

## Eosinophilic Oesophagitis (EoE)

Eosinophilic oesophagitis (EoE) happens when white blood cells (called eosinophils) deposit in the lining of the oesophagus, which is the muscular tube that connects the mouth to the stomach. This can be the result of an allergic reaction to food or the environment. Most cases are seen in people with other allergies such as allergic rhinitis (hay fever) and asthma. It is estimated to affect around one in 1,000 people (children and adults), and the frequency of EoE appears to be increasing. The reasons are unclear, but it is known that allergies of all types have become more common.

### Symptoms of EoE

The symptoms of EoE may be different in children compared to adults, as shown in the table below.

CHILDREN	ADOLESCENTS/ADULTS
<ul style="list-style-type: none"> <li>• Slow eating.</li> <li>• Food sticking on the way down the oesophagus.</li> <li>• Choking or gagging on food.</li> <li>• Regurgitation of foods.</li> <li>• Abdominal (stomach) pain.</li> </ul>	<ul style="list-style-type: none"> <li>• Trouble swallowing.</li> <li>• Food getting stuck on the way down the oesophagus.</li> <li>• Regurgitation of foods.</li> <li>• Severe acid reflux (heartburn) that does not respond to medications.</li> <li>• Chest pain when eating</li> <li>• Chewing longer and drinking more water with solid food/s.</li> </ul>

If left untreated about 30-50% of children and adults with EoE will eventually get food stuck in the oesophagus, which may have to be removed in hospital. It can result in permanent scarring and narrowing of the oesophagus (stricture). Mild reflux and vomiting are common in children and adults, and most do not have EoE.

### How is Eosinophilic oesophagitis diagnosed?

If a diagnosis of EoE is suspected by the doctor, they will usually confirm this by looking at the oesophagus using an endoscope. Three tissue samples (biopsies) will be taken at the same time and examined to look for eosinophils. Endoscopy and biopsy is performed by a gastroenterologist (stomach/bowel medical specialist).

### EoE may result from drug and food allergy

Around 75% of people with EoE have other allergic conditions such as allergic rhinitis or asthma. Allergy testing is not considered to be a reliable indicator of response to dietary manipulation and is not recommended unless a person has evidence of rapid onset allergic symptoms after food consumption as well as EoE. When food is the cause of EOE, cow's milk (dairy products), wheat and egg are the major triggers, with soy, seafood and nuts less commonly being involved. Some researchers have found that people benefit if these foods are removed from the diet. Other people with EoE have found that symptoms appear only during springtime when they are exposed to pollens.

### Who treats EoE?

Most people with EoE are co-managed by gastroenterologists, clinical immunology/allergy specialists and specialist dietitians.

### EoE treatment options

#### Time

Symptoms in infants may resolve in the first few years of life, particularly if only one or two foods are involved. When symptoms arise in older children and adults, they usually do not resolve.

#### Medication

- Proton Pump inhibitors are tablets or liquids that reduce acid production but also have an anti-inflammatory action that may reduce or abolish the eosinophilic inflammation in EoE.
- Topical asthma steroid puffers or steroid liquid made up as a paste can reduce inflammation in the oesophagus. These are swallowed instead of inhaled, poorly absorbed, and extremely unlikely to cause cortisone/steroid tablet like side effects. They help reduce inflammation and the scarring that can result from untreated EoE.
- It is important to have a rescue plan for flare of symptoms, and to take the lowest dose of medications.

#### Dilation

If the oesophagus is very narrow, an endoscopy and a procedure known as dilation may be required to open the narrowed oesophagus to allow the food to pass easier. This may provide temporary relief.

#### Diet manipulation

Dietary manipulation may assist both adults and children, but should be undertaken under the direction of a gastroenterologist or immunologist, and supervised by a specialist dietitian. When undertaking dietary manipulation, the foods are removed for a period of time and then re-introduced one at a time to see which foods result in symptoms.

Types of dietary manipulation used include:

- **Common food allergen elimination diets:** These usually include the removal of cow's milk, soy, egg, and wheat. Allergy testing or patient history may result in the removal of additional foods.
- **Step-up diets:** Instead of removing many foods at the same time, one to two foods are removed at first, to see if symptoms improve, repeating a biopsy if they do, but removing more foods later on if inflammation persists on biopsy.
- **Directed diets:** Foods are removed based on the history of trigger foods and allergy testing. This approach is no longer recommended as allergy test results are negative in most people with EoE.
- **Amino acid based diets:** These are based on amino acid/elemental formula and can be impractical in adults and older children, but are useful and commonly used for babies with EoE.

Endoscopies and repeat biopsies are essential to monitor response to treatment. Symptoms alone are not a reliable guide to disease control. It is important to note that:

- Diagnosis of EoE should always be confirmed by endoscopy and biopsies.
- Dietary manipulation for EoE should be temporary, initiated by a medical specialist and supervised by a specialist dietitian to ensure optimal nutrition.

### EoE is a developing area of research

There are currently questions about the role of allergy and diet manipulation (and best approach when doing so), that need to be answered by research.

In some people symptoms may improve with diet manipulation, but the underlying inflammation can persist. It is unclear whether the aim should be to settle symptoms only, or try to control the underlying inflammation completely as well.

While there are case reports of benefit from pollen immunotherapy in patients who report symptoms occurring or worsening during the pollen season, there is no high quality evidence of benefit and this treatment is not recommended specifically to treat EoE.

### **Patient support organisations**

Australian Support Network for Eosinophilic Oesophagitis and related disorders: [www.ausee.org](http://www.ausee.org)

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