

## Understanding young minds

Children are not small adults; they require treatment tailored to their needs. This e-mailer wishes to sketch a clear picture of what a trip to the ophthalmologist entails, but more importantly a visit to an ophthalmologist who specifically specialises in children's vision - a **paediatric ophthalmologist**.

If you're a paediatrician or a parent, the main question you might be asked/asking is how will a child communicate to an ophthalmologist? How does an ophthalmologist determine if the answer to a vision question is **"better one or better two"**?



## What to Expect for Each Age

### From birth to around 4 to 6 weeks:

An infant's visual behaviour is judged by observing how they respond to bright lights.

### From 2 to 3 months of age:

Here an infant's visual behaviour is judged by observing how they look at and follow faces, toys as well as bright coloured lights.



## After 6 months to 2 years of age:

A paediatric ophthalmologist will test a child's visual behaviour by observing their tracking, their fixation patterns, as well as having them match pictures and letters if they can. Having them match pictures and letters help an ophthalmologist to attach a number value to a child's vision, which sometimes happen as early as 2 years old.

## The Visit

The first visit to the pediatric ophthalmologist is a **comprehensive evaluation** that will take about one to one and a half hours. The visit may take longer if there is a need for **specialized testing** or if there is a complex eye problem.

For parents it would be helpful to bring along their **child's medication list (if any) and medical aid cards**. If the child has had previous eye surgeries, it's important to attempt to bring those prior records.

The parent may be introduced to a number of people in the paediatric ophthalmology team as their child is examined. This may include an **ophthalmic assistant** (a person trained to test vision and perform special tests), **an orthoptist** (a person trained in muscle disorders and alignment), **an optometrist** (a person trained in focusing problems of the eye) and their **eye doctor** (ophthalmologist).



First, a detailed history will be taken about the child and what the parent may have noticed. It might be asked whether the parent could show us pictures of what they've noticed.

The child's vision will be examined through a number of techniques that allow us to test babies, preverbal children, and children able to read the eye chart.



# KiDS EYES

specialising in paediatric eye conditions and adult strabismus

**Dr Claire Cullen**

MBBCh, FCOphth (SA),  
MMed (Ophth), Fellowship (Canada)  
**Ophthalmic Surgeon PR 0489220**

We use **matching games, letter recognition and even pictures**. Each eye will be checked separately, which is important because a child can function normally even if one eye has decreased vision and the other eye sees well.

All children's **eye movements and muscle functions** are examined, regardless of their age. We check for any form of **strabismus** (the condition where the two eyes do not work together and allow for the brain to develop depth perception).

In more verbal children, **stereoacuity or 3D vision** is examined. This provides basic information on how the eyes work together.

**Eye pressure** is checked in a number of ways. These include **contact pressure measuring devices**, which require **numbing eye drops** to numb the eyes or **a special device called the icare**, which doesn't require drops and is painless. This is used most commonly these days in children.



The **health of the front of the eyes** and the pupils are examined similar to adults. We use a machine called a **slitlamp**, which is basically a sophisticated light. Most children can sit by themselves, on their knees or on a parent's lap while this examination is done. If a child is too young or too afraid a portable slitlamp can be used.

**All new exams normally include a dilated eye exam** of both eyes with eyedrops. This is the difficult part of a trip to an ophthalmologist. A small infant or younger child will have to be still, and it can sometimes be difficult to put the drops in. A

paediatric ophthalmologist understands this and will make this experience **as comfortable as possible**.

The drops will sting for about 10 to 15 seconds. The sensation is like being splashed with swimming pool water. The dilating drops take about 30 to 45 minutes to work. This important part of the exam will allow the doctor to look at the **inside and back of the eyes** and check the health of your **child's lens, retina and optic nerve**. Dilation also helps us **measure the focusing system** of the eye to see if your child's world is in proper focus.



# KiDS EYES

specialising in paediatric eye conditions and adult strabismus

**Dr Claire Cullen**

MBBCh, FCOphth (SA),  
MMed (Ophth), Fellowship (Canada)

**Ophthalmic Surgeon PR 0489220**

In **older children** a sophisticated machine called an **autorefractor** will take a “photo” which estimates the **focusing power of the eyes**. In **younger children** a special flashlight, called a **retinoscope** is used to determine the focusing power.

We check for near sightedness (**myopia**), farsightedness (**hyperopia**) and **astigmatism**. We also check that both eyes are in similar focus together. If one eye is out of focus compared with the other eye, a condition called **amblyopia** (lazy eye) can result.

When amblyopia develops, the brain chooses to **use one eye more than the other**, which can cause long-term vision problems in the other eye. Exercises, glasses and other types of eye therapy may be needed to **retrain the brain** to use the eye. In many cases, checking your child’s focus can provide important information in diagnosing and treating eye crossing problems.

Others tests may also be performed on an as needed basis, depending on what the preceding parts of the examination showed. These include formal visual **field testing**, **photography**, **high resolution scans of the back of the eye**, **pachymetry to check corneal thickness**, and **ophthalmic ultrasound**.

After the exam, the pupils will remain dilated for several hours. This may result in some **mild blurring of near vision** as well as **increased sensitivity to sunlight**. Parents might want to bring along a pair of sunglasses for their child if they are concerned their child might be extremely light sensitive. Most of the time this is not necessary though. Children can return to school but their teacher needs to be informed that their reading will be blurred.

After the examination, the doctor will discuss the results of the exam with the parent and answer any questions they might have!

## Happy to help.

If you have any questions regarding eye diseases that affect children, kindly mail Dr. Claire Cullen at [info@kidseyes.co.za](mailto:info@kidseyes.co.za)

