# Ocular Histoplasmosis Syndrome, OHS

Histoplasmosis is a disease caused by inhaling spores of the fungus Histoplasma capsulatum from the air, into the lungs. This fungus is found all over the world, in river valleys and soil where bird or bat droppings collect. It is released into the air when the soil is disturbed by plowing fields, sweeping chicken coops, or digging holes.

Histoplasmosis is often so mild in its early stages, that it produces no apparent symptoms (*problems*). Problems that may occur are similar to those of a common cold. In fact, if you had histoplasmosis symptoms, you may think you have a cold or flu. The body's immune system normally overcomes the infection in a few days, without treatment. However, even mild cases of histoplasmosis can later cause a serious eye disease called Ocular Histoplasmosis Syndrome (OHS). OHS is a leading cause of vision loss in Americans ages 20 to 40.

## HOW DOES OHS DEVELOP?

Scientists believe that Histoplasma capsulatum (*histo*) spores spread from the lungs to the eye. They become lodged in the choroid (*layer of blood vessels that provides blood and nutrients to the retina*). The retina is the light-sensitive layer of tissue that lines the back of the eye. The histo spores cause abnormal, fragile blood vessels (*neovascularization*) to grow in the choroid. These abnormal blood vessels tend to grow toward the central portion of the retina (*macula*) where all detailed vision is concentrated. They eventually leak and scar, destroying the ability to see detail, read, or see straight ahead. In the early stages, the only thing your caregiver may see are tiny “histo spots,” which do not cause visual problems. Over time, however, visual loss may occur.

## SYMPTOMS

OHS usually has no symptoms in its early stages. In later stages, OHS symptoms may appear, if the abnormal blood vessels cause changes in vision. For example:

- Straight lines may appear crooked or wavy.
- A blind spot may appear in the field of vision.

These symptoms indicate that OHS has already progressed enough to affect vision. Anyone who has been exposed to histoplasmosis, and notices even slight changes in vision, should check with an eye specialist. Patients with OHS in one eye are likely to develop it in the other eye.

## DIAGNOSIS

An eye specialist will usually diagnose OHS if a careful eye examination reveals two conditions:

- Presence of histo spots. This suggests that you have been exposed to histo fungus spores.
- Signs of swelling, due to abnormal blood vessels in the choroidal tissue.

To confirm the diagnosis, a dilated eye examination must be performed. For this exam, the pupils are enlarged temporarily with special drops. This allows your caregiver to better examine the retina.

If fluid, blood, or abnormal blood vessels are present, your caregiver may want to perform a diagnostic procedure called fluorescein angiography. In this procedure, a dye is injected into a vein in your arm, and travels to the blood vessels of the retina. The dye allows a better view of abnormal blood vessels, and photographs can show the location and extent to which they have spread. Your caregiver especially looks at how close the abnormal blood vessels are to the macula.

## TREATMENT

The only proven treatment for OHS is a form of laser surgery called photocoagulation. This procedure is performed on an outpatient basis (*you go home the same day*) and is not painful, although a series of very bright lights may cause momentary discomfort. The laser creates a tiny burn which destroys the abnormal blood vessels. This reduces the risk that they will grow or spread.

If the abnormal vessels have grown too close to the macula, your caregiver may not be able to use

photocoagulation. This is because the laser itself causes damage to the retina, and the macula cannot be exposed to the laser without causing visual loss from the laser itself.

Laser treatment for OHS is not a cure of the disease. It is only a method for attempting to control the advancement of the disease.

**SEEK IMMEDIATE MEDICAL CARE IF:**

- You notice an inability to see detail clearly.
- Objects seem distorted when viewed with one eye.

Many eye specialists advise patients who have received treatment for OHS, and those with histo spots, to check their vision daily, using a pattern test called the Amsler Grid. This test allows you to tell if distortion of central vision is occurring, when testing one eye at a time.

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