

## What is TIGER?

The International Gastrointestinal Eosinophilic Researchers (TIGER) are a group of pediatric and adult physicians and basic scientists interested in understanding the underlying science and clinical effects that eosinophils have on disease. TIGER currently includes physicians from the specialties of gastroenterology, allergy, and pathology as well as researchers who are dedicated to conducting laboratory, clinical and genetic research on eosinophilic and allergic disorders of the gastrointestinal tract. The group also works with medical societies and community advocacy groups to educate providers and the public about these disorders.



**How is it treated?** Currently, there is no single, accepted therapy for EE. Several medications have been shown to have a clinical or histologic effect including proton pump inhibitors, oral and topical corticosteroids, and leukotriene inhibitors. Of these, only steroids lead to both clinical and histologic resolution. Unfortunately, these medications almost always need to be given chronically as the disease recurs when the medications are discontinued. Esophageal dilatation has also been utilized in some cases, specifically those cases in which food impaction occurs. Future therapy may involve the use of biologics which would specifically target the eosinophil.

Because the underlying cause of EE is related to food ingestion, in a large number of pediatric patients (and in a number of adult patients), dietary restriction may be implemented. The most common foods associated with allergy include milk, eggs, nuts, beef, wheat, fish, shellfish, corn and soy; however, almost all foods have been implicated. Some patients may be allergic to a single food while others may be allergic to many foods. Unfortunately, because allergy tests are often unable to determine the causative foods, complete elimination of all foods, is sometimes needed. In these cases, patients must be placed on a strict elemental formula for 1 to 3 months in order to heal the esophagus. Subsequently, foods are slowly reintroduced in an attempt to discover the food(s) causing the allergy. Repeat endoscopy with biopsy is often necessary.

For More Information Go To:  
[www.TIGER-EGID.CDHNF.org](http://www.TIGER-EGID.CDHNF.org)



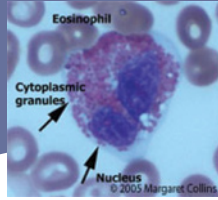
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# A Guide to Eosinophilic Esophagitis in Children and Adults





## What is Eosinophilic Esophagitis?

Eosinophilic esophagitis (EE) is an emerging disease related to food ingestion or aeroallergens. It is characterized by an isolated inflammation of the esophagus by a specific white blood cell the eosinophil. Several clinical symptoms can occur including difficulty swallowing, food becoming stuck in the esophagus, or symptoms of gastroesophageal reflux disease (GERD) such as vomiting, regurgitation, abdominal pain or heartburn. Uneffected individuals have no eosinophils in their esophagus while people with acid reflux may have a few esophageal eosinophils secondary to acid irritation.

While other disorders such as parasitic disease and Crohn's disease could potentially cause an esophageal eosinophilia, EE is the most common cause of intense esophageal eosinophilia.

**What should you do if you believe that you or your child may have EE?** If you believe that either you or your child may have symptoms of EE you should contact your primary physician, explain your concerns and ask for a referral to a gastroenterologist. An upper endoscopy with biopsy may need to be scheduled. A barium contrast study may also be useful in determining if the esophagus is narrowed or strictured.

**Where can you get additional information on EE?** The First International Gastrointestinal Eosinophilic Research Symposium brought together pediatric and adult experts from around the world to discuss the abundance of new information on EE. The idea of The International Gastrointestinal Eosinophilic Research (TIGER) consortium was created. TIGER is currently in the process of understanding and assessing diagnostic techniques, treatments and treatment approaches for patients with EE.

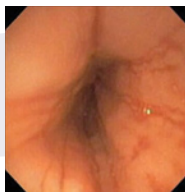
For more information about TIGER and patient information on EE please visit The Children's Digestive Health and Nutrition Foundation (CDHNF) at [www.TIGER-EGID.CDHNF.org](http://www.TIGER-EGID.CDHNF.org). Patient support groups such as the American Partnership for Eosinophilic Disorders (APFED, [www.apfed.org](http://www.apfed.org)), the Food Allergy Network (FAAN, [www.faan.org](http://www.faan.org)), CURE ([www.curedfoundation.org](http://www.curedfoundation.org)) may provide additional information and support for patients and families.



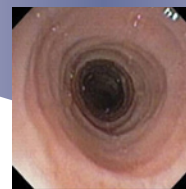
## Incidence, symptoms, diagnosis and treatment of EE

**Who develops EE?** EE is predominantly a disease of white males who make up approximately 75% of reported cases. According to two recent studies conducted in 2003 and 2005, EE occurs in 1 in 10,000 people. However, it has been suggested that the number of affected individuals may be greater than suspected due to a combination of increasing incidence and improved awareness.

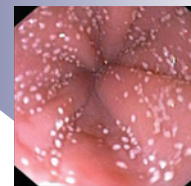
**What are the symptoms of EE?** Patients may experience abdominal pain, nausea, regurgitation, vomiting or difficulty swallowing. Children typically manifest symptoms suggestive of chronic gastroesophageal reflux while adolescents and adults frequently complain of intermittent swallowing problems. Occasionally, EE may cause a food impaction that requires emergency removal. In a small number of patients, EE produces an extremely narrowed esophagus



Furrows



Rings



White plaques

Images courtesy of Dr. Chris Liacouras, Children's Hospital of Philadelphia.

gus (small caliber esophagus) or a sliding hiatal hernia. Infants and young children may develop feeding disorders leading to poor weight gain.

**How is EE diagnosed?** Currently, the only way to accurately diagnose EE is by upper endoscopy and biopsy. Several visual findings have been associated with EE. The esophagus may appear "furrowed," "ring-like," or show multiple "white plaques;" however, none perfectly predict the disease. In many cases, the esophageal tissue appears normal. Because the visual findings are not definitive and the disease may be "patchy," multiple biopsies are required. Occasionally, contrast barium studies are useful in identifying esophageal strictures and "small caliber esophagus." TIGER is currently in the process of understanding and developing non-invasive methods of diagnosing and evaluating patients with EE.

**What is the role of the gastroenterologist?** Because of gastrointestinal symptoms, patients typically first present to the gastroenterologist. When patients present with a food impaction, an emergency endoscopy is performed. Otherwise, when EE is suspected, patients are usually placed on medication for acid blockade and subsequently undergo an upper endoscopy with biopsy. Once EE is confirmed, patients are either treated with medication or referred to an allergist for dietary restriction/elimination.

**What is the role of the allergist?** While EE has not been definitively characterized as a "food allergy," the ingestion of food has been associated with the vast majority of pediatric EE and is becoming increasingly apparent in adult EE. Therefore, allergists are essential in patient management. Unfortunately, typical allergy tests, such as skin prick tests or blood tests (RAST) that identify immediate allergic reactions, are not usually effective in determining those foods responsible for EE. Because the allergic reaction may be delayed and involve T-cell regulation, other tests such as a skin patch test may be useful.