

What is Eosinophilic Esophagitis?

Eosinophilic esophagitis (EoE) is a recently identified disease that is increasing in frequency in both adults and children. It is an allergic disease of the esophagus, the muscular tube that connects the mouth to the stomach. The allergic reaction causes build-up of eosinophils in the lining of the esophagus. Eosinophils are a type of white blood cell that play an important role in the immune system. However, they may cause considerable damage when they enter a tissue in large numbers. EoE is the disease that results from the prolonged accumulation of eosinophils in the lining of the esophagus.

What are the Symptoms of EoE?

The symptoms of EoE can vary, but most patients report problems discomfort or pain when swallowing food, or the sensation of food getting stuck in their throat as they try to swallow. Other symptoms may include cough, heartburn, or pain in the throat, chest or abdomen. Less commonly, patients vomit after eating.

Younger children with EoE may not be able to describe their symptoms, but may eat slowly or refuse to eat, and may fail to gain weight and grow appropriately.

Who Gets EoE?

EoE can affect people of all ages. However, it is more common in younger Caucasian males, who account for about 75% of cases.

What Causes EoE?

Food allergies are a common cause of EoE, especially in children. In these cases, dairy products, egg, wheat, soy and meats are the main food triggers. Allergies to substances in the environment, such as pollen and dust mites, can also play a role in EoE. Some patients may feel that their EoE is triggered during pollen seasons, for example.

Studies have also suggested that there is a genetic basis in some patients with EoE. Many patients with EoE have a family history of allergies, including symptoms of one or more allergic diseases such as asthma or eczema.

How is EoE Diagnosed?

If your doctor suspects that you have EoE, he or she may refer you to a gastroenterologist (a doctor who specializes in diseases of the digestive system) or an allergist for further examination.

To confirm the diagnosis of EoE, the gastroenterologist will perform an upper endoscopy and take biopsies. During this procedure, you will be sedated and a gastroenterologist will place a special flexible tube known as an endoscope into your esophagus. The endoscope is connected to a video monitor and also has a light and a camera attached. This allows the gastroenterologist to look at the monitor and see any problem areas on the lining of the esophagus. At this time, the gastroenterologist can also pass a tiny surgical instrument through the endoscope to take biopsy samples of the esophagus (biopsies).

How is Eosinophilic Esophagitis Diagnosed at the Lab?

Tissue samples removed during an endoscopy are sent to a pathology lab. There the tissue is prepared on glass slides and reviewed by a pathologist, a doctor who has specialized in the microscopic diagnosis of disease.

At Miraca Life Sciences, all pathologists who examine esophageal biopsies have further specialized in the study of conditions of the digestive tract.

The pathologist looks for abnormal cellular changes under a microscope. These include large numbers of eosinophils in the lining of the esophagus, as well as possible changes such as scarring below the esophageal lining. However, these changes are not unique to EoE, and may be seen in patients with acid reflux. The pathologist interprets the findings in the context of the clinical information provided by your doctor, and the diagnosis of EoE is usually made based on a combination of the biopsy report and your specific circumstances, including your symptoms.

At Miraca, difficult and unusual cases are reviewed together by our specialists at large multi-headed microscopes to ensure the most accurate and definitive diagnoses. The pathologist creates a pathology report with all the important findings to help the doctor decide your treatment.

The EoGenius(TM) Test

In some cases, the combined clinical assessment and microscopic examination of the biopsy specimens are not enough to make a definitive diagnosis.

Miraca Life Sciences now offers the recently developed EoGenius genetic test, which is based on the analysis of the expression of genes (RNA) that regulate the traffic of eosinophils in the esophagus as well as other key inflammatory/fibrosis genes. This test is performed on an existing biopsy specimen and can be helpful in determining whether a patient has EoE or a similar condition, such as reflux esophagitis.

The EoGenius test also can be used for patients with an established diagnosis of EoE to monitor their response to therapy.

To learn more about this test, visit www.MiracaLifeSciences.com/EoGenius

What Is the Next Step?

If you are diagnosed with EoE, you may need extra tests to look for a possible allergic cause and to see what treatments might help. Your allergist may choose to do certain tests, including:

Blood tests: Blood tests may be done to check for evidence of allergy, such as high numbers of eosinophils in the blood, or high levels of immunoglobulin E, which is an antibody that may indicate an allergic condition.

Food patch tests: A food patch test is used to check for food allergies. Your allergist will decide what types of food should be tested. In this test, tiny samples of the food are placed on small aluminum disks, which are taped on the skin on your back. They are removed after 48 hours, and the skin is examined to see if any of the foods have caused inflammation.

Allergy skin tests: Testing may be needed to check for allergies to common environmental substances, such as dust mites, animal dander, and pollens. In this test, a small drop of the substance is placed on the skin. The surface of the skin is pricked through the drop, and the skin is examined 20 minutes later for a reaction to the substance.

How is EoE Treated?

If your tests show any specific food allergies, your doctor and allergist may recommend that you stop eating those foods. The allergist may advise a food elimination diet. This usually involves removing six different food types from your diet for six weeks, and then having another endoscopy. If your esophagus has healed, the different foods can then be put back into your diet on by one, in order to try to identify the "trigger food" that causes symptoms.

Some of the symptoms and pathology findings in EoE overlap those of acid reflux. In addition, some patients with EoE respond to proton pump inhibitor (PPI) medication (e.g. Omeprazole, Pantoprazole, Nexxium, and many others). Therefore, your doctor may first prescribe a PPI medication to see if your symptoms improve. Your doctor may recommend a trial of this medication for eight weeks, followed by another endoscopy and biopsy to recheck any problem areas in the lining of the esophagus, and to see if eosinophils remain. If eosinophils are still in the tissue after treating for acid reflux, you probably have EoE, not gastroesophageal reflux disease (GERD).

However, most people with EoE do not respond well to PPI medication, and may therefore need to take a topical steroid to reduce the inflammation in the lining of the esophagus. This may be swallowed either in liquid or aerosol form.

Some patients with EoE do not respond well to medications or diet changes and, usually over a period of many years, develop scarring in the esophagus. This causes narrowing of the esophagus and reduces its ability to contract, thus making it more and more difficult to swallow food. In these cases, patients may need a procedure called esophageal dilation to help them swallow. This involves stretching of the esophagus under sedation to widen the tube and make it easier to swallow food.

EoE is an ongoing and recurring condition and most patients have continued symptoms, although they may change in severity over time. The aim of long-term management of EoE is to control the symptoms as much as possible. To achieve this result it is important that you work closely with your doctor, gastroenterologist, and allergist.

Learn More

Some trusted resources where you can learn more about the condition:

<http://www.eosinophilicesophagitishome.org/>

<http://patients.gi.org/topics/eosinophilic-esophagitis/>

<http://www.eogenius.com>

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