The informed patient

Eosinophilic Esophagitis

AUTHORS:

Prof. Dr. Alain Schoepfer
Department of Gastroenterology
and Hepatology
University Hospital Lausanne
CHUV
1011 Lausanne, Switzerland

Prof. Dr. Stephan Miehlke
Center for Digestive Diseases
Internal Medicine Center
Eppendorfer Landstraße 42
20249 Hamburg, Germany
and
Center for Esophageal Diseases
University Hospital Eppendorf
Martinistraße 52
20251 Hamburg, Germany

Prof. Dr. Stephen E. Attwood
Durham University
Stockton Road
Durham DH1 3LE
United Kingdom

Publisher

Dr. Falk Pharma GmbH
Leinenweberstr. 5
79108 Freiburg | Germany
www.drfalkpharma.com

© 2025 Dr. Falk Pharma GmbH
All rights reserved.

6th edition 2025

Eosinophilic Esophagitis (EoE)

Prof. Dr. Alain Schoepfer
Prof. Dr. Stephan Miehlke
Prof. Dr. Stephen Attwood

Illustrations Title page, pages 5, 9: © von Mende
Illustrations, pages 2, 5, 16: © Katja Heller
Photo, page 4: © chombosan/shutterstock (adapted by Katja Heller)
Photos, page 7: Gastro Scope 208; with permission from Prof. Dr. A. Straumann; photo bottom left: with permission from Prof. Dr. A. Straumann
Photo, page 10: © somersault1824/shutterstock (adapted by von Mende)
Photos, page 11: Gastro Scope 208; with permission from Prof. Dr. A. Straumann (adapted by Katja Heller)
Photo, page 19: © marina_ua/shutterstock
Photo, page 22: Reprinted from: Gastroenterology, 147/6, Dellon ES, Liacouras CA. Advances in clinical management of eosinophilic esophagitis, 1238–54, © 2014, courtesy of Elsevier.

CONTENTS

GENERAL INFORMATION CONCERNING EoE 4

THERAPEUTIC PRINCIPLES OF EoE 12

DIFFERENT THERAPEUTIC OPTIONS 14

› MEDICATIONS 14

Local steroid treatment of the esophagus 14

Proton-pump inhibitors 15

Immunomodulatory treatment 16

› DIETS 17

Empirical elimination diet 18

› DILATION OF THE ESOPHAGUS 20

SUMMARY: CHARACTERISTICS OF THE DIFFERENT TREATMENTS 22

SYMPTOM-TRACKER 24

REFERENCES 26

GENERAL INFORMATION CONCERNING EoE

What is eosinophilic esophagitis?

Eosinophilic esophagitis (abbreviated EoE) is a chronic, inflammatory disease of the esophagus whose origins and causes are not yet fully understood. This inflammation of the esophagus (as denoted by the "itis" at the end of esophagitis) is characterized by the presence of a certain type of white blood cells in the mucosa, the so-called eosinophils. This is why the disease is called eosinophilic esophagitis. The most commonly reported symptoms include difficulty swallowing (whereby food may potentially become lodged in the esophagus) and pain during swallowing.

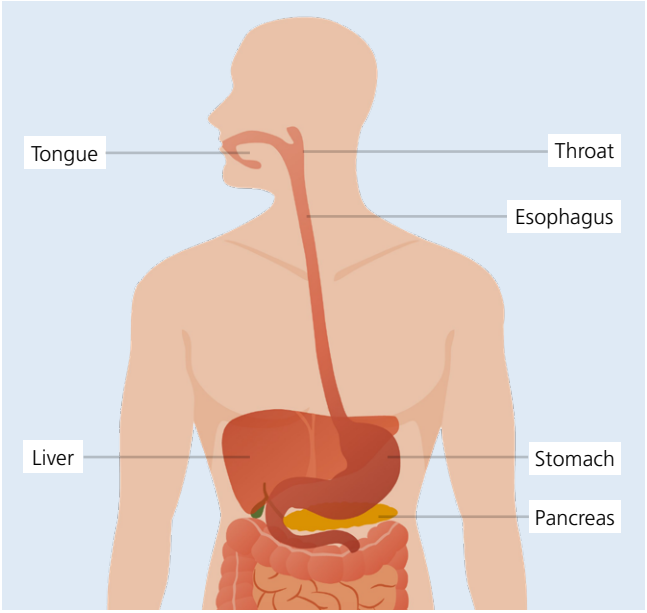


Fig. 1: The esophagus connects the mouth to the stomach

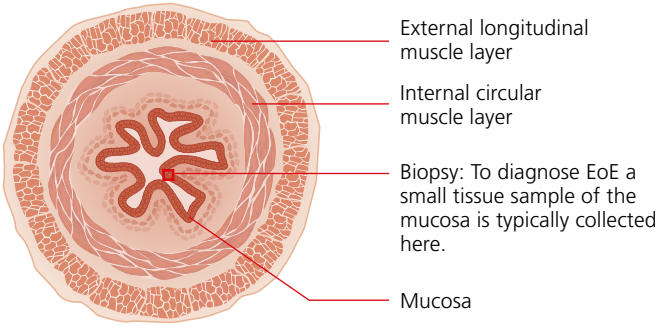


Fig. 2: Cross-section of the esophagus.

What are the causes of EoE?

The esophagus is about 25 cm long with a diameter of about 2.5 cm, that normally stretches to 3.5 cm in diameter as a solid bolus passes through. It connects the oral cavity (mouth) to the stomach and is responsible for transporting food from the throat to the stomach. Based on this function, the esophagus comes into contact with all the food we consume.

In EoE patients, certain food components (so-called allergens) are suspected of triggering inflammation in the esophagus.

Common triggers of EoE include[1]

- **Mammalian milk**
- **Wheat**
- **Soya**
- **Eggs**
- **Nuts**
- **Fish and seafood**

The inflammatory reaction is highly similar to asthma, a chronic, inflammatory condition of the respiratory tract that is triggered by allergens in the air. Therefore, EoE is often referred to as "asthma of the esophagus". Similar to asthma, airborne allergens are also suspected of potentially triggering EoE.

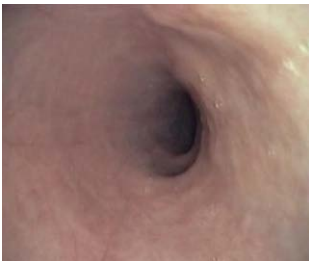
EoE is presumed to involve a chronic, inflammatory reaction triggered by certain allergens in foods and in the air.

In addition, EoE patients also commonly suffer from allergic diseases, such as hay fever, asthma or rash and food allergies in general. Yet, the connection between EoE and these disorders remains unclear. The exact causes and pathogenic processes of EoE are not completely understood and thus are the focus of current research.

In EoE inflammation involves many types of inflammatory cells, but the easiest to see are eosinophils. That inflammation makes the mucosa stiff and swollen, making the passage of solid foods difficult. In addition, over time, the inflammation causes fibrosis which hardens or stiffens the tissues so that they fail to stretch when solid food is swallowed, and the food gets stuck.

What are the symptoms of EoE?

The main symptoms of EoE in adults include difficulty swallowing (so-called "dysphagia") and/or pain during swallowing, also known as "odynophagia", chest pain, and heartburn. In a worst-case scenario, EoE can even result in a prolonged obstruction of the esophagus, a so-called food bolus impaction. In this circumstance a bite of food gets stuck on its way through the esophagus (see Figure 3). In some cases, the food can no longer be coughed up or regurgitated and requires removal from the esophagus by a physician.

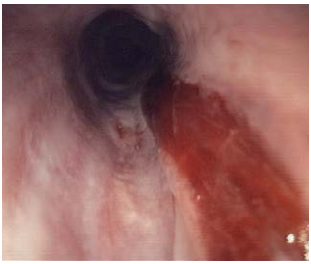


Normal

Inflammation: white deposits

Strictures (narrowing) with typical ring formation

Acutely inflamed EoE with lengthwise reddish furrows



Mucosal tear following successful dilation

Obstruction of the esophagus with a piece of meat (arrow)

Fig. 3: Endoscopic findings in the esophagus. In about 10%–25% of EoE patients, the esophageal mucosa appears normal despite the presence of microscopic inflammation.[2] Signs of acute inflammation (white deposits, mucosal swelling, elongated striations) and signs of scarring (ring formations with narrowing of the diameter of the esophagus in some cases) are distinguished.

In children, the symptoms are significantly less consistent and EoE often manifests indirectly with vomiting, reduced appetite or growth disorders. As a result, a diagnosis is often difficult and may be significantly delayed after the initial occurrence of symptoms – taking years in some cases.

In addition, pronounced avoidance strategies have been observed, especially in adolescent and adult patients, including:

- Avoidance of certain foods or even avoiding restaurants altogether.
- Thoroughly chewing food and consuming food in small bites only.
- Plentiful drinking in order to minimize or prevent difficulty swallowing.

Although these avoidance strategies seriously restrict the quality of life, many patients are often unaware that they are suffering from a disease of the esophagus because they consider their condition to be normal.

If EoE remains untreated, the esophagus may often continue to constrict over the years (reducing the diameter of the esophagus). The difficulty swallowing typical of EoE is either the result of an active inflammation or a narrowing of the esophagus. This difficulty occurs especially with solid foods (see Figure 4). But it is also possible that the disease suddenly manifests even though a person never experienced difficulty swallowing when a piece of food becomes stuck in the esophagus.

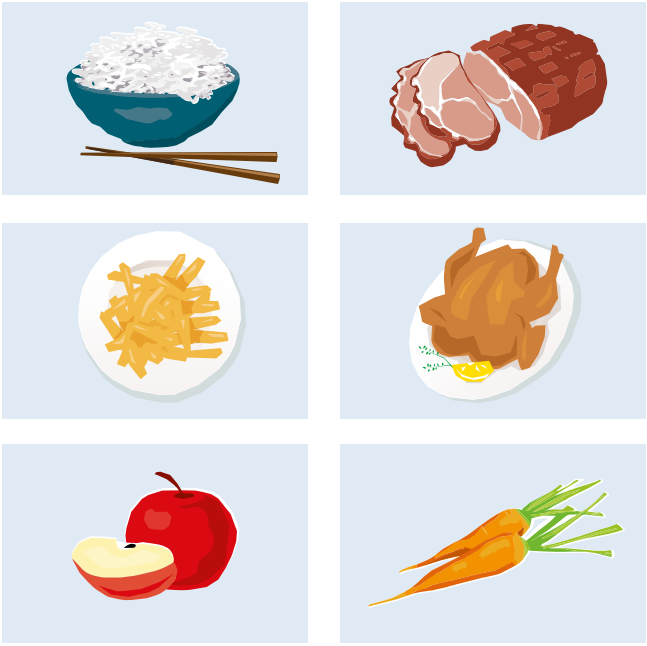


Fig. 4: Typical foods that cause difficulty swallowing include dry rice, meat, French fries or raw fruits and vegetables (e.g. carrots, apples). Patients experience difficulty swallowing because these foods are very solid, not because they trigger acute allergies.

How can EoE be diagnosed?

EoE can only be definitively diagnosed by a gastroenterologist. In addition to recognizing the symptoms described above, EoE is diagnosed by endoscopic examination of the esophagus with simultaneous collection of tissue samples. The esophagus commonly exhibits signs of acute inflammation (see Figure 3), but only a high number of eosinophils in the mucosa of the esophagus is considered decisive evidence of EoE (see Figures 5 and 6).

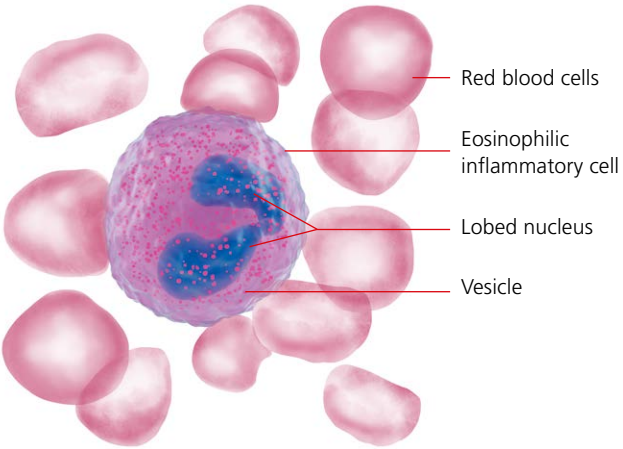


Fig. 5: An eosinophil (specialized white blood cell) surrounded by red blood cells. Inside the cell is a lobed nucleus (compartment where genetic material is stored) and numerous vesicles (small bubbles or granules) containing various inflammatory substances. Every human has small numbers of eosinophilic inflammatory cells circulating in the blood. These form an important line of defense against parasites (e.g. worms) and in the case of allergies. In healthy conditions, the mucosa of the esophagus is completely free of eosinophilic inflammatory cells.

How frequently does EoE occur?

EoE is a rare disorder that was first recognized as a disease in 1993 but has emerged over the past two decades to a major cause of upper gastrointestinal morbidity.[3] Worldwide around 34–40 out of 100,000 inhabitants suffer from EoE, although there are large geographic variations.[4,5] In many countries there is a rapid increase in the frequency of this condition.

What are the risk factors for EoE?

The majority of patients with EoE are male (approx. 60–80%).[6,7] EoE can occur at any age, but occurs most commonly between the ages of 30 and 50. Patients with EoE often suffer from other allergic diseases, such as hay fever, allergic asthma, food allergies or atopic dermatitis. Hereditary risk factors are known, but have no influence on the diagnosis or treatment of EoE.

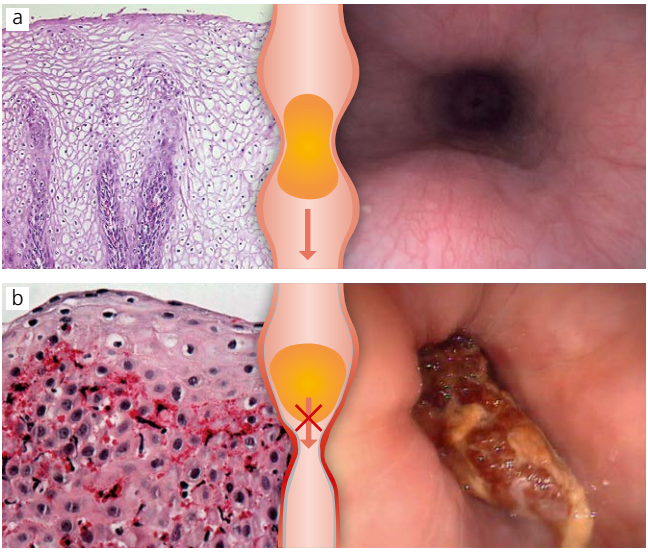


Fig. 6: a) Normal esophagus with no eosinophils
b) Increased eosinophils in an EoE patient

How does EoE progress if left untreated?

If left untreated, the persistent inflammation caused by the presence of eosinophilic cells, over the years can result in scarring and subsequent narrowing of the esophagus (see Figure 6). Accordingly, EoE is a chronic disease for which there is currently no cure.

Various therapies can minimize narrowing and scarring, prevent complications, such as obstruction of the esophagus, and significantly improve the quality of life of patients.

THERAPEUTIC PRINCIPLES OF EoE

Three different treatment options are currently recommended: The first one is medication, usually in form of locally acting steroid products, which reduce the inflammation, or alternatively with proton pump inhibitors. The latter are usually used to inhibit the secretion of gastric acid, but acid is rarely a cause of EoE. Sometimes proton pump inhibitors can partly suppress the inflammation by a direct action but this is usually only a partial inhibition. Regulatory authorities in Europe and the US have approved an immunomodulatory treatment for adults and children. In Europe this therapy has a marketing authorization to treat EoE patients, who are inadequately controlled by conventional treatment, cannot tolerate it or for whom it is not an option. Country-specific regulations might apply. The second option involves special diets that avoid certain food allergens. The third option is dilation of the esophagus with an endoscopic procedure.

› Acute inflammation

Medications and diets are primarily applied in the case of acute inflammation. These therapies also have the advantage of minimizing the high risk of narrowing (also known as stricture formation) and potentially irreversible scarring of the esophagus which is associated with prolonged untreated inflammation.

› Advanced disease

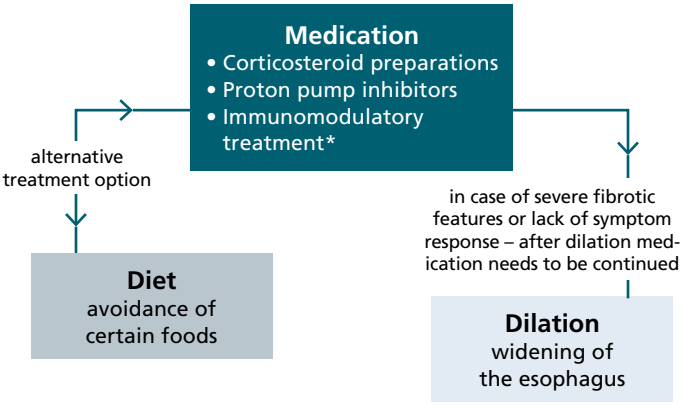
If EoE has been diagnosed too late or the patient no longer responds to medications or diets and severe narrowing of the esophagus has occurred, dilation is applied. Here, the constricted segment is carefully dilated during an endoscopic procedure performed under deep sedation (without general anesthesia). Patients are typically pain- and symptom-free within 2–3 days after this procedure.

The different treatment options are applied based on the clinical picture: Medications and diets in the case of acute inflammation, dilation in the advanced stage once the esophagus has already narrowed.

Long-term treatment is required

Currently, EoE cannot be cured with medications or diets. Unfortunately, if inflammation-inhibiting therapies are discontinued, the inflammation commonly flares up after a few months, accompanied by the known symptoms. As a result, the patient must remain in close contact with the treating physician, watch out for symptoms, and undergo regular check-ups.

But inflammation of the esophagus is not necessarily accompanied by symptoms. It is possible to have esophageal inflammation without ever noticing anything. Therefore, an endoscopic follow-up examination of the esophagus should take place approx. 6–12 weeks following the start of treatment to verify therapeutic success.



**approved in Europe and the US for EoE patients of 1 year and older with a least 15 kg body weight. In Europe this therapy has a marketing authorization to treat EoE patients, who are inadequately controlled by, are intolerant to, or who are not candidates for conventional medicinal therapy.*

DIFFERENT THERAPEUTIC OPTIONS

MEDICATIONS

Local steroid treatment of the esophagus

Efficacy:
Local acting steroid drugs work directly on the lining of the esophagus and block several stages of the inflammatory process. They are usually well tolerated because they are rapidly inactivated in the liver and only a tiny fraction of steroid actually gets to other parts of the body via the bloodstream.[8]

In clinical studies, 85% of patients experience a reduction of inflammation and improvement of symptoms after 12 weeks of treatment.

Administration:
EoE used to be commonly treated with asthma sprays containing budesonide or similar active ingredients that were swallowed instead of being inhaled. But because these medications were developed to treat the respiratory tract, they are not ideal for coating the esophagus. Drugs with a specific technical formulation to improve adherence and delay absorption were developed to coat the esophagus for a more efficient treatment of EoE.

Side effects:
Locally acting steroid drugs are considered to be relatively safe. The most common side effect (< 10%) is a mild, local fungal infection called candidiasis. This infection can usually be treated easily with a local antifungal medicine without needing to stop taking the local steroid drug. Wider side effects of systemic steroids have not been seen with approved local steroid treatment options for EoE in over 250000 treatments.

Treatment duration:
The initial treatment phase with said products typically lasts 6 weeks, which can be extended to 12 weeks for patients who do not respond at first. After the initial phase a long-term treatment is recommended to keep EoE in remission.

Proton-pump inhibitors (PPIs)

Efficacy:
A minority of EoE patients respond to treatment with so-called proton pump inhibitors. These medications suppress the formation of gastric acid and are approved for the treatment of heartburn and stomach ulcers but not EoE. The effect in EoE patients is probably not based on an inhibition of acid but may be an effect on the immune function in the esophageal wall.

A study on PPI efficacy published in 2020 could show histological remission (defined as < 15 eosinophils per high-power field) in 48.8% of patients and clinical remission (defined as a decrease of ≥ 50% in dysphagia symptom score) in approx. 50%. Clinical response (≤ 50% decrease from baseline) is seen in 71.0% of patients.[9]

Administration:
Double standard therapeutic doses of proton pump inhibitors (PPIs) are used to treat patients with eosinophilic esophagitis.[10]

Side effects:
Proton pump inhibitors are considered relatively safe. Among the most common side effects are headache, abdominal pain, constipation, diarrhea, flatulence, nausea/vomiting and fundic gland polyps (benign).

Treatment duration:
Proton pump inhibitors are typically administered for 6–8 weeks, but the exact duration should be in agreement

with the doctor. If the patient does not experience any improvement, then other treatment strategies, such as treatment with local acting steroid drugs or diet, must be considered.[9]

Effectiveness rates of PPI induction therapy depended on the PPI dosages prescribed. Histological remission rate and symptomatic improvement was higher for patients treated with high doses (defined as double dosage or higher) compared to standard or low doses. Standard doses of PPI included omeprazole 20 mg, pantoprazole 40 mg, esomeprazole 20 mg, lansoprazole 30 mg and rabeprazole 20 mg daily. The likelihood of achieving clinico-histological remission was greater for high compared to standard or low PPI doses (50.8% vs 35.8%, respectively; P = 0.027; OR = 1.85).[9]

Immunomodulatory treatment

Efficacy

Dupilumab is a monoclonal antibody blocking two key cellular communication factors that drive EoE (interleukin 4 and interleukin 13). Dupilumab is approved in Europe and the US for EoE patients starting from one year of age with a least 15 kg body weight. In Europe this therapy has a marketing authorization to treat EoE patients, who are inadequately controlled by, are intolerant to, or who are not candidates for conventional medicinal therapy.

Clinical studies showed that weekly treatment with subcutaneous dupilumab improved histologic outcomes and alleviated symptoms of EoE in both adults and adolescents in 60% after 24 weeks of treatment. Monoclonal antibody therapies may be very effective at reducing eosinophils without having much effect on the other aspects of inflammation from mast cells, lymphocytes and fibroblasts.[11]

Side effects

The most frequently reported adverse events that occurred in the clinical EoE trials were injection-site reactions, upper

respiratory tract infections and arthralgia. Conjunctivitis and oral herpes occurred predominantly in atopic dermatitis studies.

Treatment duration

Duration of treatment is expected to be lifelong, but for EoE there is no long-term data available yet.

DIETS

Most EoE patients are allergic to more than one food. As a result, EoE is regarded as a special type of food allergy. If it is possible to eliminate the foods that cause an allergic reaction in the esophagus from the diet, then the symptoms and inflammation may disappear without the use of medications. The most common foods that cause eosinophilic inflammation of the esophagus include mammalian milk products, wheat, eggs, soya, nuts, and fish/seafood (see Figure 7). Appropriate diets are therefore associated with massive restrictions on daily food choices and are rarely applied successfully over prolonged periods. Elimination diets can be effective treatments for EoE, but pose psychosocial and financial challenges to patients and consequently may impair quality of life.[12]

Foods which are avoided during an elimination diet.

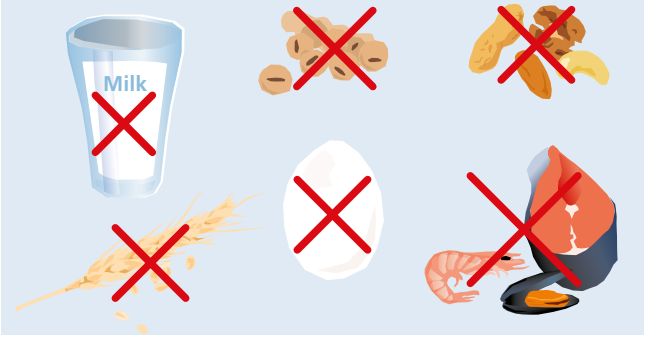


Fig. 7: Common food allergens

Empirical elimination diet

Efficacy:

An elimination diet based on allergy testing results in an improvement in symptoms in only a very small number of patients. In EoE, allergy tests are generally not specific, often misleading and are not recommended by the current guidelines.

Therefore, usually an empirical elimination diet is performed, which is based on excluding the two most common food triggers, milk and wheat, and stepping up to more exclusions if that is unsuccessful, or a more complex elimination of the 6 most common allergy-triggering foods with subsequent, controlled, stepwise reintroduction until the allergy-triggering "culprit" is identified. These diets have shown some effect in children and adults. Recent well controlled randomized studies show similar and relatively poor outcomes with either regime.[13]

Procedure:

This diet involves the complete elimination of mammalian milk, wheat, eggs, soya, nuts, and fish/seafood from the diet for 6-8 weeks. An endoscopic examination of the esophagus is then performed, including the collection of tissue samples (see Figure 8). In the best case, the inflammatory cells have then disappeared from the esophagus. The individual foods are then reintroduced one after the other at 8-week intervals. Another endoscopic examination of the esophagus is then performed at approximately 8 weeks following reintroduction of each new food category in order to determine whether it triggers an eosinophilic inflammation of the esophagus. This procedure is continued until all allergy-triggering foods have been identified. Once an allergy-triggering food has been identified, it is eliminated from the diet.

During multiple sessions, a dietitian provides patients with instructions and advice on how these foods may be avoided. The diet is conducted on an outpatient basis.

In order to reduce the number of endoscopic inspections, a so-called step-up elimination diet may also be used in some cases, in which the first 2 foods (usually mammalian milk and wheat) are eliminated and if there is no response, then 4 or ultimately 6 foods are eliminated from the diet. This step-up approach can reduce the number of endoscopic inspections by about 20% on average.[14]

Patients in whom the triggering foods are successfully identified should follow the diet over the long term (for months or years).

Although elimination diets help reduce symptoms for many patients, they need to be maintained for a long time.

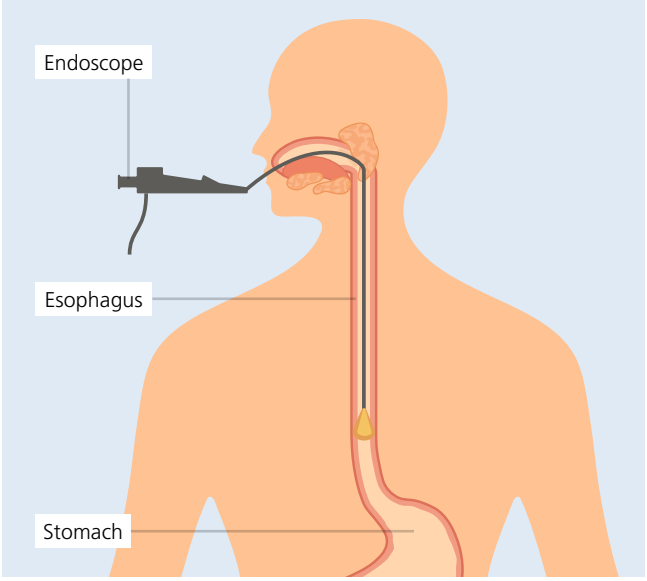


Fig. 8: Endoscopic examination of the esophagus

DILATION OF THE ESOPHAGUS

Efficacy:
About 75% of patients, treated by dilation, experience significantly improved symptoms that last up to 12 months.[15]

Procedure:
In the case of stricture formation (narrowing) of the esophagus, the diameter may be enlarged through dilation treatment. Here, an endoscopic examination is performed. The diameter of the esophagus is then enlarged by deploying an inflatable balloon or by inserting a wire into the stomach and advancing bougies (candle-shaped plastic cylinders) of increasing diameter into the esophagus.

In the case of failure of medication treatments, dilation therapy may help to stretch underlying fibrosis that is not responding to medication. In these cases usually no stricture is seen, but the whole esophagus should be dilated.[16]

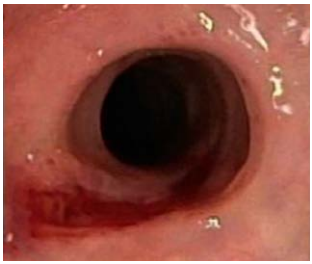
Dilation takes about 10 minutes and is performed with the patient under deep sedation. The scar tissue that reduces the diameter of the esophagus is mechanically dilated during the procedure. However, this procedure does not treat the underlying inflammation that is causing the narrowing of the esophagus and dilation procedures may need to be repeated as new strictures form over time.

Side effects:
Pain during swallowing may occur in about half of the patients for 2–3 days following the procedure but this pain responds well to conventional pain relievers. The risk of complications, especially a hole (perforation) in the esophagus, is relatively low (< 1%).[17] A hole in the esophagus may be closed endoscopically with small metal staples or temporary stents that are then removed after a few weeks. Operations to treat the complications of dilation procedures are very rarely necessary.

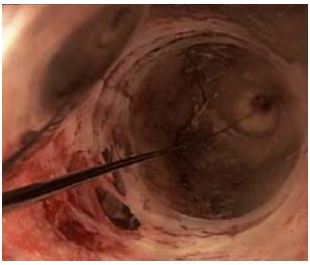
Treatment duration:
Dilations may be performed as often as necessary. Patients are usually required to undergo dilation treatment regularly if they are not additionally receiving anti-inflammatory treatment with medications or diets.

Dilation does not treat the causes of EoE, but instead merely involves the mechanical expansion of the constricted esophagus.

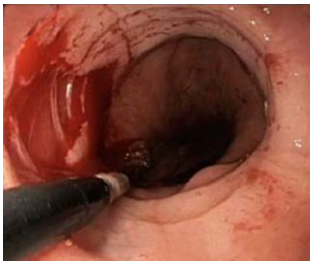
Stricture in the esophagus.



Superficial laceration of the mucosa following attempted passage of a gastroscope.



Insertion of an inflatable balloon via the accessory channel of the gastroscope. Balloon is inflated to a defined diameter.



The stricture is expanded, a superficial tear of the epithelium is visible. The gastroscope is then able to be pushed without difficulty.

Fig. 9

SUMMARY: CHARACTERISTICS OF THE DIFFERENT TREATMENTS

	MEDICATIONS	
	Local steroid treatment of the esophagus	**Proton-pump inhibitors**
Reduces symptoms	⊕⊕⊕	⊕⊕
Reduces endoscopically visible inflammation	⊕⊕⊕	⊕⊕
Reduces microscopically visible inflammation	⊕⊕⊕	⊕⊕
Reduces stricture formation (narrowing) in the esophagus	⊕	–
Side effects	!	!
Limitations	–	**Not approved for EoE***
Notes	Up to 85% of patients experience a reduction of inflammation and improvement of symptoms.[8]	Effective in only a minority of EoE patients.[9]

Legend:

●●● Strong effect and/or many side effects

●● Moderate effect and/or moderate number of side effects

● Weak effect and/or few side effects

– No effect and/or no side effects

	DIET		DILATION
Immuno-modulatory treatment	**Elimination diet based on allergy testing**	**Empirical elimination diet[13]**	**Dilation treatment of the esophagus**
⊕⊕	⊕	⊕	⊕⊕⊕
⊕⊕⊕	⊕	⊕⊕	—
⊕⊕	⊕	⊕⊕	—
Not yet known**	—	—	⊕⊕⊕
	—	—	!
Higher costs	!	!	—
Good option for EoE patients who suffer from uncontrolled eosinophilic asthma or chronic rhinosinusitis with nasal polyps or severe neurodermitis.[11]	None of the currently-available allergy tests predicts food triggers for EoE.[18]	Roughly 30% chance that microscopically identifiable inflammation will be reduced. Multiple endoscopies of the esophagus required to identify the triggering food(s).	Dilation is recommended to be combined with a long-term anti-inflammatory therapy.

* No approved PPI therapy for the treatment of EoE
** No evidence yet for the effects of dupilumab on stricture resolution or stricture prevention

Fill out this symptom tracker if you notice your symptoms getting worse and you want to record and track them,

Think back over the past 7 days:	Date:
Did you need to go to a doctor or the hospital because of difficulty swallowing?	○ Yes ○ No
How many days did you have difficulty swallowing solid food?	○ No difficulty swallowing ○ On one day ○ On more than one day ○ Every day this week
How painful was it to swallow solid food?	○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 not painful … very painful
Did food ever get stuck in your throat while swallowing?	○ Yes ○ No
What foods did you avoid because you thought they might get stuck?	
Did you cut any specific food into small pieces or put it in the blender to make it easier to swallow?	○ Yes ○ No
Did it take you longer to eat than other people?	○ Yes ○ No
How often did you eat together with friends or family?	
Which of these food groups did you leave out as part of an elimination diet?	○ Mammalian milk ○ Nuts ○ Wheat ○ Eggs ○ Soya and legumes ○ Fish/shellfisch ○ _____
How are you currently treating your EoE?	○ Topical Corticosteroids ○ PPIs ○ Elimination diet ○ No treatment ○ Other ○ Immunomodulatory treatment
How does EoE impact your daily life?	○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 no impact … normal life not possible du to EoE

or regularly to help you prepare for your routine check-ups with your doctor.

Date:	Date:
○ Yes ○ No	○ Yes ○ No
○ No difficulty swallowing ○ On one day ○ On more than one day ○ Every day this week	○ No difficulty swallowing ○ On one day ○ On more than one day ○ Every day this week
○ ○ ○ ○ ○ ○ ○ 0 1 2 3 4 5 6 not painful very painful	○ ○ ○ ○ ○ ○ ○ 0 1 2 3 4 5 6 not painful very painful
○ Yes ○ No	○ Yes ○ No
○ Yes ○ No	○ Yes ○ No
○ Yes ○ No	○ Yes ○ No
○ Mammalian milk ○ Nuts ○ Wheat ○ Eggs ○ Soya and legumes ○ Fish/shellfisch ○ _____	○ Mammalian milk ○ Nuts ○ Wheat ○ Eggs ○ Soya and legumes ○ Fish/shellfisch ○ _____
○ Topical Corticosteroids ○ PPIs ○ Elimination diet ○ No treatment ○ Other ○ Immunomodulatory treatment	○ Topical Corticosteroids ○ PPIs ○ Elimination diet ○ No treatment ○ Other ○ Immunomodulatory treatment
○ ○ ○ ○ ○ ○ ○ 0 1 2 3 4 5 6 no impact normal life not possible du to EoE	○ ○ ○ ○ ○ ○ ○ 0 1 2 3 4 5 6 no impact normal life not possible du to EoE

If you experience intense or recurring pain and problems swallowing, don't wait until your next appointment! Contact your gastroenterologist immediately.

REFERENCES

1 Cianferoni A et al. Food avoidance strategies in eosinophilic oesophagitis. Clin Exp Allergy 2019;9:269–284

2 Vinit C et al. Eosinophilic esophagitis: Pathophysiology, diagnosis, and management. Volume 26, issue 3, April 2019, pages 182–190

3 Dellon ES, Hirano I. Epidemiology and natural history of eosinophilic esophagitis. Gastroenterology. 2018;154(2):319–32.e3

4 Hahn JW et al. Global incidence and prevalence of eosinophilic esophagitis, 1976–2022: a systematic review and meta-analysis. Clin Gastroenterol Hepatol. 2023;21(13):3270–84.e77

5 Navarro P et al. Systematic review with meta-analysis: the growing incidence and prevalence of eosinophilic oesophagitis in children and adults in population-based studies. Aliment Pharmacol Ther. 2019;49:1116–1125

6 Attwood SE et al. Esophageal eosinophilia with dysphagia. A distinct clinicopathologic syndrome. Dig Dis Sci. 1993 Jan;38(1):109–16

7 Hruz P. Epidemiology of eosinophilic esophagitis. Dig Dis 2014;32:40–47

8 Lucendo A et al. Efficacy of budesonide orodispersible tablets as induction therapy for eosinophilic esophagitis in a randomized placebo-controlled trial. Gastroenterology 2019;157:74–86

9 Laserna-Mendieta EJ et al. Efficacy of proton pump inhibitor therapy for eosinophilic oesophagitis in 630 patients: results from the EoE connect registry. Aliment Pharmacol Ther. 2020 Sep;52(5):798–807

10 Dhar A et al. British Society of Gastroenterology (BSG) and British Society of Paediatric Gastroenterology, Hepatology and Nutrition (BSPGHAN) joint consensus guidelines on the diagnosis and management of eosinophilic oesophagitis in children and adults. Gut. 2022 Aug;71(8):1459–1487

11 Dellon ES et al. Dupilumab in adults and adolescents with eosinophilic esophagitis. N Engl J Med. 2022 Dec 22;387(25):2317–2330

12 Kliewer KL et al. Dietary therapy for eosinophilic esophagitis: Elimination and reintroduction. Clin Rev Allergy Immunol. 2018 Aug;55(1):70–87

13 Kliewer KL et al. One-food versus six-food elimination diet therapy for the treatment of eosinophilic oesophagitis: a multicentre, randomised, open-label trial. Lancet Gastroenterol Hepatol. 2023 May;8(5):408–421

14 Molina-Infante J et al. Step-up empiric elimination diet for pediatric and adult eosinophilic esophagitis: The 2-4-6 study. J Allergy Clin Immunol. 2018 Apr;141(4):1365–1372

15 Moawad F J et al. Meta-analysis: the safety and efficacy of dilation in eosinophilic oesophagitis. Aliment Pharmacol Ther 2013;38:713-720

16 Sami SS et al. UK guidelines on oesophageal dilatation in clinical practice. Gut. 2018 Jun;67(6):1000–1023

17 Nhu Q et al. New developments in the diagnosis and treatment of eosinophilic esophagitis. Curr Treat Options Gastroenterol. 2019 March; 17(1):48–62

18 Philpott H et al. Allergy tests do not predict food triggers in adult patients with eosinophilic oesophagitis. A comprehensive prospective study using five modalities. Aliment Pharmacol Ther 2016;44:223–233

19 Dellon et al. Reviews in basic and clinical gastroenterology and hepatology. Gastroenterology 2014;147:1238–1254

NOTES

Dr. Falk Pharma GmbH
Leinenweberstr. 5
79108 Freiburg | Germany
www.drfalkpharma.com

JO80e 6-05/2025