Our Kid Patient has Glasses: What to do?
(Refractive Errors in Children)

Neepa Dave*, Sahil Mhatre**, Trupti Khaladkar**, Jyoti Dodhi**, Roma Vakade***, Karobi Lahiri Coutinho****

Abstract

The most common reasons a child needs to wear glasses are:

1. To improve vision and help the child to function better in his environment, by correcting refractive errors.

2. To help straighten eyes that are crossed or misaligned, (strabismus or squint)

3. To help strengthen a weak or lazy eye.

4. To protect one eye, if the child has poor vision in the other.

It is important to remember that during early childhood visual system is growing and developing and glasses can help ensure normal vision development.

Glasses are most commonly used to treat refractive errors.

Refractive errors in kids include nearsightedness (difficulty seeing things that are far away), farsightedness (trouble seeing things close by), and astigmatism (distorted vision caused by an irregularly shaped cornea).

Signs Your Child Might Need Glasses

Here are a few signs that indicate your child may be experiencing vision problems and need glasses:

1. Squinting: Squinting may be a sign that your child has a refractive error, which affects how well the eyes focus on an image. By squinting, your child may be able to temporarily improve the focus and clarity of an object.
2. Tilting head or covering one eye: Your child might cover one eye or tilt her head to adjust the angle of vision in an attempt to increase clarity. This might be an indication that the eyes are misaligned or that your child has amblyopia (lazy eye), which is a common eye disorder in children.
3. Sitting too close to the television or holding hand-held devices too close to the eyes. Narrowing of eyes to view distance objects. People who have myopia, or nearsightedness, have clear vision at close range and poorer vision at a distance. Bringing an object closer makes an image bigger and clearer.
4. Rubbing eyes excessively: Excessive eye rubbing may indicate that your child is experiencing eye fatigue or strain. This could be a sign of many types of vision problems and

**Consultant Eye Surgeon - Squint, Paediatric Ophthalmology and Neuro-Ophthalmology, **Optometrist - Taparia Institute of Ophthalmology, ***Resident Ophthalmologist, ****Consultant - Vitreoretinal Surgeon and Paediatric Ophthalmologist, Bombay Hospital Institute of Medical Sciences, 12, New Marine Lines, Mumbai-400 020.

conditions, including allergic conjunctivitis.

5. Complaining of headaches or eye pain: If your child complains about eye pain or headaches at the end of the day, he or she may be overexerting the eyes in an effort to increase focus of blurred vision.
6. Having difficulty concentrating on school work: Because children need to quickly and accurately adapt their visual focus from distant to near and on a number of different objects ranging from chalkboards and computers to textbooks, vision problems may manifest as a lack of focus on schoolwork.
7. If your child already has glasses, it's important to get eyes checked every 6 months or as the need arises.

Optimal vision is essential to the learning process. Many people don't realise how many problems poor vision can cause for school-aged children. Therefore, it is important to be aware of your child's overall eye health and what you can do to safeguard it.

What is the Correct Time to have an Eye Test in a Child?

1. All premature children with low birth weight should have an eye exam within the first month of life (30 DAY RULE) to look for Retinopathy of Prematurity.
2. All normal asymptomatic children should have their first eye test between 3-4 years of age. This is to detect uncorrected refractive errors and amblyopia which are best treated before 7-9 years of age. This is the CRITICAL period of visual development. If vision problems are not treated appropriately before this critical period, the eye brain connection undergoes permanent changes and then maybe very difficult to treat.
3. Children with a family history of high refractive errors, early cataracts, children with special needs, children with systemic conditions etc. should have an eye exam as needed.

How is an Eye Test done in a Child?

1. Preverbal children can be assessed with dilated retinoscopy and fundus exam.
2. Verbal children are first assessed with special picture visual acuity charts followed by dilated retinoscopy and fundus exam.

Criteria for Frame Selection

1. Special frames are available for children. Usually the all plastic variety which is soft mouldable plastic is preferred.
2. Allow child to choose the colour.
3. Get a paediatric frame that is sized appropriately and is durable.
4. Full frames with plastic material should be selected.
5. There are colourful, gummy frames that strap on with a headband, the child can chew on them, drop them, or even sit on them and they're not going to break.

Polycarbonate lenses should be selected because they are shatter free.

Help Your Child Use His / Her Glasses

Wearing glasses can be hard for children to accept. They may worry that the other kids will tease them. They may

feel different. Some children don't like wearing glasses and they "forget" to put them on or "forget" to take them to school. They think that they won't be able to play sports or that they'll look ugly. Glasses may feel uncomfortable or heavy at first.

There are several things you can do to help get young children to wear their glasses.

1. Help your child understand why she needs to wear glasses. Even toddlers can understand that glasses will help them see better.
2. For school-aged children, wearing glasses can help them read or see the blackboard. Be sure to ask the eye doctor the times your child needs to wear his or her glasses. Some children need glasses for reading and homework, and others need glasses to see at a distance.
3. If teasing or bullying is a problem from other students, talk with your child about effective ways to deal with the teasing. Often if the child doesn't react to the teasing, it stops. Talk with your child's teacher about it.
4. Let children help pick out frames that they like.

   Tell them that they look great when they wear their glasses. Many children are concerned that they look weird, or that everyone is looking at them when they first get glasses.
5. Make sure the glasses fit properly.

   Glasses should fit snugly, but not too tight. Glasses that are too tight can hurt behind the ears. Do not try to buy frames thinking that your child will grow into them. Glasses should fit comfortably now. Loose glasses will start to slide down your child's nose.
6. Keep safety in mind.

   Children's lenses should be made of polycarbonate. It is the safest material and is lighter weight than other lenses. If your child plays sports, sports goggles help protect against eye injury.
7. Keep your child's glasses clean and if you notice redness or sore patches on your child's nose or temples, take the glasses for readjustment.

   Check screws and other fittings regularly to make sure the glasses are secure.

   Make wearing glasses enjoyable.
8. Start your child off by having her wear the glasses for short periods of time. It also helps to link wearing glasses to something the child enjoys, such as watching a favourite video. Find picture books that show children wearing glasses.
9. Be positive.

   Make glasses seem "cool" for your child. Point out sports figures, celebrities, or family members who wear glasses. For very young children, "being just like Daddy" may be what counts. Point out how good the glasses look on your child.

   If the child takes his / her glasses off, put them back on in a firm but loving manner. Compliment your child for remembering to wear his glasses. Nagging or trying to reason with your child will not improve glasses wearing.
10. Make it routine.

    Make the glasses a part of the child's daily routine. Put them on in the morning as the child is getting dressed

and take them off before naps and bedtime. Let teachers know when the child should wear glasses.

11. Keep follow-up appointments.

References

1. A.K. Khurana (2007) Comprehensive Ophthalmology. 4th Edition. New Age International Ltd Publishers.
2. Kristen Finello (August 11, 2013) Kids and Glasses, Meredith Corporation.
3. Wikipedia Page on Children with Glasses.
4. Irvin M. Borish (2007) System for Ophthalmic Dispensing. 3rd Edition.
5. Jonathan H Salvin. Your Child's Vision, Kids Health.

Making Sense of Triple Inhaled Therapy for COPD

Guidelines for the treatment of chronic obstructive pulmonary disease (COPD) have consistently recommended long-acting inhaled bronchodilators - either long-acting muscarinic antagonists (LAMAs) or long-acting inhaled beta-agonists (LABAs) - as initial maintenance therapy. If disease control is not achieved, as manifested by inadequate lung function and disease exacerbations guidelines recommend their combined use. Although there is general agreement about the role of LAMAs and LABAs in the treatment of COPD, the role for inhaled glucocorticoids in this treatment guideline has been the object of much debate because of their modest effectiveness and concerns about safety, particularly the risk of pneumonia.

Until further evidence is available, we think that clinicians should rely on the updated GOLD 2017 guidelines recommending that escalation to triple therapy occur only after maximized bronchodilator treatment with LAMA-LABA regimens and be limited to patients with more symptomatic GOLD group D COPD with frequent exacerbations.

Samy Suissa, Jeffery M. Drazen, The NEJM, 2018, Vol 378, 1723-1724

Radial Artery as the Preferred Second Conduit for Coronary Bypass

The use of arterial grafts other than the left internal thoracic artery to the left anterior descending coronary artery for CABG remains very uncommon.

The Achilles' heel of the use of bilateral internal thoracic arteries is the risk of sternal-wound complications. An increasing number f studies document similar outcomes when comparing the strategy of using the single internal thoracic artery with the radial artery versus that of using both internal thoracic arteries for grafting. The data from Gaudino and colleagues provide further evidence that, in the presence of a suitable coronary anatomy, the radial artery should be strongly considered as the preferred second conduit to the left internal thoracic artery, particularly in younger patients, female patients, and patients without renal insufficiency. The radial artery should also be considered as the second arterial graft of choice in patients with diabetes, obesity, or chronic obstructive pulmonary disease, for whom the risk of deep sternal wound infection associated with the use of both internal thoracic arteries may outweigh the benefits.

Oz M. Shapira, The NEJM, 2018, Vol 378, 2134-2135