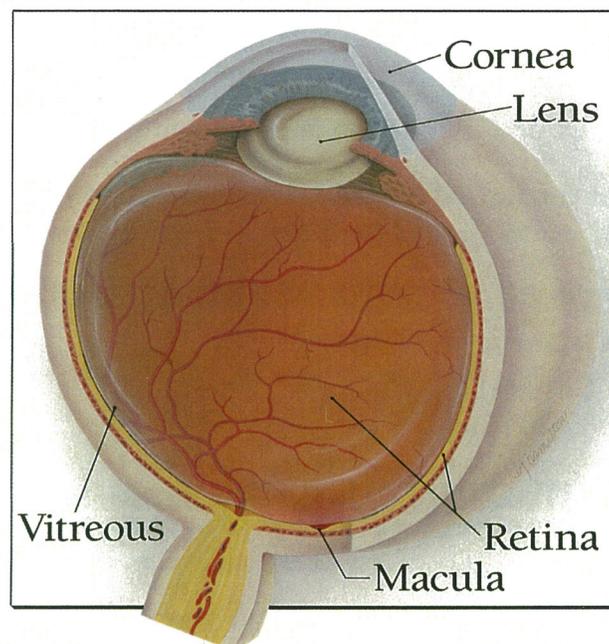


# Central Serous Retinopathy

## Anatomy of the Retina

Light enters the eye and is focused onto the retina, the light-sensing part of the eye. This information is transmitted through the optic nerve to the brain where it is interpreted as the images you see. The macula is the part of the retina responsible for your central vision. The retinal pigment epithelium (RPE) is a layer of cells that support the overlying photoreceptors, the cells that actually sense the light that enters your eye. Underneath the RPE is the choroid, or the blood supply that brings nutrients and oxygen to your retina.



## What is Central Serous Retinopathy (CSR)?

CSR is also known as idiopathic central serous chorioretinopathy (ICSC) because the exact cause is unknown. CSR is believed to be a non-infectious and non-inflammatory disease that results in collection of fluid below the retina and RPE, most commonly involving the macula. This is believed to be caused by increased and abnormal choroidal vascular permeability (leakage of fluid under the retina).

While CSR can occur at any age, most commonly patients are between 20 and 50 years old. Men are affected more commonly than women. Risk factors for CSR include the use of cortisone type medications (steroids - oral, inhaled or injected), smoking and stress. Many patients will be affected in both eyes.

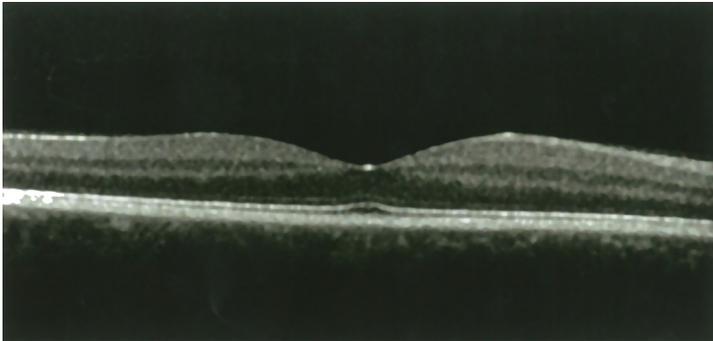
### Symptoms of CSR may include

- Blurred vision
- Metamorphopsia (objects appear distorted or crooked)
- Micropsia (objects appear smaller than normal)
- Central scotomas (areas of decreased vision)

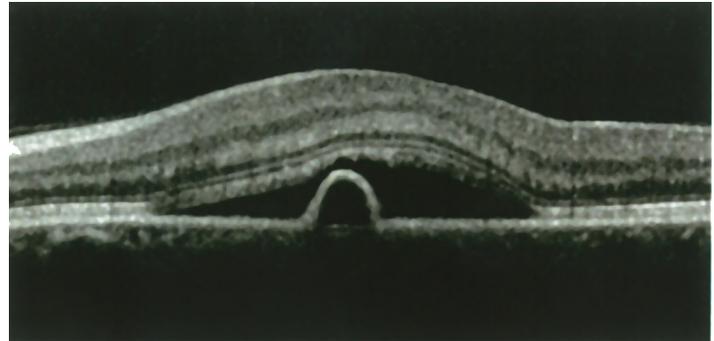
### **What your ophthalmologist sees**

The classic findings of CSR are collections of a clear fluid below the retina and RPE. Other problems can develop including retinal and RPE atrophy or degeneration, subretinal exudation and scarring, RPE tears and the development of choroidal neovascular membranes.

Your ophthalmologist may obtain multiple types of ocular imaging including photography, ocular coherence tomography (OCT) and angiography to facilitate diagnosis and treatment.



**Normal OCT**



**OCT with fluid under the retina**



**Normal fluorescein angiogram (FA)**



**Fluorescein angiogram with leakage under the retina and pooling into a "pocket" of fluid**

### **Disease course and treatment**

Approximately 50% of people with CSR will have more than one episode and about 10% of patients will have more than 3 episodes. In most cases the fluid under the retina will resolve spontaneously within 3 months and most people (about 90%) will maintain relatively good central vision. Some patients, however, will have significant visual effects and in its most aggressive form, CSR can cause severe central vision loss.

Patients with CSR should stop smoking, minimize cortisone or steroid use under the guidance of their primary care physician and decrease stress. For patients who would like more rapid visual rehabilitation and for patients with chronic or severe subretinal fluid, treatment may be needed. Different kinds of laser can be applied in an attempt to decrease the amount of subretinal fluid. If choroidal neovascular membranes develop, you may need to have injections of medications into your eye to try to stop the abnormal blood vessels.