



Rods are so sensitive that any kind of light breaks them. When a camera flash goes off in front of you, for instance, it leaves a blind spot on a patch of your retina where all the rods are broken. In daylight, rods break much faster than they can be repaired. Whenever you're in the dark, your eyes must rebuild all the rods, so night vision develops slowly.

Cones can see colors, but rods distinguish colors only as shades of gray. That's why you see most stars as silver or white, even though telescope photos show them

in bright reds and oranges, blues and yellows. Most starlight is too dim for cones to see.

Both rods and cones see some colors as brighter than others. Cones see yellow as the brightest color, followed by red. To rods, blue and green are the lightest shades of gray.

Rods and cones are spaced differently in your eye. In the center of the retina is a tiny pit called the fovea centralis that contains no rods at all—only cones. In the fovea, cones are packed very closely together, and each cone sends a separate signal to the brain. The fovea is very good at seeing details, like words in fine print, if you look straight at them under a bright light.

The area surrounding the fovea consists of both rods and cones. About 6 million cones cluster around the fovea, becoming sparser nearer the edge of the retina. At the very edge of the retina, there are no cones at all. About 120 million rods are evenly spaced over most of your eye.

Unlike the cones in the fovea, no rod has its own separate channel for signaling the brain. About 120 rods share each signaling channel. The brain gets a message when any one, or several, of those rods receives light. But since the brain can't pinpoint exactly which rod sent the signal, it gets imprecise information about what's being seen.

Rods—your nighttime eyes—aren't good at seeing details. A full moon may seem bright enough to read by, but even the brightest moonlight will allow you to read only the biggest headlines in a newspaper. Your nighttime eyes have some amazing abilities, though. Scientists say that when