Retinitis Pigmentosa

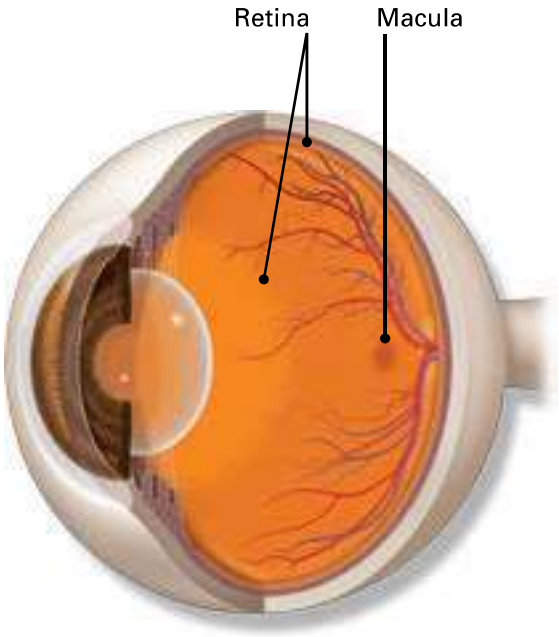
Retinitis pigmentosa

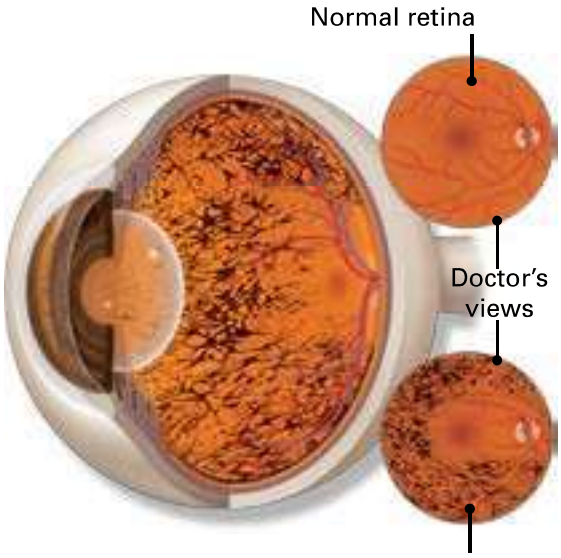
Retinitis pigmentosa (RP) is a group of eye problems that affect the retina. This condition changes how the retina responds to light, making it hard to see. People with RP lose their vision slowly over time. Usually, though, they will not become totally blind.

Eye Words to Know

Retina: Layer of cells lining the back wall inside the eye. This layer senses light and sends signals to the brain so you can see.

Macula: Small but important area in the center of the retina. You need the macula to clearly see details and colors of objects in front of you.





Retina with retinitis pigmentosa

RP is a genetic condition, meaning it can be passed down in families. The type and speed of vision loss from RP varies from person to person. It depends on their form of the condition.

With RP, you may have vision loss in the following ways:

- **Loss of night vision.** Night blindness is when you cannot see anything in the dark. Your vision may be normal during the day. As you start losing night vision, it takes longer to adjust to darkness. You may stumble over objects or have trouble driving at dusk and at night. You might also find it hard to see in movie theaters or other dim rooms.
- **Gradual loss of peripheral (side) vision.** This is known as "tunnel vision." You may find you bump into things as you move around. This is because you are not able to see objects below and around you.

- **Loss of central vision.** Some people also have problems with central vision. This can make it hard to do detailed tasks such as reading or threading a needle.
- **Problems with color vision.** Some people may also have trouble seeing different colors.

How is retinitis pigmentosa diagnosed?

RP can be diagnosed and measured by:

- **Genetic testing.** This test looks at a sample of your blood or other tissues to see if you have certain genes that are associated with a disease. It can also help determine the likely course or severity of a disease, and whether gene therapy to replace the faulty gene may be helpful.
- **Electroretinography.** This test measures the electrical activity in the retina, or how well the retina responds to light. It works much like the EKG, which measures the activity and health of the heart.
- **Visual field testing.** RP can affect your peripheral (side) vision. Visual field testing helps measure your side vision and find any blind spots that may be developing.
- **Optical coherence tomography.** Also known as OCT, this imaging test takes special, highly detailed pictures of your retina. It can help diagnose RP and find out how it is affecting your retina.

Can retinitis pigmentosa be treated?

There is no single treatment for RP because there are over 100 genes that cause it. Scientists are studying why and how RP happens within families. They hope to develop treatments based on this information.

Some research has shown that vitamin A may slow the progression of certain forms of RP, but there is concern that high intake of vitamin A may lead to worsening of other eye conditions. Your ophthalmologist can advise you about the risks and benefits of Vitamin A and how much you can safely take. Taking too much vitamin A can be harmful, and evidence of vitamin A's effect on RP progression is not substantial. So vitamin A supplements are not currently recommended.

Some patients develop swelling of the retina and may be helped by a certain type of eye drop. Cataracts or clouding of the eye's lens may also develop and surgery to treat this might be helpful for some patients. There is also an "artificial retina" called the ARGUS II implant, which may be helpful for some patients with complete vision loss due to RP.

People with low vision can learn to make the most of their remaining sight. There are many devices and ways to do things differently that can help with tasks. Vision specialists can teach you to use these tools and techniques.

If you have retinitis pigmentosa and plan to have children, you might want to speak with a genetic counselor to learn about your chance of passing this eye condition on to your children.

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Summary

Retinitis pigmentosa (RP) describes a group of eye problems that affect how your eye sees light. There is treatment for RP due to RPE65 genetic defect. Research is ongoing for other forms of RP. See your ophthalmologist to get appropriate genetics testing.

People with low vision from RP can learn to make the most of their remaining sight with special techniques, devices and training.

Get more information about retinitis pigmentosa from EyeSmart—provided by the American Academy of Ophthalmology—at **aao.org/retinitis-pigmentosa-link**.

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