WHAT YOU NEED TO KNOW ABOUT EYE DEGENERATION

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Margarita, or Rita to her relatives, was only eight years old when her parents found out about her poor eyesight. At her annual doctor's appointment, she failed her eye exam. Both Rita's parents wore glasses so they were not alarmed at first. They thought that Rita might just need to wear glasses, too. However, at an Easter egg hunt party, Rita ran right past eggs her four-year-old sister Nancy spotted. She also started bumping and tripping over objects, so that bruises and headaches were common occurrences. That was what prompted her parents to take her to a pediatric ophthalmologist, a consultation that would change their lives enormously.

Rita was diagnosed with Retinitis Pigmentosa (RP), a disease that was gradually destroying her retina, the part of the eye where images are captured just like a camera. The retina, which is located at the back of the eye, sends visual images to the brain where they are perceived or interpreted.

HOW THE EYE WORKS

When light enters your eye, it is focused onto your retina. The cells in the retina that receive the visual images are called photoreceptors. The retina has a number of layers, but the most important for vision is the layer where photoreceptors are found.

Photoreceptors are cells that are sensitive to light. There are two types: rods (which are responsible for vision in low light) and cones (which are responsible for color vision and detail in high light).

The macula, which is the central part of the retina, contains a few million cone cells that work best in bright light and allow you to see fine detail for activities like reading, writing and recognizing colors.

The peripheral retina is further away from the central macula. It is mostly made up of rod cells. RP causes damage to the rod cells, in particular. These rod cells allow us to see when light is dim and provide our peripheral side vision outside our main line of sight.

In RP, the photoreceptors progressively lose function. Side vision slowly worsens over time. Night vision is also affected. Central vision typically declines in the advanced stages of the disease.

Most cases of retinitis pigmentosa are inherited. However, some people develop the disease even if they have no family history. Others may develop the condition as part of another disorder.

Although the disease worsens over time, most patients retain at least partial vision and complete blindness is rare. There is currently no known cure or effective treatment for RP, but there are some possible ways to manage the condition.

RP is an inherited disease causing degeneration, or the progressive death of retinal cells. It affects one in 3,000 to 5,000 individuals. It can occur and be diagnosed anytime from childhood to later adulthood, and varies in its speed of progression and severity. Losing your vision rapidly can be scary. You will have to make a lot of adjustments to how you do things over time, but with the right support and resources, it is entirely possible to live the life you want to live, and live it to the fullest.

RP is a very tricky disease. Night vision is usually the first to go (one cannot see the sun rise or the stars at night), followed by side vision, and then it gradually closes in until it also takes out your central vision.

Peripheral vision is like looking through a peephole and staring straight ahead. You see everything above, below and to your sides. Suddenly, the peephole gets smaller and smaller. You see everything in front of you, but everything above, below and around you goes black. It's like you're looking through a narrow tube, or tunnel. This is how it feels to have "tunnel vision," and then when everything else has blacked out, it means you've lost your central vision as well.

EYE HEALTH

Eye degeneration can come in waves. You can have stable vision for years and then suddenly lose a lot at once. In the advanced stages of RP, you might not be able to read a menu or identify a face, but still be able to tell someone is there and make eye contact with them.

Research says many individuals with RP don't start losing their sight until they're in their 40s, but that's not always the case. Rita, who is now 26, lost the majority of her vision. She wasn't always aware of how much vision she had lost, like the time she missed a stop sign during her driving test. She tried to dismiss it, until she would catch herself missing many other things. Rita would gradually lose her ability to see and there was no way to predict how far her eyesight would deteriorate.

There was also no way to stop the progression, as there was no known cure, until Human Mesenchymal Stem Cells (HSMCs) came on to the scene. HSMCs are actually marketed for rejuvenation and anti-aging, but as many individuals avail of this kind of treatment, physicians all over the world realize that it's for more than just beautification. It actually helps people with other ailments like heart disease, diabetes, stroke, spinal cord injury, chronic kidney disease, Parkinson's, arthritis, RP, and many more.

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