

# Eye Care - Do You?

## Computer Vision

Children are susceptible to the same visual conditions as adults when a computer is viewed extensively, such as eye discomfort, blurred vision, headaches, and fatigue.

However, children have a more limited degree of self-awareness than adults. While engaging in an enjoyable computer activity or school work, they often maintain intense concentration until near exhaustion. Prolonged activity without a break can cause eye-focusing (accommodative) problems long after the activity has been completed.

Most computer work stations are arranged to accommodate an adult. A youngster using the same computer may have to look upward. The most efficient viewing angle is slightly downward (about 15 degrees). Besides vision problems, a child may experience head, neck, or back pain, not just from an awkward viewing angle, but also because of difficulty in reaching the keyboard or being unable to put their feet on the floor.

A child's own adaptability can actually be harmful when it involves the computer. Excessive eyestrain may be the result. Infrequent blinking may also lead to discomfort due to dryness, often mistaken for an allergy problem.

Studies have shown that one in four school age kids has a vision problem. Some are obvious, such as squinting and crossed eyes, other problems are less recognizable and require a thorough eye exam to identify. Early detection is important to avoid lifelong visual impairment. It

can also improve classroom performance and reduce behavioral and learning problems.

Unfortunately, an estimated 85 percent of children begin the school year without undergoing an eye exam. A parent should not count on their child, tween, or teen to report a vision issue. Often, children have adapted to their own visual impairments and mistakenly think that what they're seeing is the same as what everyone else is seeing.

Children Should receive visual screenings beginning during infancy and periodically thereafter (at a minimum of every two years depending on the need of the child). Those who wear glasses or contacts should have yearly checkups with their eye doctor.

### Possible signs of vision problems in a child:

- \* *Rubs eyes a lot.*
- \* *Closes or covers one eye.*
- \* *Dislikes reading and doing close-up work.*
- \* *Blinks more than usual.*
- \* *Squints often.*
- \* *Eyes are frequently watery.*

<https://www.aoa.org>

## Middleton Pediatrics Featured in PediaVision Press Release

**LAKE MARY, Fla., Jan. 26, 2012** -- In a pediatric practice dedicated to providing families with a unique and caring environment, Middleton Pediatrics is one of the first pediatric practices in Orlando using the Spot vision screener to assess their young patients' vision. This revolutionary vision screening device, created by PediaVision, is able to capture important vision data in one second or less.

"The parents of our patients belong to a generation that embraces new technology in assessing their child's health," said Michael Middleton, M.D., founder of Middleton Pediatrics.

**"The children have been very receptive to the screening"**

"Technology has become such a major part of their lives that they expect it in health care and fully appreciate how beneficial this technology can be in assessing vision health."

The breakthrough vision screener, Spot, was recently introduced into the market and can assess the vision of anyone from six months through adult with unmatched accuracy and speed, delivering immediate comprehensive, noninvasive and objective results. This has provided a significant change in Dr. Middleton's practice allowing his team to conduct vision screenings on very young patients.

"We no longer have to wait for the children to reach a certain age so they can articulate what they are seeing on the eye chart," said Dr. Middleton. "With Spot, we can now screen children from infancy through 18."

Liz Moore is the practice manager at Middleton Pediatrics who coordinated the introduction of Spot into the practice. Based on the reaction from patients and their parents, she is quite happy she made that decision. "The children have been very receptive to the screening," said Moore. "Typically, a manual screening takes several minutes to check a child's vision, however Spot allows us to capture an accurate result in just a few seconds. It is a short process designed to

get their attention with lights and sounds, making it easy for our team to use."

As PediaVision's Chief Executive Officer, David Melnik said, "For kids, Spot is no different than picking up a digital camera, saying smile, and click they are done. And what happens in that one second is a full analysis of that child's vision without them even realizing what has just occurred."

At this time, a little over half of the parents agree to vision screening as part of their child's annual physical. However, Dr. Middleton expects that number to grow dramatically once parents see how quick, easy and comprehensive the screening is with Spot. "Parents often tell me that they think Spot is great," said Dr. Middleton. "Some parents have even asked if we can screen them, after watching us use Spot to screen their children."

### About Spot

Spot has an incredibly quick capture time of one second or less which makes screening equally efficient in a physician's office or large-scale public screening. The Wi-Fi enabled handheld device makes vision screening as easy as using a camera. Spot's touchscreen interface clearly displays the results accurately and instantly.

### About PediaVision

PediaVision, the inventor of the Spot vision screener, is dedicated to solving the critical problem of undiagnosed vision problems and transforming the lives of thousands of children each day. Automated and objective vision screening empowers organizations in public health and private medicine to positively affect the outcomes of a child's education performance. Supported by ophthalmologists, optometrists, scientists and leading technology innovators, the

Spot vision screener is breakthrough technology and represents what vision screening should be. For more information, including how to order Spot, please visit [www.pedivision.com](http://www.pedivision.com).

## GREAT VISION

"We are always looking but we never really see." Milton Glaser

"If your eyes are good, your whole body will be full of light." Jesus of Nazareth

### GOOD EYES, GOOD VISION?

The human eye is remarkable, to say the least. Its ability to quickly adjust focus, discriminate minuscule differences of colors, shades, depth perceptions, and on and on. And then, to be able to send all of those messages chemically and electrically along nerves to the brain so that it can "recreate the scene" – remarkable!

Yet, what if your child went through life with poor vision despite having great eyes? Is it possible for your child to have vision problems that will not be diagnosed at a pediatrician's or even an eye doctor's office?

### MORE THAN MEETS THE EYE

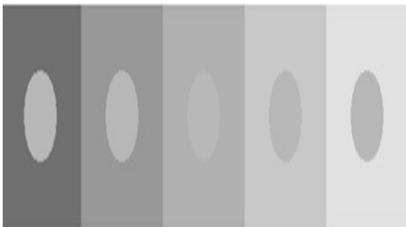
Vision is more than eyesight. Two people can look at the same thing and yet "see" it quite differently. For some fun and instructive examples, look at the following pictures:

What do you see?



A man playing a saxophone or a woman's face?

Which ovals are lighter and which ones are darker?



Actually, all of the ovals are exactly the same.

Look at the following picture and what do you see?



Now close your eyes almost completely and look again

### DEFINING GREAT VISION

The difference between vision and eyesight rests primarily with the brain, i.e. how one interprets what the eyes see. "Vision" involves both the eyes and the mind. Some have greater "insight" than others, and we see examples of this every day. The person who notices their wife's new haircut. The quarterback who sees opportunities to exploit a defense that other quarterbacks cannot see. The businessman or woman who looks at a problem and sees a solution that others don't. There are negative examples as well. Magicians are able to "trick our eyes". This can be true in a pathologic sense as well. The movie "A Beautiful Mind" with Russell Crowe was a great depiction of someone who really saw things that really were not there. (Though obviously not a true story, "Shallow Hal" is another movie that has a theme of good vision and is quite funny, though you will want to make sure it is appropriate for your child before letting them view it.) Once the eyes have done their job, the brain has specific areas

## Caring Well

### A Healthy Look at Your Child's Sexuality

Thursday June 14th

7:00PM-8:30PM

Topics Include:

- How to talk to your child about sex and sexuality at various ages
- Understanding Puberty
- How to shape and protect your child's exposure to the world around them

Please RSVP to [kelli@middletonpediatrics.com](mailto:kelli@middletonpediatrics.com)

devoted to vision in addition to all the areas that cognitively interpret and think about what is seen.

If we were to define great vision, perhaps we would say that it is not simply the ability to see but the ability to see things *appropriately*.

### PEDIATRICS AND "HEALTH"

So, what does all this have to do with pediatrics? Vision, including eyesight but not limited to it, is perhaps the primary way we navigate life in this world. As parents and pediatricians, we want to help our children live full and healthy lives, with "healthy" meaning more than simply treating diseases and going to doctors. We want them to "see well"; therefore they will need good vision.

Two common mistakes that we (or our kids) make that result in bad vision:

A first mistake is looking at something without seeing its context. The result of this is that we see something but fail to see it properly and fail to understand it accurately. The example above of the ovals surrounded by various shades of grey is an illustration of how surrounding "context" can affect the way something appears. The challenge is to appreciate the proper context so that our interpretation may be accurate.

A second mistake occurs when we look *superficially*. Looking at something without focused concentration on the object causes us to miss so much that is there. There is a famous story of a student instructed by his professor to look at a fish and then describe what he saw. After 10 minutes, the student thought he was ready. However, the student had failed to appreciate virtually everything about the fish. For many days, the professor had the student continue studying the same fish until finally the student started seeing things previously missed (to see the full story, go to <http://philosophy.lander.edu/intro/introbook2.1/x426.html>). One of the great things about the field of science is that it teaches us to look critically with sustained thought, looking deeply so we can look at the world accurately.

Superficial vision can also mean that we look at situations or people and see only the obvious external things, failing to appreciate the less obvious, but far more important, aspects of the person or situation. Like having a bad lens in your eye, bad values and points of emphasis in our minds cause us to see and interpret the world around us in a distorted way. (This, by the way, is the message of "Shallow Hal".)

### HOW DO YOU IMPROVE YOUR CHILD'S VISION?

So, if vision is more than eyesight, and improving vision therefore involves more than eating carrots, what are we as parents to do? How can we help our children navigate life well? A couple of suggestions:

Teach your children to think. This doesn't mean simply learn material that will be on a test, which is far too often what our kids are primarily learning to do, but rather to consider what the material means and how it relates to everyday life, their life. Don't be afraid to let them be bored. The ability to focus and think must be cultivated, and one of the primary ways this skill is cultivated is during times of boredom.

Reading is another way that our vision is improved as it enhances our ability to interpret accurately. Make sure your child reads books that teach them about life, and then have discussions with them about these books. Learn how to ask great questions, as this will challenge them to think and interpret what they learn.

How are you teaching your child values about life? If a child's values are the lens through which they see events and people, what values are you emphasizing to your kids, by your words and your actions? Have a conversation as a family about what values you want to make sure you pass along to your children.

As a parent, I want to help my children have great vision, i.e. I want them to be able to see things as they really are—to understand the significance of things they are taught in school, to know that the core of a person is not what they look like, that the value of someone is based on something more than their income in society or the degree to which their fame extends, and on and on.

May our children have both eyesight (at least corrected) AND vision that is 20/20, and the years of their life after they leave our home be ones that are "full of light".