Vision Screening and Amblyopia

Amblyopia, or poor vision caused by abnormal development of visual areas of the brain, occurs in as many as 2-4% of children.

Amblyopia can be due to poor visual input from one eye, or, less commonly, both eyes. Amblyopia remains treatable until age 60 months, with rapid decline in effectiveness of treatment afterwards.

The goal of vision screening in infants and young children is to detect EARLY the more common risk factors for amblyopia.

Traditional vision screening with an eye (Snellen) chart is difficult to do well in children under the age of 5. Our practice uses a machine called Spot Vision Screening to screen vision instead- this machine performs a "refraction" using a beam of light that is reflected off of the retina (allowing us to create a measurement of the eye's focal length) and can detect many of the common causes of amblyopia. Since this is a screening test, any possible abnormalities are referred to a pediatric ophthalmologist for further testing. Many times the abnormalities found are minor, and can be followed with serial exams. We have, however, picked up significant visual abnormalities that, when corrected early, can save a child significant visual impairment in the future.

Strabismus- ocular misalignment; most common cause of amblyopia

Anisometropia- asymmetric refractive error between the 2 eyes, which causes the brain to "suppress" the image from the weaker eye.

Astigmatism- blurred vision at any distance because of abnormal curvature of the cornea or lens.

Hyperopia- farsightedness; visual images come to focus behind the retina (difficult to see objects close up.)

Media opacity- opacities of the clear portions of the eye such as the cornea, lens or fluid between structures, can cause blurry or reduced vision. One example is cataracts.

More information about Amblyopia and other pediatric vision problems can be found here:

American Association for Pediatric Opthalmology and Strabismus
http://www.aapos.org