

Your Baby's Vision

Vision is one of your baby's most precious senses. Babies will learn more about the world through their sight than through all their other senses combined. As a parent you can do much to aid your child's visual development and growth. Your child's eyes are generally examined at birth for signs of major defects. This examination is extremely important because the earlier defects are detected, the greater the likelihood of effective treatment. Although initially your child may have no signs of eye or vision problems, there is no guarantee that vision difficulties will not occur later. Every child should be examined by an optometrist before reaching school age. Watching your child's vision develop can provide important clues in the detection of vision deficiencies. Here are some ways you can help your baby's visual development.

Birth to four months.

At birth a baby sees patterns of light and dark but specific objects are probably blurred. During the first four months, your baby should begin to follow slowly moving objects and start to use their vision to direct his or her hand movements. The two sides of the body are developed alternately. The baby will use the right hand, foot and eye for a few days or weeks, and then use the left side for a time.

At this stage of your child's development, some of the following ideas could be helpful.

- Change the location of the bassinette and your infant's position in it so that neither eye is favoured. Gazing constantly at a blank wall is not interesting.
- Hang a mobile above the bassinette to provide movement. Babies will learn to control eye movements by watching gentle movement.
- Provide a variety of safe objects within baby's focus, about 200-300 mm away, for the baby to touch.
- Talk to your baby as you move about the room. The baby will learn to associate movements, distances and directions with vision and hearing.



Four to Six months.

At four to six months, a baby learns to turn from side to side and use their arms and legs. Control of the eye movement is further developed. You might notice that one eye is

sometimes turned toward the nose or to outside, giving the baby a cross-eyed appearance. When this happens, the baby is using only the other eye. Within a few days or weeks, the other eye will be used while the first will wander. This is part of the development of binocularity -the use of two eyes together-and is normal for the first six months.

You can help your baby development during this period by:

- Allowing your baby to explore different shapes and textures. Sensory mats are good to use during play time.
- Handing your child choking safe, non-toxic small objects so that his or her co-ordination is improved.



Six to eight months.

Both eyes should focus equally by six to eight months. If your child fails to use both eyes together after the age of six months, they should receive prompt professional advice. A child will not outgrow crossed eyes: the earlier the treatment is started, the better the chances of correcting the problem. During this period allow your child freedom to explore, provide interesting stuffed toys and participate in games such as hide and seek.

Eight to 12 months.

Babies are generally more mobile now and begin to use both eyes to judge distances. They can grasp and throw objects with greater accuracy. You can help their progress by:

- Allowing your baby to develop at their own pace. Walking too early may deprive the infant of co-ordination skills acquired during crawling. 4 to 5 months of

crawling helps develop bilateral control, accommodation and convergence skills and distance estimation skills.

- Let your baby investigate the safer kitchen cupboards- they will learn much about the relative sizes of objects and improve control in hand movements.

One to two years.

Co-ordination of eyes and hands is now well developed, and your child will probably begin walking.

Activities to be encouraged include:

- Playing with small objects like building blocks and simple puzzles to improve precision in movement and aid small muscle development.
- Climbing.
- The use of a tricycle or rocking horse to increase co-ordination of the eyes, hands, and feet.



Two to three years.

The child now speaks in sentences and useful activities are:

- Reading or telling stories to improve the child's ability to understand visual information and prepare for learning to read.
- Drawing, painting, and colouring for development of accurate hand movements.

Encourage your child to have a break from close work every 20 minutes, to move about and relax the eyes.

Your children and technology.

Throughout these stages we encourage parents to keep devices like tablets and phones away from their children or limit the amount of time they are in front of the screen.



The use of such devices can seriously hinder the development of the child's eyes.

Effects technology use has on children include:

- Eye fatigue and headaches.
- Dry and irritated eyes- rubbing eyes.
- Double vision.
- Loss of focus control.
- Become near sighted.
- Impact on sleep (Blue light from screens keeps the brain awake).
- Visual stress.
- Computer vision syndrome.
- Over stimulation (lights, music, rewards stimulate dopamine release creating addiction).
- Loss of interest in reading.

Whilst using your phone or tablet to occupy your infant during appointments with doctors or optometrists can make the consultation easier, remember the World Health Organisation (WHO) guidelines recommend a maximum screen time per day of 1 hour (less is better) for children between 2-5 years and no screen time below age 2. Try not to add more screen time on the same day. Compliment any screen time with twice as much physical activity which can range from interactive floor-based activity for infants with at least 30-minute tummy time each day, to 3 hours physical activity for toddlers and 4-5-year-olds. Exercise should be spread throughout the day and include some vigorous activity such as brisk walking, tricycle riding, running, ball games, swimming, dancing or any exercise which makes them a little breathless.



Sedentary time should involve interactive play, reading, storytelling, puzzles, singing, block building, cutting out, play dough, puzzles and games. Outdoor activities with adequate sun protection are also important. A pre-school child should not be restrained for more than 1 hour at a time (e.g., prams/strollers, car seats, highchairs, back packs) or sit for extended periods of time.



Sleep including naps should range from 14-17 hours (0-3 months of age), 12-16 hours (4-11 months of age), 11-14 hours (1-2 years), 10-13 hours (2-4 years).

By the age of three years, a thorough optometric examination will reveal any tendency toward squint (crossed eyes), short-sightedness or long-sightedness. It will also check that your child is acquiring the many visual skills necessary for complete development. This examination provides an important record with which to compare later performance and enables better evaluation of symptoms that might occur as the child grows older. Watching your child's development is one of the joys of parenthood. The optometrist's professional skills linked with your own active participation will ensure that your child realizes his or her full visual potential.