

Let me see!

A Lesson on Infant Eye Care

Playgroup #18

Materials Needed

- Large piece of paper or poster & marker
- A reading book with small text for each mother in attendance

Handouts

- Infant Development chart – InfantSEE
- InfantSEE Brochure

Introduction

A baby's failure to see well can affect his or her entire development. Unfortunately, babies do not know if there is a problem because their own vision is all they have experienced, they have nothing to compare it to. Think about your child and look for these milestones in your infant's visual and motor development.

Does your baby:

- Follow an object with his or her eyes by 5 weeks?
- Bring his or her hands together by 8 weeks?
- Hold and sustain direct eye contact with you by 3 months?
- Turn his or her eyes together to locate near objects by 4 months?
- Make the sounds p, b, t, d, and m by 5 months?
- Roll over independently by 7 months?
- Sit without support by 8 months?
- Creep and crawl by 9 months?

If you notice a delay in any of the developmental milestones listed above, seek professional help. The sooner any vision problems are detected and treated, the more likely the problem can be fully corrected. In general, babies and children do not outgrow visual problems.

Lesson Plan

Lesson Objectives

- Understand the importance of infant eye care
- Learn activities that can be done to help stimulate your child's visual development
- Know warning signs of eye problems and where to go for help

The eyes are a child's doorway to the world. Vision is one of their main sources of stimulation and learning. As a result, good vision is a dominant and crucial process in the growth, development and daily performance of children. Good vision includes healthy eyes,

age appropriate visual acuity, visual integration and visual skills such as: **eye teaming** – the ability of the eyes to work together; **eye focusing** -- the ability of the eyes to focus clearly at different distances quickly accurately, and for sustained periods of time; and **eye motility** -- the ability of the eyes to smoothly follow moving objects and to move accurately from one object to another.

It is important for parents to know that infants are not born with complete vision. As babies grow, good vision is developed through a *learned process* of looking, touching, and exploring. Parents can play an important role in helping to ensure that their baby learns to see well. The next part of the lesson will teach you about your baby's developing eyes, as well as give activities you can do to help stimulate good vision for you baby.

Understanding Your Baby's Developing Eyes

Prenatal Development & Birth

An infant's visual development starts long before they are born. Many mothers overlook the importance of proper nutrition when they are expecting. Proper prenatal care is crucial to the development of healthy eyes.

When your child is born it usually takes a moment or two for your baby to open his eyes. Doctors usually examine their eyes right away for signs of congenital eye problems. These are rare, but early diagnosis and treatment are important to your child's development. Health professionals typically administer an antibiotic ointment, such as erythromycin, to prevent infection from this new world they have come in contact with. Within a short period of time, your baby will begin to focus on objects less than a foot away.

1 Month Activities

- Give you baby toys that have complex shapes and high contrasting colors (ex: Black & White)
- When setting up baby's room, include décor that is bright, contrasting and varied.
- Babies' eyes are drawn to new objects, so be prepared to change the location of items in the room, including the crib
- Put a nightlight, in the baby's room to provide visual stimulation when the baby is awake in bed
- Ensure that you child has supervised time on their stomach. This provides important visual and motor experiences

Two months: Learning to look

For the first six to eight weeks of life, it is normal for a child's eyes to not always track together. This should not be a concern unless the child's eyes are never aligned or their alignment does not gradually improve. Tears are normal for many children because the tear

drainage ducts may not have fully opened. They usually open on their own, but the doctor should be informed and he or she will suggest what to do to stimulate the opening of the ducts if tears continue or seem excessive.

2 Months Activities

- *Stimulating both sides of the body by moving a child's arms or legs simultaneously, as parents tend to do naturally, is helpful in fostering appropriate bilateral and binocular development*
- *Allow your baby time to explore with their hands. Provide them with stimuli of many different textures, sizes, weights, and forms*
- *Place a mobile near the crib and change the position of the mobile every other day*

Four months: Eyes, brains, hands

During the first four months of life, your baby should begin to follow moving objects with the eyes and reach for things. At first, this will be inconsistent, but as eye-hand coordination and depth perception begin to develop they will become more accurate. During the next few months, your baby should begin to use his/her arms and legs. Eye movement and eye/body coordination skills continue to develop as vision progressively stimulates and guides movement.

4 Months Activities

- *Change the crib's position frequently and your child's position in it*
- *Keep reach-and-touch toys within your baby's focus, about eight to twelve inches*
- *Provide clean smooth objects that can be explored with mouth and hands*
- *Start to play the "patty cake" game*

Six months: A trip to the optometrist

Your baby's first visit to an eye doctor for a comprehensive eye assessment should be scheduled at this time. The optometrist will test for visual acuity, excessive or unequal amounts of nearsightedness, farsightedness, or astigmatism, evaluate eye alignment, and examine eye teaming ability. The health of your baby's eyes will be assessed as well. Although problems are not common, it is important to identify children who have specific risk factors at this stage. Vision development and eye health problems can be more easily corrected if treatment is begun early.

6 Months Activities

- *Let your baby explore different shapes and textures with his or her fingers*
- *Give your baby the freedom to crawl and explore*
- *Play "peek-a-boo" and "patty cake" with your baby*

- *Tie bells on booties so your infant can learn about his or her body through sound and movement*
- *Move the crib mobile closer to your baby so they can reach and hit to make it move*

Eight to twelve months: Getting mobile

Your baby is mobile now, being attracted to objects in their visual environment. He is using both eyes together to judge distances, and is grasping and throwing objects with greater precision. Crawling is important for developing eye-hand-foot-body coordination.

8 Months Activities

- *Give your baby stacking and take-apart toys*
- *Provide objects your baby can touch, hold, and manipulate*
- *Talk to your baby frequently so he or she can associate experiences with words.*
- *Place objects on a highchair tray that can be pushed off and dropped to the floor*

10-12 Months Activities

- *Do not rush your baby into walking. Creeping on all fours is very important for developing coordination of the body, as well as the two eyes.*

Why should I take my baby to a physician at such a young age?

Early intervention is critical to successful and cost-effective treatment. Despite the nation's present system of preschool vision screening, there exists a lack of understanding by the public of the importance of periodic professional eye and vision assessments. Unfortunately, during the course of their young lives, most children probably never see an eye care practitioner who can provide the kind of professional eye assessment necessary to identify critical eye and vision problems at an early stage, explain those conditions to parents, and provide the care necessary to correct those problems.

One in every 10 children is at risk from undiagnosed eye and vision problems, yet only 13 percent of mothers with children younger than 2 years of age said they had taken their babies to see an eye and vision care professional for a regular check-up or well-care visit. Moreover, many children at risk for eye and vision problems are not being identified at an early age, when many of those problems might be prevented or more easily corrected.

Since many eye problems arise from conditions that can be identified by an eye doctor in the infant's first year of life, a parent can give an infant a great gift by taking them to see a physician within their first year. There is a wonderful program called **InfantSEE®** to help encourage parents in this endeavor. InfantSEE is a public health program designed to ensure that eye and vision care becomes an integral part of infant wellness care to improve

a child's quality of life. Under this program, our member optometrists will provide a comprehensive infant eye assessment within the first year of life as a no cost public health service. For more information and to find an InfantSEE physician near you visit <http://www.infantsee.org/>.

Activity

Third and fourth grade is the typical time when children are given school assignments to read more intensely or for greater lengths of time. They also read from the blackboard a lot more, which calls for the use of different muscles. Children's eyes often become strained at this time and they complain of headaches. Like any muscle in the body that you don't use very often, children who begin to use their eyes more regularly and intensely through study may experience soreness and headaches.

Take the opportunity to compare how much your eyes move to see the writing on a blackboard (or paper far away), to how much your eyes move to read the small print in a textbook. The host should hang up a large piece of paper and write a full sentence or two on it. You might consider writing vision statistics to connect with the lesson. Make sure the writing is big enough to be seen from far away. Also give each mother a reading book with small writing. Have each mother compare the difference of reading from both objects. Discuss as a group the difference they felt individually. Then pair up and watch the difference in each other's eyes as they read first from the poster and then from the book. They should be able to see a major difference between the two (very little eye movement to read the poster, and a great deal of movement to read the book).

Discuss again the difference between the two. This activity should have helped them to understand the difference in eye muscle usage which will help them to better relate to what their children are going through as well as the wide variety of muscle that needs to be developed.

Suggested Reading

All Children Have Different Eyes
By Dr. Maria Burgio & Edie Glaser

References

InfantSEE, www.infantsee.org

The College of Optometrists in Vision Development (COVD), www.covd.org

Interview with Dr. Robin S. Price, Optometric Physician



Infant Development During the First 12 Months

The first year of life is one of the most critical stages in childhood development. From the moment they open their eyes, newborns undergo dramatic physical and mental changes.

During the first 12 months, infants should be examined regularly to determine proper development and identify any health problems. Early detection and treatment of potential problems are vital to a child's development. The following developmental milestones should be monitored during routine well-care exams with a pediatrician and the appropriate specialists.

	Vision	Speech & Hearing	Physical	Emotional & Social
By 3 Months	<ul style="list-style-type: none"> ▪ Tends to see objects about a foot away ▪ Follows moving objects and reaches for things 	<ul style="list-style-type: none"> ▪ Sucks and swallows ▪ Quiets and smiles in response to sound or voice 	<ul style="list-style-type: none"> ▪ Pushes up on arms ▪ Lifts and holds head up 	<ul style="list-style-type: none"> ▪ Needs to be cradled and comforted ▪ Begins to develop trust in parents or caregivers
By 6 Months	<ul style="list-style-type: none"> ▪ Eye movement and eye/body coordination skills develop ▪ Both eyes should focus equally 	<ul style="list-style-type: none"> ▪ Uses consonant sounds in babbling ▪ Uses babbling to get attention 	<ul style="list-style-type: none"> ▪ Uses hands to support self in sitting ▪ Rolls from back to tummy 	<ul style="list-style-type: none"> ▪ Smiles broadly and laughs when pleased ▪ Develops self-calming skills to quiet down after being upset
By 9 Months	<ul style="list-style-type: none"> ▪ Eye/body coordination skills develop further ▪ Eye contact begins to replace physical contact 	<ul style="list-style-type: none"> ▪ Increases variety of sounds and syllables ▪ Looks at familiar objects and people when named 	<ul style="list-style-type: none"> ▪ Sits and reaches for toys without falling ▪ Moves from tummy or back into sitting 	<ul style="list-style-type: none"> ▪ Gets angry and frustrated when their needs are not met ▪ Begins to fear strangers
By 12 Months	<ul style="list-style-type: none"> ▪ Uses both eyes to judge distances 	<ul style="list-style-type: none"> ▪ Says "mama" and "dada" 	<ul style="list-style-type: none"> ▪ Pulls self up to stand ▪ Stands alone and takes independent steps 	<ul style="list-style-type: none"> ▪ Expresses a variety of emotions such as fear, anger, dislike and happiness

Sources:

American Academy of Pediatrics – www.aap.org

American Optometric Association – Your Baby's Eyes Brochure

Invest in Kids – www.investinkids.com