# **WebMD**

# YOUR VISIT

EOSINOPHILIC ESOPHAGITIS



FIRST PERSON: CARING FOR A LOVED ONE WITH EOE page 14

# QUESTIONS TO ASK

USE THIS GUIDE TO HELP YOU GATHER THE INFORMATION YOU NEED FROM YOUR DOCTOR.

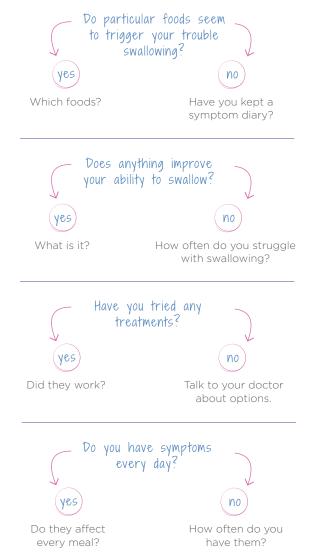
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➤ What treatments	are available for	EOE?						
►At what point is	surgery necessary	?						
➤ When should I call you?								
➤ Treatments I've tried:								
	WHAT TYPE AND DOSE/AMOUNT?	HOW WELL DID IT WORK?	DID YOU HAVE SIDE EFFECTS/ PROBLEMS?					
MEDICATION DOSE								
OTHER TREATMENTS/ LIFESTYLE CHANGES								

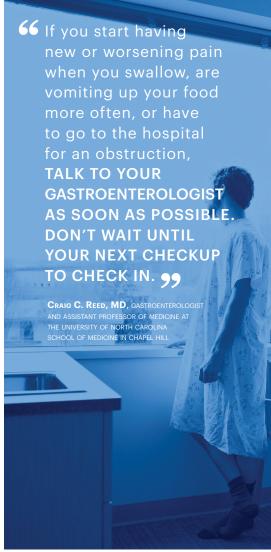
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# THOMAS BARWICK/VIA GETTY IMAGES

# GETTING TO THE BOTTOM OF IT

ANSWERS TO THESE QUESTIONS CAN HELP YOUR DOCTOR BETTER UNDERSTAND HOW YOUR EOE IS AFFECTING YOU.







## INDICATION

DUPIXENT is a prescription medicine used to treat adults and children 1 year of age and older with eosinophilic esophagitis (EoE), who weigh at least 33 pounds (15 kg). It is not known if DUPIXENT is safe and effective in children with eosinophilic esophagitis under 1 year of age, or who weigh less than 33 pounds (15 kg).

## IMPORTANT SAFETY INFORMATION

Do not use if you are allergic to dupilumab or to any of the ingredients in DUPIXENT®.

Before using DUPIXENT, tell your healthcare provider about all your medical conditions, including if you:

- have a parasitic (helminth) infection.
- are scheduled to receive any vaccinations. You should not receive a "live vaccine" right before and during treatment with DUPIXENT.
- are pregnant or plan to become pregnant. It is not known whether DUPIXENT will harm your unborn baby.
  - o A pregnancy registry for women who take DUPIXENT during pregnancy collects information about the health of you and your baby. To enroll or get more information call 1-877-311-8972 or go to https://mothertobaby.org/ongoing-study/dupixent/.
- are breastfeeding or plan to breastfeed. It is not known whether DUPIXENT passes into your breast milk.

Tell your healthcare provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins and herbal supplements.

**Especially tell your healthcare provider if you** are taking oral, topical, or inhaled corticosteroid medicines or if you have EoE and asthma and use an asthma medicine. **Do not** change or stop your corticosteroid medicine or other asthma medicine without talking to your healthcare provider. This may cause other symptoms that were controlled by the corticosteroid medicine or other asthma medicine to come back.

# **IMPORTANT SAFETY INFORMATION cont'd**

**DUPIXENT** can cause serious side effects, including:

- Allergic reactions. DUPIXENT can cause allergic reactions that can sometimes be severe. Stop using DUPIXENT and tell your healthcare provider or get emergency help right away if you get any of the following signs or symptoms: breathing problems or wheezing, swelling of the face, lips, mouth, tongue or throat, fainting, dizziness, feeling lightheaded, fast pulse, fever, hives, joint pain, general ill feeling, itching, skin rash, swollen lymph nodes, nausea or vomiting, or cramps in your stomach-area.
- **Joint aches and pain.** Some people who use DUPIXENT have had trouble walking or moving due to their joint symptoms, and in some cases needed to be hospitalized. Tell your healthcare provider about any new or worsening joint symptoms. Your healthcare provider may stop DUPIXENT if you develop joint symptoms.

The most common side effects in patients with eosinophilic esophagitis include injection site reactions, upper respiratory tract infections, cold sores in your mouth or on your lips, and joint pain (arthralgia).

Tell your healthcare provider if you have any side effect that bothers you or that does not go away. These are not all the possible side effects of DUPIXENT. Call your doctor for medical advice about side effects. You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

Use DUPIXENT exactly as prescribed by your healthcare provider. It's an injection given under the skin (subcutaneous injection). Your healthcare provider will decide if you or your caregiver can inject DUPIXENT. **Do not** try to prepare and inject DUPIXENT until you or your caregiver have been trained by your healthcare provider. In children 12 years of age and older, it's recommended DUPIXENT be administered by or under supervision of an adult. In children 1 to less than 12 years of age, DUPIXENT should be given by a caregiver.

Please see Brief Summary of Prescribing Information on next page.

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# Brief Summary of Important Patient Information about DUPIXENT® (dupilumab) Rx Only (DU-pix-ent)

### injection, for subcutaneous use

### What is DUPIXENT?

- DUPIXENT is a prescription medicine used: to treat adults and children 1 year of age and older with eosinophilic esophagitis (EoE), who weigh at least 33 pounds (15 kg).
- DUPIXENT works by blocking two proteins that contribute to a type of inflammation that plays a major role in EoE.
- It is not known if DUPIXENT is safe and effective in children with EoE under 1 year of age and who weigh at least 33 pounds (15 kg).

### Who should not use DUPIXENT?

**Do not use DUPIXENT** if you are allergic to dupilumab or to any of the ingredients in DUPIXENT. See the end of this summary of information for a complete list of ingredients in DUPIXENT.

# What should I tell my healthcare provider before using DUPIXENT? Before using DUPIXENT, tell your healthcare provider about all your medical conditions, including if you:

- have eye problems.
- have a parasitic (helminth) infection.
- are scheduled to receive any vaccinations.
  You should not receive a "live vaccine" right before and during treatment with DUPIXENT.
- are pregnant or plan to become pregnant.
  It is not known whether DUPIXENT will harm your unborn baby.
- Pregnancy Exposure Registry. There is a pregnancy exposure registry for women who take DUPIXENT during pregnancy. The purpose of this registry is to collect information about the health of you and your baby. Your healthcare provider can enroll you in this registry. You may also enroll yourself or get more information about the registry by calling 1-877-311-8972 or going to https://mothertobaby.org/ongoing-study/dupixent/.
- are breastfeeding or plan to breastfeed.
  It is not known whether DUPIXENT passes into your breast milk.

Tell your healthcare provider about all of the medicines you take including prescription and over-the-counter medicines, vitamins, and herbal supplements.

## **Especially tell your healthcare provider if you:**

- are taking oral, topical, or inhaled corticosteroid medicines
- have EoE and asthma and use an asthma medicine

**Do not** change or stop your corticosteroid medicine or other asthma medicine without talking to your healthcare provider. This may cause other symptoms that were controlled by the corticosteroid medicine or other asthma medicine to come back.

### **How should I use DUPIXENT?**

- See the detailed "Instructions for Use" that comes with DUPIXENT for information on how to prepare and inject DUPIXENT and how to properly store and throw away (dispose of) used DUPIXENT pre-filled syringes and pre-filled pens.
- Use DUPIXENT exactly as prescribed by your healthcare provider.
- Your healthcare provider will tell you how much DUPIXENT to inject and how often to inject it.
- DUPIXENT comes as a single-dose pre-filled syringe with needle shield or as a pre-filled pen.
- DUPIXENT is given as an injection under the skin (subcutaneous injection).
- If your healthcare provider decides that you or a caregiver can give the injections of DUPIXENT, you or your caregiver should receive training on the right way to prepare and inject DUPIXENT.
  Do not try to inject DUPIXENT until you have been shown the right way by your healthcare provider. In children 12 years of age and older, it is recommended that DUPIXENT be given by or under supervision of an adult.
- If your dose schedule is every week and you miss a dose of DUPIXENT: Give the DUPIXENT injection as soon as possible and start a new every week dose schedule from the time you remember to take your DUPIXENT injection.
- If you inject too much DUPIXENT, call your healthcare provider or Poison Help line at 1-800-222-1222 or go to the nearest hospital emergency room right away.
- Your healthcare provider may prescribe other medicines to use with DUPIXENT. Use the other prescribed medicines exactly as your healthcare provider tells you to.

# What are the possible side effects of DUPIXENT?

DUPIXENT can cause serious side effects, including:

- Allergic reactions. DUPIXENT can cause allergic reactions that can sometimes be severe. Stop using DUPIXENT and tell your healthcare provider or get emergency help right away if you get any of the following signs or symptoms: breathing problems or wheezing, swelling of the face, lips, mouth, tongue, or throat, fainting, dizziness, feeling lightheaded, fast pulse, fever, hives, joint pain, general ill feeling, itching, skin rash, swollen lymph nodes, nausea or vomiting, or cramps in your stomach-area.
- Joint aches and pain. Joint aches and pain can happen in people who use DUPIXENT. Some people have had trouble walking or moving due to their joint symptoms, and in some cases needed to be hospitalized. Tell your healthcare provider about any new or worsening joint symptoms. Your healthcare provider may stop DUPIXENT if you develop joint symptoms.

# The most common side effects of DUPIXENT in patients with atopic dermatitis include: injection site reactions, upper respiratory tract infections, cold sores in your mouth or on your lips, and joint pain (arthralgia).

The following additional side effects have been reported with DUPIXENT: facial rash or redness. Tell your healthcare provider if you have any side effect that bothers you or that does not go away. These are not all of the possible side effects of DUPIXENT.

Call your doctor for medical advice about side effects. You may report side effects to FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

### **How should I store DUPIXENT?**

- Store DUPIXENT in the refrigerator at 36°F to 46°F (2°C to 8°C).
- Store DUPIXENT in the original carton to protect from light.
- DUPIXENT can be stored at room temperature up to 77°F (25°C) up to 14 days. Throw away (dispose of) any DUPIXENT that has been left at room temperature for longer than 14 days.

- **Do not** heat or put DUPIXENT into direct sunlight.
- **Do not** freeze. **Do not** shake.
- Keep DUPIXENT and all medicines out of the reach of children.

General information about the safe and effective use of DUPIXENT. Medicines are sometimes prescribed for purposes other than those listed in a Patient Information leaflet. Do not use DUPIXENT for a condition for which it was not prescribed.

Do not give DUPIXENT to other people, even if they have the same symptoms that you have. It may harm them.

This is a brief summary of the most important information about DUPIXENT for this use. If you would like more information, talk with your healthcare provider. You can ask your pharmacist or healthcare provider for more information about DUPIXENT that is written for healthcare professionals.

For more information about DUPIXENT, go to www.DUPIXENT.com or call 1-844-DUPIXENT (1-844-387-4936)

# What are the ingredients in DUPIXENT? Active ingredient: dupilumab

**Inactive ingredients:** L-arginine hydrochloride, L-histidine, polysorbate 80, sodium acetate, sucrose, and water for injection

Manufactured by: Regeneron Pharmaceuticals, Inc., Tarrytown, NY 10591 U.S. License # 1760; Marketed by sanofi-aventis U.S. LLC, (Bridgewater, NJ 08807) and Regeneron Pharmaceuticals, Inc. (Tarrytown, NY 10591) DUPIXENT<sup>®</sup> is a registered trademark of Sanofi Biotechnology / ©2024 Regeneron Pharmaceuticals, Inc. / sanofi-aventis U.S. LLC. All rights reserved. Issue Date: January 2024

# THE LATEST ON

### **EOSINOPHILIC ESOPHAGITIS**

## **HOW MUCH THE PREVALENCE OF EOE HAS INCREASED** over

the last 20 years.

SOURCE: National Organization for Rare Disorders

# A Cure in the Works?

Researchers recently learned more about the cause of eosinophilic esophagitis (EoE), and it could lead to a cure. They found that when a person with EoE eats triggering foods, it prompts the release of an inflammatory protein called IL-18. This protein produces the excess white blood cells called eosinophils that damage the esophagus in EoE. When the researchers used medication to block the release of IL-18 in mice, it blocked the overproduction of eosinophils, too-effectively curing the disease. They've found a drug that may block IL-18 in humans. The next step is to run a clinical trial to test it.

SOURCE: Communications Biology

### Collateral Benefit

Doctors had been treating a man with EoE when he developed leukemia. While he focused on his leukemia treatment, he stopped seeing his EoE doctors and following his management plan. Yet, though there is no known cure for EoE, 6 years after the man had a stem cell transplant for his leukemia, an endoscopy showed no sign of EoE. It's the first published case of a person who no longer had EoE after a stem cell transplant. But stem cells have worked for other gastrointestinal diseases, including Crohn's, celiac, and chronic liver diseases. The accidental discovery may lead to tests of stem cell transplants for EoE and perhaps a cure.

SOURCE: Cureus

# Fed up with Steroids

Doctors sometimes prescribe swallowed corticosteroids for EoE. You might get them through an inhaler or nebulizer or in the form of a thick liquid slurry that you drink. They can improve your symptoms and reduce the number of damaging white blood cells in your esophagus. But according to a survey, many people with EoE don't like using steroids and often stop taking them. In the survey, only about 40% of adults prescribed corticosteroids for EoE stuck to the treatment. Just under 45% said they were satisfied with the treatment. If you're not satisfied with your EoE therapy, talk to your doctor.

SOURCE: Journal of Clinical Gastroenterology



ESTIMATED NUMBER OF PEOPLE IN THE U.S. living with EoE—more than previously believed. SOURCE: National Organization for Rare Disorders

**ESTIMATED NUMBER OF** 

# WHAT YOU SHOULD KNOW

### ANSWERS TO YOUR COMMONLY ASKED EOE QUESTIONS

By Sonya Collins | Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

Mark Holbreich, MD, an allergist in Indianapolis, IN, shares some basic information about eosinophilic esophagitis.

# Q. What is eosinophilic esophagitis (EoE)?

It's considered a rare disease, but it's probably more common than we think. It happens when white blood cells called eosinophils build up in the esophagus and cause inflammation. If left untreated, it progresses and slowly narrows the esophagus over many years and causes difficulty swallowing solid food.

## Q. What causes EOE?

The whole picture is still unclear. It's likely a combination of genetics and things that you are exposed to in the environment and certain foods. The general consensus as to what ultimately triggers the disease is an allergic reaction.

# Q. What are the symptoms?

The hallmark of the disease is difficulty swallowing solid food and choking on food. For a few years, you may just write it off as "I just didn't chew my food carefully," "I ate too fast," "I should drink some water." Then you start accommodating so you can eat problematic foods—usually foods that go down in a glob like meat, rice, and bread. You cut it into smaller pieces. You chew more carefully.

Eventually, eating becomes so uncomfortable that you seek care. Or food gets stuck in your esophagus—it won't go up or down—and you go to the emergency room.

# Q. What is the treatment for EoE?

First, you might try an acid reflux medicine called a proton pump inhibitor. They reduce inflammation in the esophagus for about 50% of people who have EoE, so they just take it for the rest of their life.

The next option is a swallowed steroid you get through an asthma inhaler or in liquid form.

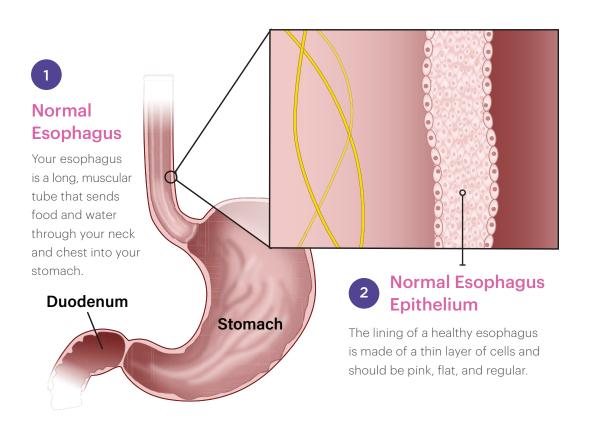
Third is an elimination diet. A diet that removes eggs, dairy, wheat, peanuts, soy, fish, and shellfish helps 40% to 50% of people. But every time you add a food back in to see if you can tolerate it, you have to do an endoscopy to make sure it's not affecting the esophagus. That's six to seven endoscopies within a year. So now we tell people to try to eliminate just gluten and dairy. If they do well, they can stay on it. If not, we can try something else.

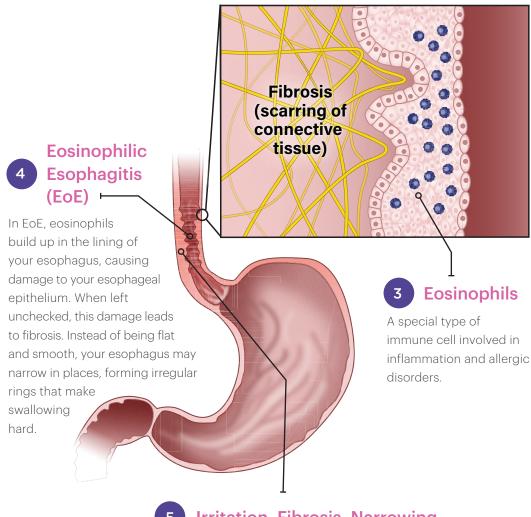
If other treatments fail, we have a new FDA-approved drug. It's a biologic agent used to treat several allergic diseases. And it's a weekly injection you give yourself at home.



# EOSINOPHILIC ESOPHAGITIS

By Kendall K. Morgan | Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor





# Irritation, Fibrosis, Narrowing

When your body tries to heal damaged tissue and leaves abnormally thick, stiff, scarred tissue behind.

# Focus On

# NEED TO KNOW

# FOLLOW THESE FIVE TIPS TO GET YOUR EOE UNDER CONTROL

By Kendall K. Morgan Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

When you have eosinophilic esophagitis (EoE), it's a good idea to take immediate steps to prevent permanent damage to your esophagus, says Michael S. Smith, MD, a gastroenterologist at Mount Sinai in New York City. To help you, follow these tips.

# Tip No. 1: Work With Your Doctor

Talk with your doctor about your treatment options, which may include changes in your diet, taking medicines, or having a medical procedure to stretch your esophagus.

"It is very likely you will need ongoing treatment for EoE, so make sure you have a good relationship with your physician and share openly what is and is not working for you with respect to your care plan," Smith says.

# Tip No. 2: Adjust Your Eating Habits

Smith recommends cutting your food into smaller pieces and making sure that you chew your food well. Drink water regularly while you eat to help push your food along. These steps can help you to avoid a blockage in your esophagus that could send you to the emergency room.

# Tip No.3: Consider Your Diet

EoE is often related to foods, most commonly including dairy, wheat, eggs, soy, nuts, and



shellfish. Try an elimination diet (see page 17) with guidance from your care team to help you identify any food triggers.

# Tip No. 4: Ask About Allergy Testing

Many people with EoE have a history of allergies or allergic conditions, such as atopic dermatitis (eczema) or food allergies. Ask your doctor if they recommend allergy testing. Keep in mind that you can still have EoE even if you don't have any known allergies, Smith says.

# Tip No. 5: Let Friends and Family Know

Your EoE and its symptoms may cause you to avoid eating around other people or to feel self-conscious when you do. It can help to tell friends and family about your EoE and the ways it's affecting you.

"It's OK to be the last to finish a meal and to take your time and not feel rushed," Smith says. "If people around you don't know you have to do that, they can't be as supportive of you as you work through your condition."

# KEEP A RECORD

# USE THIS SYMPTOM TRACKER TO GIVE YOU AND YOUR DOCTOR A BETTER OVERALL SNAPSHOT OF YOUR CONDITION.

"When monitoring your EoE, you want to pay attention to how difficult it is to swallow food and liquid at each meal," says Bryan G. Sauer, MD, gastroenterologist in the Digestive Health Center at UVA Health in Charlottesville, VA. "How often do you have trouble swallowing? Are you doing anything to get foods down easier? Are you avoiding certain foods or social situations because of your symptoms? This overview helps your doctor get a clearer picture of how best to treat you."

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
EOE SYMPTOMS							
MEDICATION SIDE EFFECTS							
ANXIETY LEVEL							
FOODS I'VE EATEN							
ACTIVITIES							
MOOD							

SCAN OR COPY THIS PAGE BEFORE YOU FILL IT IN TO USE FOR TWO OR THREE MONTHS

# CARING FOR A LOVED ONE WITH EOE

# IT TAKES PLANNING, PATIENCE, AND PERSISTENCE. WE SUPPORT EACH OTHER.

By Marvin Randall Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

Early into the pandemic, my partner, Mike, started saying he felt like he was going to choke every time he ate. It kept getting progressively worse. I was a bartender at the time, and Mike was so afraid of eating by himself that he would sit in the parking lot and wait while I was working.

At first, his therapist thought it was anxiety—that he was afraid of choking but he wasn't actually going to choke. Her recommendation was that he push through. She suggested I leave the house, but stay close by while he tried to eat alone. I needed to be available full time in order to do all this. Eventually, I left my job and started working for Instacart for a little while so I could have complete flexibility.

Until he got a diagnosis and treatment, it got to the point that he couldn't eat solid foods. I had to help find things that he could eat. I boiled chicken and used the blender to turn it into soup. I was just liquifying everything, until eventually he went on a feeding tube.

I had to be on call 24/7 so that if something happened, I could get him to the ER as soon as possible. It's such an unpredictable disease.

It was so hard to watch him go through all of this, watch him not be able to eat and lose 40 or 50 pounds. I felt completely helpless. It was absolutely terrifying.



It was depressing for both of us. But we did what we could to keep our spirits up. On my days off, we would leave the small town where we lived, outside of Phoenix, and go spend the day in Phoenix. But, even then, depending on where he was in his diet at the time, we'd have to pack lunches, pre-make soups, or pack the



# MARVIN'S WORDS OF WISDOM FOR CAREGIVERS



- + Though you are advocating for your loved one, don't take over. Always listen to the person you're caring for.
- + Don't be afraid to seek a second opinion if the current treatment plan isn' working.
- + Keep pushing until the person in your care has their symptoms under control

feeding tube formula. There was a lot of planning and a lot that had to be organized before we could leave town.

I'm a caregiver for him, but incredibly he's also been a caregiver for me through it all. He's always pushing me to make sure I'm exercising, eating right, and taking care of myself. We support each other.

But things are easier now. Once Mike got a diagnosis, he was put on a biologic. When it started kicking in, he could eat solid foods again and swallow them without fear of choking. Now, my role as caregiver is much less. I help coordinate appointments and set reminders to take the medication. The medication is working so well now that Mike says he sometimes forgets he has EoE.



# **GROCERY LIST**

## HERE'S WHAT YOU SHOULD PICK UP AT THE STORE

By Kendall K. Morgan Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

One of the most common ways to treat eosinophilic esophagitis (EoE) is to take the foods that trigger it out of your diet. You might do tests to find out which foods bother you specifically. Sometimes people also try an elimination diet, in which they remove up to six foods that commonly trigger EoE.

These foods to avoid may include:

- Dairy products
- Wheat
- Eggs
- Soy
- Peanuts and tree nuts
- Fish and shellfish

If you need to cross certain foods off your grocery list, what should you buy at the store?

Here's a good list to keep you eating well and help you replace some of what you're missing:

Rice mi			Porl	,
RICE IIII	IIK	_	POH	ζ.

- ☐ Hemp milk☐ Pea milk☐ Rice
- ☐ Rice ☐ Potatoes
- □ Oats □ Fruit
- ☐ Corn ☐ Vegetables
- ☐ Quinoa ☐ Coffee
- ☐ Millet ☐ Tea
- ☐ Buckwheat ☐ Daily multivitamin
- ☐ Gluten-free flour ☐ Vitamin D and calcium-fortified orange juice

You can find lots of resources online for meals and snacks that suit your new diet. Remember when you're at the store to check food labels for any packaged items on your list to make sure they don't contain allergens or ingredients you're eliminating. Don't rely on claims on the front of a package that say a food is dairy-, nut-, or wheat-free.

# **ELIMINATION DIET**

# USE THIS TOOL TO KEEP A RECORD OF YOUR MEALS AND SYMPTOMS.

A typical six-food elimination diet (SFED) for EoE starts with the subtraction of wheat, milk, eggs, nuts, soy, fish, and shellfish. After 6 weeks on the SFED diet, you'll introduce one of the eliminated foods every 2 to 4 weeks. Using this weekly table, you can record your symptoms to get a better overall picture of how your body reacts to each reintroduced food.

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
FOOD INTRODUCED THIS WEEK							
MORNING SYMPTOMS							
MIDDAY SYMPTOMS							
EVENING SYMPTOMS							

Check in with your doctor as you progress through your elimination diet.

SCAN OR COPY THIS PAGE BEFORE YOU FILL IT IN TO USE FOR TWO OR THREE MONTHS

# Living Healthy

# DIET IS KEY

# THESE FOODS COULD BE SETTING OFF YOUR EOE SYMPTOMS

By Rachel Reiff Ellis Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

For most people with EoE, cutting certain foods out of your diet is an effective method for treating your symptoms. Although it can be time-consuming and at times overwhelming, it's a low-risk choice that can deliver positive results and move you toward a better quality of life.

"Not all people with EoE have food allergies that contribute to their symptoms, but at least 80% of cases are induced by food allergens," says Deepa M. Grandon, MD, an allergist/immunologist at Cleveland Clinic Abu Dhabi, UAE.

Your health care team will help you figure out your trigger foods in a specific way so you know what may be safe and what needs to go for good.

# Target food groups

When EoE symptoms happen because of a food allergy, it means certain proteins from those foods trigger an allergic inflammatory response in your esophagus. Certain food groups are more likely to cause this reaction than others.

The most common method for food elimination is the six-food elimination diet (SFED). On this diet, you cut the common culprits such as wheat, milk, eggs, nuts, soy, fish, and shellfish completely out of your diet. After 6 weeks, your doctor does an endoscopy and biopsy to see if your

### WHO YOU'LL SEE

Here are three specialists who can help you as you navigate dietary changes.

- + Allergist/Immunologist
- + Nutritionist
- + Gastroenterologist





inflammation has gone down.

It can be challenging to give up so many foods at once, so some doctors instead try a modified approach where they focus on only a couple of top offenders first.

"We're finding more and more that patients are more willing to do a step-up type of diet where they eliminate milk and wheat first and then see if their inflammation resolves over time," says Derek A. Damin, MD, assistant professor of clinical medicine at Vanderbilt University Medical Center in Nashville, TN.

Grandon says that for people who fit the criteria for food elimination, 43% will respond to this smaller change alone.

## When to reintroduce

Once the elimination period has passed, your doctor will have you start eating one of the foods you cut out. Then they'll do certain tests to see how your body responds. Over time, you'll continue to test each food you've eliminated.

"Typically, [you] can find the culprit food within the first meal of reintroduction," Grandon says.

Your doctor does this by doing an endoscopy and taking a small sample of tissue from your esophagus. Then they check the sample to see if your level of eosinophils—the immune cells that trigger inflammation—has gone down.

"Many times one of the best indicators for a food causing an individual's inflammation is in their history," Damin says. "They'll say, 'I think dairy has been bothering me over the past months or years,' and then that will be the culprit."

### WAYS TO ELIMINATE

Deepa M. Grandon, MD, shares the three main dietary restriction strategies for EoE.

- **1. Empiric elimination diet:** Take out two to six foods and gradually add back in.
- **2. Test-directed diet:** Based on skin or blood allergy test results.
- 3. Elemental diet: Liquid meal replacement.

# TIPS FOR MANAGING COSTS

# HOW TO HANDLE YOUR **EoE-RELATED EXPENSES**

By Rachel Reiff Ellis Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

After an EoE diagnosis, you want the best treatment plan to keep your symptoms under control. And although you want to do what's necessary, you may also be wondering what these treatments will cost.

Your expenses will vary based on your plan and insurance coverage, but there are ways to approach the financial part of your care with savvy.

### Know the numbers

Your doctor may start with medications such as protonpump inhibitors (PPIs) or inhaled steroids, or a biologic, or they may suggest an elimination diet. These options range in cost, and you may try several before finding what works.

Over-the-counter PPIs are inexpensive but generally the least effective treatment for EoE. Prescription steroids are more expensive.

"Typically, one inhaler is more than \$300 and you may need two of them per month," says Evan S. Dellon, MD, MPH, professor of medicine and adjunct professor of epidemiology at the

## WHO CAN HELP?

These organizations can assist.

- + American Partnership for Eosinophilic Disorders: APFED.org
- + Campaign Urging Research for Eosinophilic Disease: **CUREDFoundation.org**
- + Patient Access Foundation:

**PANFoundation.org** 



University of North Carolina School of Medicine at Chapel Hill. Other options can be as much as \$1.000.

Biologics are the most effective treatment, but costly. You get them from a specialty pharmacy and take them as weekly injections. Although the price can be steep, Dellon says there are forms of help available.

"There are copay assistance programs with the company [that makes the drug]," he says. "It's actually quite generous, but they're still the most expensive possible option right now."

# Expect hidden costs

Most people with EoE respond well to dietary therapy. In a study, Dellon found that people



following the six-food elimination diet (SFED) added nearly \$700 to their yearly grocery bill.

"It's expensive if all your foods have to be wheat-, dairy-, and egg-free," he says. "And those estimates were from 2010, so that number might be doubled by now with inflation."

You may be able to cut some of these costs by talking to a nutritionist, says Elizabeth T. Jensen, MPH, PhD, associate professor of epidemiology and prevention and associate professor of gastroenterology at Wake Forest University School of Medicine in Winston-Salem, NC.

"They can provide information and resources about how to adhere to the diet in a way that is simple and not as costly for you," she says.

# Compare plans

One of the best ways to save is to take a hard look at your insurance coverage and see if moving to another plan could reduce overall costs.

"You may need something with a higher

monthly premium that's going to be a lower deductible with better pharmacy coverage," Dellon says.

Even if you have to pay an extra \$100 to \$200 a month, it can pay off if you're facing multiple endoscopies and more expensive medications.

## Check clinical trials

EoE treatment research is ongoing, and as a result, there are many clinical trial options. Your doctor can help you see if you qualify for any open studies.

"If you're underinsured or not insured, it's a great way to get treatments," Dellon says. "Everything—the endoscopies and medications and all of your care—is paid for."

### Connect with others

There are people out there who may have good advice about how to manage therapy costs.

"A lot of patient advocacy groups have a very active social media presence, which can be a way to connect with other families experiencing this and get ideas from their process," Jensen says. You may want to run their tips by your doctor.

### **ELEMENTAL DIET COVERAGE**

States where insurance covers liquid replacement diets for people with severe EoE:

- + Arizona
- + New Jersey
- + Connecticut
- + New York
- + Illinois
- + Oregon
- + Maine
- + Pennsylvania
- + Maryland
- + Rhode Island
- + Massachusetts
- + South Dakota
- + Minnesota
- + Texas
- + Nebraska
- + Washington
- + New Hampshire

# Quiz

# WHAT IS YOUR EOE IQ?

# TAKE THIS TRUE/FALSE QUIZ TO FIND OUT

By Kendall K. Morgan Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

- The main problem when you have eosinophilic esophagitis (EoE) is with your esophagus, the tube that connects your mouth and throat to your stomach.
- 2. EoE can be cured.
- I. False > EoE symptoms do show up in your esophagus. But EoE is a chronic immune system disorder. It happens mainly when your immune system reacts badly to foods that you're eating. The key to treating EoE is to limit the immune response either with medicine or by eliminating foods that trigger it.
- 2. False > EoE is a chronic disorder of the digestive system. It's a major cause of illness that can make it hard to swallow and eat. Doctors are diagnosing EoE more now than ever before at rates that keep going up.
- 3. False Acid reflux happens when acid from your stomach comes up into your esophagus. EoE happens from inflammation caused by immune cells called eosinophils. Both conditions can make it hard to swallow and eat. If you have what you think is heartburn but it doesn't go away with



- 3. EoE is related to acid reflux.
- 4. A doctor can't tell if you have EoE by looking at your esophagus.
- 5. The only way to treat EoE is by avoiding foods that trigger it.

heartburn medicine, you could have EoE. Even though acid isn't the main problem in EoE, medicines that lower acid in your stomach sometimes can help with EoE. But those medicines don't really fix the main problem

- 4. True Your doctor can't tell if you have EoE just by passing a camera and light in a flexible tube down your throat to look at your esophagus in a procedure called an endoscopy. But they will need to do an endoscopy of your esophagus to take biopsy samples. They'll use a microscope to check for immune cells called eosinophils and other signs of inflammation in small bits of your esophageal tissue.
- 5. False ➤ Diets that take out major food allergens or foods you have specific sensitivities to can help and are a good way to treat your EoE. But medical treatment may also help manage the condition.

# **NEXT STEPS**

Treatment plan:							
► MEDICATIONS							
DRUG							
DOSE							
WHEN TO TAKE IT							
HOW TO TAKE IT							
➤ LIFESTYLE CHANGES							
DIET CHANGES							
EXERCISE PLAN							
ANXIETY REDUCTION							
OTHER CHANGES							
My next appointment is:							
I should call between visits if:							

66 It's important to receive proper treatment for your eosinophilic esophagitis because over time, THE ALLERGIC REACTION CAN CREATE PERMANENT SCAR TISSUE AND CAUSE NARROWING—ALSO CALLED A STRICTURE—IN YOUR ESOPHAGUS."

HOUMAN REZAIZADEH, MD,

ASSOCIATE PROFESSOR OF MEDICINE AND DIRECTOR OF THE ESOPHAGEAL DISEASE PROGRAM AT UCONN HEALTH IN FARMINGTON, CT

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