for him in the future."

– *Jerisa, Javi's Mom*

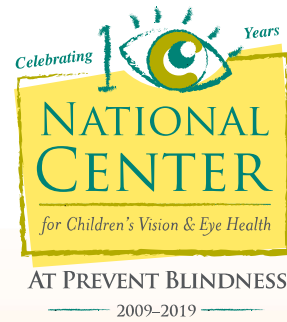
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Founded in 1908, Prevent Blindness is the nation's leading volunteer eye health and safety organization dedicated to fighting blindness and saving sight. Focused on promoting a continuum of vision care, Prevent Blindness touches the lives of millions of people each year through public and professional education, advocacy, certified vision screening training, community and patient service programs and research.

These services are made possible through the generous support of the American public. Together with a network of affiliates, divisions and chapters, it is committed to eliminating preventable blindness in America.

For more information, or to make a contribution to the sight-saving fund, call **800.331.2020** or visit us on the web at **preventblindness.org**.

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