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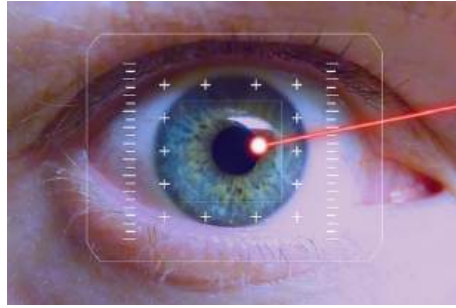
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Reading Comprehension Passage & Questions

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Laser Eye Surgery



What is Laser Eye Surgery?

Laser eye surgery¹ is a type of **refractive surgery**². Refractive surgery fixes the three most common eyesight problems so that people either don't need glasses or don't need their glasses to be as strong. To understand how laser eye surgery works, let's first learn about the eye and the three most common vision problems.

Did You Know?

Almost 30% of people in the United States are nearsighted.



The pupil is the opening in the middle of the iris.

How Do Eyes Work?

The eye is made up of many parts, but we only need to know about the iris, pupil, cornea, retina, lens, and optic nerve for now. The clear **cornea**³, at the front of the eye, acts like a window. When light comes through the cornea, it gets bent – or **refracted**⁴ – so that it goes through the pupil. The **pupil**⁵ is the opening in the middle of the iris. The **iris**⁶ is a flat, colored layer of the eye. When we talk about what color someone's eyes are, we are talking about the color of their irises. The iris changes the size of the pupil to make sure enough light gets in. This light goes through the **lens**⁷, which can change its width to focus the light onto the retina. The **retina**⁸ is at the back of the eye and catches the light using cells called **photoreceptors**⁹. The photoreceptors turn light energy into electrical impulses, which are sent to

¹ **Laser eye surgery**: a type of refractive surgery that uses a laser to fix people's eyesight.

² **Refractive surgery**: a type of surgery that fixes the three most common vision problems.

³ **Cornea**: a clear front of your eye; acts like a window letting light in.

⁴ **Refracted**: bent.

⁵ **Pupil**: the opening in the middle of the iris

⁶ **Iris**: flat, colored layer of the eye; where we get our eye color from.

⁷ **Lens**: layer of the eye that focuses light on the retina; can change its width to change focus.

⁸ **Retina**: layer at the back of the eye that catches light using photoreceptors.

⁹ **Photoreceptors**: special cells in the retina that capture light and turn it into electrical impulses.

the **optic nerve**¹⁰. The optic nerve then carries these impulses to the brain, where they are turned into an image.

Common Vision Problems

Ecobottle Sample



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Astigmatism¹¹ is a weirdly shaped cornea or poorly curved lens, which causes blurred vision at any distance. The eye can't focus entering light.

Laser Eye Surgery

In laser eye surgery, a laser changes the shape of the cornea to give patients clearer vision. The laser uses cool, ultraviolet light to painlessly remove tiny pieces of cornea. A computer that has been programmed specially for a patient's vision problem controls the laser. For nearsighted patients, the cornea is flattened. For farsighted patients, it is steepened. For patients with astigmatism, the cornea is smoothed into a more regular shape. The entire procedure usually takes around 15 minutes if patients have both eyes operated on the same day. Each eye normally takes around 5 minutes. Patients have to rest right after the procedure and cannot drive themselves home.

Almost all patients end up with much better vision after laser eye surgery. Sometimes, their vision gets better almost right away.

¹⁰ **Optic nerve:** nerve that carries electrical impulses from the photoreceptors to the brain.

¹¹ **Astigmatism:** vision problem in which objects at any distance are blurry.

Reading Comprehension Questions:

1. What is
2. What are the three most common vision problems and what are the effects of each?
3. What

Extension Question:

4. Laser eye surgery is

TWE READING SAMPLE

Reading Comprehension Questions:

Ecobottle Sample



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TWF READING

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