

What They See

It is difficult for people with normal color vision to understand what people with Color Vision Deficiency see. Scientists can now filter photographs to accurately represent the view of a person with dichromatic (two-cone) color vision. Normal color vision is trichromatic, using three cones. The photographs below represent the view of a person with Deuteranopia, a type of Red-Green Color Vision Deficiency in which the green-sensitive cone is absent. Because there are different types of Red-Green Color Vision Deficiency, these photos may or may not represent the exact type that you or your family member have.

In the apple photos below, note how red and green appear as different shades rather than as different hues to a person with a red-green deficiency.



Normal Color Vision (Unfiltered)



Dichromatic Color Vision (Filtered)

Red and green are not the only colors affected for an individual with Color Vision Deficiency. The picture of flowers below shows how purple and orange (colors with red in them) also have a different appearance. People with dichromatic vision see fewer hues and so have a significantly different view of the world than those with normal color vision.



Normal Color Vision (Unfiltered)



Dichromatic Color Vision (Filtered)