WHAT MAKES YOUR IRIS UNIQUE?

Irises are not simply blue or brown. In fact, every iris is blue and it is the distinct way this interacts with pigment and pattern which produces the incredible variety that we see.

COLLAGEN

At the back of every iris is a layer of collagen fibres which radiate from the pupil and form intricate patterns and textures. They give the iris its physical structure, crunching up and stretching out like springs as the pupil grows and shrinks. Collagen is white but scatters light in such a way as to appear **blue** - just like the sky.

PUPIL

Some people have naturally large or small pupils. Those with larger pupils often report being more sensitive to bright lights.

GREEN

Green irises occur where there is the presence of both pheomelanin (the yellowish pigment found in amber eyes) and a thin layer of melanin. These warm gold tones combine with the blue collagen behind to produce green.

HETEROCHROMIA

A condition where an uneven distribution of pigment results in two distinct colours. This example shows Central Heterochromia with a gold ring around the pupil. It may also manifest in segments or with each iris being a completely different colour.

MELANIN

Melanin is a pigment which occurs throughout the body and gives us **brown** hair, dark skin and freckles. It determines eye colour by interacting with the blue collagen layer behind. Melanin is not spread evenly across the iris - it forms areas of chocolate, coffee and gold. The more melanin in the iris, the darker it will be.

BANDS

Eyes grow rapidly in the first few years of life. These concentric bands around the outside of the iris are where the melanin layer stretched and split to form growth rings, like a tree.

AMBER

Amber eyes are rare in humans. They occur when the yellow pheomelanin pigment is dominant, giving the eye a copper or gold hue. In normal lighting amber eyes often look brown, and only show their true colour with the aid of a bright light.

PATTERN

Collagen fibres may be regularly-spaced and parallel - resulting in a lighter and more uniform colour, or may split and converge to form dramatic patterns with areas of highlight and shadow - giving a darker and more textured appearance.

FRECKLE

Small concentrations of melanin, exactly like you get on your face and body.

Your iris is much more detailed than your fingerprint. In fact, it's so specific that your iris is unique not just in the world, but in history! Our eyes start to develop just two weeks after conception. The iris is fully-formed in the womb and doesn't change throughout your life. Except for occasionally acquiring freckles.

Even if no one in the past few generations of your family had blue or green eyes, these recessive traits can still appear in later generations.

DID AON KNOMS

Your left and right irises are different, but will look 'like a pair' with similar patterns and colours. Even identical twins have different irises. The eyes are the second most complex organ in the body, after the brain; and about half of the brain is dedicated to vision.

The eye is the fastest muscle in your body – hence why when something happens quickly, we say 'in the blink of an eye!'









