Jeepers creepers, what color are your peepers? It depends on the amount and pattern of melanin, or pigment, in the iris—the colorful ring around the black circle in the middle, your pupil. The iris’s expanding and contracting are what control the amount of light that enters your eyes. The iris has two layers, and melanin is found in both, but it’s the pigment in the front layer that determines your eye color.

The amount of melanin produced in the iris is determined by a person’s DNA. Brown eyes have the most melanin, green not as much, and blue even less. Brown eyes are likely to run in your family if your ancestors came from a part of the world that receives the most sunlight, because melanin provides protection from the sun. If you have blue eyes, maybe your great-great-great-grandparents didn’t need as much sun protection.

Some babies are born with dark-blue or slate-gray eyes. Then, at birth, the iris begins producing melanin, and eye color matures. The biggest changes occur between 6 and 9 months of age, but sometimes, eye color doesn’t become permanent until age 3!

Sometimes, and this is very rare, the iris appears violet or red. What you’re seeing is not a violet or red iris but the blood vessels behind it. This happens when there’s little or no pigment.

Have you ever spied someone whose eyes were two different colors? That’s yet another rarity. And there are even people whose eyes just look like they’re two different colors, because one pupil is much larger than the other (usually because of injury). Apparently, color is more than meets the eye. —Elaine Vitone and Kylie Wolfe

Is there a topic you’d like For Real! to explore? Are you a teacher who would like to use Pitt Med in the classroom? Drop us a line: medmag@pitt.edu