

Color Blindness

This material will help you understand color blindness.

What is color blindness?

Color blindness is a condition that affects a person's ability to see certain colors. The retinas have color-sensing pigments called cones. There are three types of cones: red, blue, and green. A balanced number of cones is necessary to have normal color vision. If these cones are deficient or non-functional, it may be hard to tell the difference between certain colors. About 1 in 12 males have some form of color blindness. Very few females have color blindness.

What are the types of color blindness?

The most common type of color blindness is red-green, where people have difficulty telling the difference between red and green colors. It is an inherited condition that is most common in males. Blue-yellow color blindness is less common and usually affects males and females in equal ratios.

How does color blindness affect my child's vision?

Your child may have difficulty telling the difference between shades of the same color. He or she may also see muted or washed-out versions of certain colors.

How is color blindness diagnosed?

An eye doctor tests color vision during an eye exam, usually using a book with patterns made from colored dots. Children with color blindness are unable to see all of the patterns in the pictures.

How is color blindness treated?

There is no treatment for color blindness, but there are things you can do to help your child adjust to living with the condition. Printing reading materials on white paper with black ink is helpful. Labeling crayons, markers, and colored pencils can help your child avoid confusing colors. You can also help your child learn the color of common items. This will help him/her have a reference when talking about colors.

How will color blindness affect my child in the future?

Color blindness is not a severe limitation. Most children learn to adjust to living with color blindness. However, color blindness may make having some jobs more difficult, such as for electricians, painters, and military pilots.

For more information, scan these codes with your smartphone or visit the websites listed.



<http://www.aapos.org/terms/conditions/144>

Disclaimer: This document contains information and/or instructional materials developed by the University of Michigan Health System (UMHS) for the typical patient with your condition. It may include links to online content that was not created by UMHS and for which UMHS does not assume responsibility. It does not replace medical advice from your health care provider because your experience may differ from that of the typical patient. Talk to your health care provider if you have any questions about this document, your condition or your treatment plan.

Author: Kristin Maurer, BA, MPH candidate
Reviewers: Catherine Choi, MD and Gale Oren, MILS

Unless otherwise noted, Patient Education by [University of Michigan Health System](#) is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License](#).

Last Revised 4/2015