

Down Syndrome

WHAT CAUSES DOWN SYNDROME?

Down syndrome is a medical problem caused by having an extra copy of all or part of chromosome 21, making three copies of the chromosome rather than the usual two copies. Down syndrome is also called trisomy 21.

DO CHILDREN WITH DOWN SYNDROME HAVE EYE PROBLEMS?

People with Down syndrome are at a higher risk for having a variety of eye and vision problems. Fortunately, many of these eye problems can be treated, especially if found at an early age. The most common eye findings include:

- [Refractive errors](#) - Children with Down syndrome are more likely to need glasses than other children. Some children with Down syndrome may benefit from wearing bifocal glasses. Refractive error (problems focusing due to a need for glasses) may develop early in life or later on.
- [Strabismus](#) - Between 20% and 60% of those with Down syndrome have eyes that are not straight (strabismus). [Esotropia](#) (eyes that drift inward toward the nose) is more common than [exotropia](#) (eyes that drift outward towards the ears). Strabismus may be treated with glasses and sometimes eye muscle surgery.
- [Keratoconus](#) - A cone shaped curve in the cornea (front layer of the eye), occurs at a higher rate in teens and adults with Down syndrome. Keratoconus is usually diagnosed around puberty and should be monitored regularly. It can cause blurred vision and may need different treatments, including glasses, contact lenses, and surgery. Keratoconus is worsened by eye rubbing; so eye rubbing should be discouraged.
- [Cataracts](#) - There is an increased risk of cataracts that are present at birth or that may develop over time. The cataracts may get worse slowly and should be monitored regularly, with surgery performed when needed.
- [Glaucoma](#) - There is an increased risk of glaucoma (high pressure in the eye) in infants with Down Syndrome.
- [Blepharitis](#) - Inflammation of the eyelids with redness at the edge of the lids and crusting around the eyelashes may occur and cause a feeling of dryness or burning.
- Tearing - Children with Down syndrome have higher rates of tearing because the drainage channels are blocked or narrow ([nasolacrimal duct obstruction](#)). This may require surgical treatment.



- [Nystagmus](#) - This is a “back-and-forth” movement or shaking of the eyes. It can affect vision.

WHEN SHOULD CHILDREN WITH DOWN SYNDROME GET AN EYE EXAM?

The American Academy of Pediatrics (AAP) recommends that children with Down syndrome be examined by an ophthalmologist who has experience with children with disabilities within the first six months of life. Additionally, the AAP recommends either annual photo-screening or an eye exam by an ophthalmologist for children aged 1-12 years old.

WHERE CAN I FIND MORE INFORMATION ABOUT DOWN SYNDROME?

- [National Down Syndrome Society](#)
- [Down's Syndrome Association](#)
- https://eyewiki.org/Trisomy_21/Down_Syndrome

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