

EYE MOVEMENT RECORDING

AT CHILDREN'S HOSPITAL OF PITTSBURGH OF UPMC, we believe parents and guardians can contribute to the success of this test and invite you to participate. Please read the following information to learn about the test and how you can help.

Fast Facts About Eye Movement Recording

- Eye movement recording is done to diagnose certain types of nystagmus.
- Eye movement recording gives important information that can be used when a surgical approach to treating nystagmus is needed.
- This test does not hurt and it is done while the child is awake.
- During the test, your child's eye movement will be recorded in one of two ways: either by having your child wear a set of "goggles," similar to swim goggles, to look at a red dot on a special screen, or by having his or her eye movement measured by a special digital camera instead.
- The recording device will measure eye movement from inside the goggles or from the digital camera and record the results on a piece of paper that looks similar to an electrocardiogram (EKG).
- Eye movement recording can be done on children of all ages, even on babies who can't understand verbal directions.
- This test requires no preparation and is done in the Division of Ophthalmology offices at Children's Hospital of Pittsburgh in Oakland.
- Your child can resume normal activities as soon as the test and office appointment are over.
- This test takes about 30 minutes to 1 hour, depending on the age of the child and how cooperative he or she is during the test.

What Is the Eye Movement Recording Test?

The eye movement recording test gives important information in the diagnosis and treatment of nystagmus (*nigh-STAG-muss*). Nystagmus is an eye problem which causes the eyes to make involuntary (unintentional) movements or "wiggle." It usually affects both eyes and often is more visible when the eyes are looking in a particular direction. Nystagmus can cause vision problems and often occurs with strabismus (*stra-BIZZ-muss*), which is misaligned eyes, and amblyopia (*am-blee-OH-pee-uh*), sometimes called "lazy eye."



About 90 percent of all cases are infantile nystagmus, meaning that the child develops the condition in the first few months of life. The other 10 percent of cases are acquired nystagmus, meaning that it was caused by something else, such as a brain injury or tumor.

The eye movement recording test takes measurements of the eye to determine what position causes the nystagmus to get better or worse; what distances cause the nystagmus to get better or worse; and whether the nystagmus changes with direction or intensity over time. The ophthalmologist also can observe a child's head position as he or she wears the goggles. A child will naturally adjust his or her head to improve vision. All of this information is important in treating nystagmus, especially if a surgical approach to improving a child's vision is needed.

Home Preparation

No special preparation is needed before the eye movement recording test.

The Eye Movement Recording Test

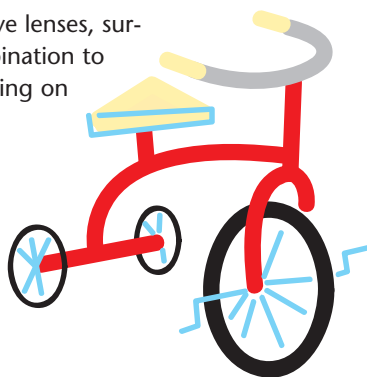
This test is done in a special room in the doctor's office at the Division of Pediatric Ophthalmology at Children's Hospital of Pittsburgh.

- Your child might be asked to put on a pair of special "goggles," similar to swim goggles, to begin the test. You might explain to your child that these special goggles are funny looking but will not hurt.
- If your child is old enough to understand verbal directions, your child will be asked to follow a red dot on a screen. The

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doctor will need to do three different tests with the dot to take special measurements. Each test looks for a specific type of nystagmus and each will take about 5 to 10 minutes. You might explain to your child that following the red dot with his or her eyes is like a game to see how quickly the red dot can be spotted on the screen using the funny goggles.

- If your child is too young to understand directions, you will be able to hold your child on your lap while he or she is wearing the goggles. With some help from the ophthalmology staff, your child will be able to start tracking the red dot on his or her own during the test.
- When the doctor has taken all the needed measurements, the goggles will be removed and the test will be over.
- If your child does not use the goggles, his or her eye movements will be recorded through the use of a special digital camera. The camera does not touch your child at all, but will record the movement of your child's eyes while he or she looks at the moving red dot.
- The doctor may need some time to review the results of the test. After reviewing the results, the doctor will discuss them with you and plan the treatment of your child's nystagmus.
- The doctor may recommend corrective lenses, surgery, adaptive techniques, or a combination to treat your child's nystagmus, depending on your child's specific condition.



Special Needs

If your child has any special needs or health issues you feel the doctor needs to know about, please call the Division of Ophthalmology at Children's Hospital **before** the appointment and ask to speak with a nurse. It is important to notify us **in advance** about any special needs your child might have.

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To see the list of all available patient procedures descriptions, please visit www.chp.edu/procedures.