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Color Vision (Color Blindness)

Color vision difficulty is most often hereditary. It is a sex-linked recessive trait and is usually passed form an affected male via his daughter to his grandson. It is estimated that 1 of 12 boys and 1 of 200 girls have the problem. This deficiency may also be acquired through injure or disease, but this is less common. There are various degrees of color vision impairment. Color vision deficiency does not usually interfere with visual acuity and correction of this deficiency is limited at present. Educational referral is recommended if the color deficiency interferes with the child's ability to use the educational materials in his/her classroom.

Color deficiency is defined as the absence of or defect in the perception of colors. The most frequently used class of color deficiency is based on the perception of red, green and blue (termed the 1st, 2nd and 3rd color factors, respectively). If there is a defect in the perception of one of these colors, a color will be perceived as if it were composed only of the other two colors. Based on the color or colors for which there is defective perception, a person may suffer from red, green or blue deficiency.

People who have such deficiencies cannot distinguish between certain colors or shades of colors. The most common deficiency is red-green. And since most road, marine and airborne traffic positions use these colors for signaling, knowledge of a color deficiency is important.

Color deficiency in which all colors are perceived as gray is termed monochromasia.

Colored plate help determine a person's ability to perceive color. Persons with normal color vision will see geometric shapes. Those with a color deficiency will see a different shape or none at all. Mild to moderate color deficiency is seldom a handicap.