

Vision Screening in Children

The US Preventive Services Task Force (USPSTF) has recently published new recommendations on vision screening in children.

Childhood Vision Problems

Vision problems in children include **strabismus** (crossed eyes), **anisometropia** (a condition in which the 2 eyes have different levels of visual acuity), **hyperopia** (farsightedness), **myopia** (nearsightedness), and cataracts. Strabismus, anisometropia, and visual deprivation can lead to a condition called **amblyopia**, a permanent loss of vision due to abnormal visual development in early life, which is a crucial period of maturation for the visual system. Amblyopia is one of the most common vision problems in children, and early diagnosis and treatment leads to better vision outcomes. Vision problems can be treated in a variety of ways depending on the underlying problem, such as with glasses, eye patches, or surgery if necessary.

What Tests Are Used for Vision Screening in Children?

Vision screening in children can involve a number of different tests. Some tests done in the primary care setting include external inspection of the eyes, red reflex testing, corneal light reflex testing, and testing of visual acuity using pictures or letters. Other tests can be done with more specialized instruments (autorefractors and photoscreeners).

What Is the Patient Population Under Consideration for Vision Screening?

This USPSTF recommendation applies to children aged 6 months to 5 years.

What Are the Potential Benefits and Harms of Vision Screening in Children?





The potential benefit of vision screening in children is large: it may prevent permanent vision loss by finding and treating vision problems before the window of visual development is closed. There is adequate evidence that vision screening in children aged 3 to 5 years to detect amblyopia or its risk factors (strabismus, anisometropia) improves visual acuity. Potential harms include false-positive test results, which can lead to unnecessary treatments such as wearing glasses or an eye patch when not needed. These treatments generally do not worsen vision in "good" eyes but may cause psychological stress. Overall, the degree of potential harm is likely small. For children younger than 3 years, there is not enough evidence available on benefits vs harms.

How Strong Is the Recommendation for Vision Screening in Children?

The USPSTF concludes with moderate certainty that the benefits of vision screening in children aged 3 to 5 years outweigh the harms.

Author: Jill Jin, MD, MPH

Source: US Preventive Services Task Force. Vision screening in children aged 6 months to 5 years: US Preventive Services Task Force recommendation statement. *JAMA*. doi:10.1001/jama.2017.11386

Vision Screening in Children Aged 6 Months to 5 Years	
Population	USPSTF recommendation grade
 <p>CHILDREN Aged 3-5 years</p>	 <p>Recommended</p>
 <p>CHILDREN Aged younger than 3 years</p>	 <p>There is insufficient evidence to make a recommendation.</p>

For children younger than 3 years, the USPSTF concludes that there is not enough evidence to assess the balance of benefits and harms of vision screening.

Bottom Line: Current Recommendation for Vision Screening in Children

The USPSTF recommends vision screening at least once in all children aged 3 to 5 years ("B" recommendation). The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of vision screening in children younger than 3 years of age ("I" statement).

FOR MORE INFORMATION

www.uspreventiveservicestaskforce.org/Page/Document/draft-recommendation-statement/vision-in-children-ages-6-months-to-5-years-screening

To find this and other JAMA Patient Pages, go to the For Patients collection at jamanetworkpatientpages.com.

The JAMA Patient Page is a public service of *JAMA*. The information and recommendations appearing on this page are appropriate in most instances, but they are not a substitute for medical diagnosis. For specific information concerning your personal medical condition, *JAMA* suggests that you consult your physician. This page may be photocopied noncommercially by physicians and other health care professionals to share with patients. To purchase bulk reprints, call 312/464-0776.