

Eosinophilic Duodenitis

A Practical Guide For Patients



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Introduction: Eosinophilic Duodenitis

Eosinophilic duodenitis, abbreviated EoD, is a rare inflammatory condition affecting the duodenum, the first part of the small intestine. It occurs when unusually high numbers of eosinophils—white blood cells involved in allergic and immune responses—collect within duodenal tissue and cause digestive symptoms. Patients may experience abdominal pain, nausea, bloating, vomiting, early fullness, diarrhea, or weight loss. EoD is classified as a non-esophageal eosinophilic gastrointestinal disease. Diagnosis requires digestive symptoms, tissue eosinophilia on duodenal biopsy, and exclusion of infections, medications, inflammatory diseases, and other possible causes. Treatment may involve dietary therapy, corticosteroids, nutritional support, and specialist-directed care.

Key Takeaways

- Eosinophilic duodenitis causes eosinophil-predominant inflammation in the duodenum.
- It is abbreviated as EoD.
- EoD belongs to a group called eosinophilic gastrointestinal diseases.
- It may occur alone or with eosinophilic inflammation elsewhere in the digestive tract.
- Symptoms vary and can resemble other gastrointestinal conditions.
- Abdominal pain, nausea, bloating, and early fullness are common complaints.
- Some patients also experience vomiting, diarrhea, or weight loss.
- A normal-looking duodenum during endoscopy does not completely exclude EoD.



What Causes Eosinophilic Duodenitis?

Known Causes:

The exact cause of eosinophilic duodenitis is not fully understood. It appears to be an immune-mediated condition in which food antigens, environmental allergens, abnormal immune signaling, and intestinal barrier changes may trigger eosinophilic inflammation. Many patients also have allergic conditions. However, infections, medicines, autoimmune diseases, and other disorders must be ruled out before primary EoD is diagnosed.

- **Abnormal immune response:** The immune system may react excessively and recruit eosinophils to duodenal tissue.
- **Food-related immune triggers:** Certain foods may contribute to inflammation in some patients.
- **Environmental allergens:** Airborne or seasonal allergens may influence immune activity.
- **Atopic conditions:** Asthma, eczema, allergic rhinitis, and food allergies may occur alongside EoD.
- **Genetic susceptibility:** Inherited immune and barrier-related factors may increase vulnerability.
- **Intestinal barrier dysfunction:** A weakened mucosal barrier may allow antigens to activate inflammation.
- **Medication reactions:** Certain medicines can cause secondary gastrointestinal eosinophilia.



Common Signs & Symptoms

Symptoms of eosinophilic duodenitis are often nonspecific and may overlap with functional dyspepsia, irritable bowel syndrome, food intolerance, celiac disease, or inflammatory bowel disease. Some people experience persistent symptoms, while others have periods of improvement and recurrence.

Core Symptoms Include:

- Upper or central abdominal pain
- Feeling full shortly after starting a meal
- Indigestion or discomfort after eating
- Reduced appetite
- Diarrhea or loose stools
- Abdominal cramping
- Fatigue or reduced energy



Severe cases can also cause:



- Persistent vomiting and dehydration
- Significant weight loss or malnutrition
- Low blood protein or albumin levels
- Swelling related to protein loss
- Gastrointestinal bleeding
- Severe anemia
- Narrowing or obstruction of the small intestine
- Fluid accumulation within the abdomen



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Diagnosis requires gastrointestinal symptoms and increased eosinophils within duodenal biopsy tissue after other explanations have been excluded. Upper endoscopy with multiple biopsies is central to evaluation because eosinophilic inflammation can be patchy and may be present even when the tissue looks relatively normal. Clinical-trial criteria have commonly used at least 30 eosinophils per high-power field in three or more duodenal fields, although practical clinical thresholds continue to be studied.

Diagnostic Tools:

- **Medical history evaluation:** Reviews pain, nausea, vomiting, diarrhea, fullness, weight loss, and symptom triggers.
- **Allergy history:** Identifies asthma, eczema, allergic rhinitis, food allergy, and related conditions.
- **Medication review:** Looks for medicines associated with gastrointestinal inflammation or eosinophilia.
- **Physical examination:** Checks abdominal tenderness, hydration, weight, swelling, and nutritional status.
- **Upper endoscopy:** Examines the esophagus, stomach, and duodenum.
- **Multiple duodenal biopsies:** Samples several areas because eosinophilic inflammation may be unevenly distributed.
- **Gastric and esophageal biopsies:** Determine whether other digestive regions are also affected.
- **Pathology assessment:** Counts eosinophils and evaluates tissue injury under a microscope.



There is no single diet that works for every patient with eosinophilic duodenitis. Some patients may benefit from a supervised elimination diet or, in severe cases, an amino-acid-based elemental diet. Dietary treatment should be planned with a gastroenterologist and registered dietitian because removing several foods can cause nutritional deficiencies, weight loss, and difficulty maintaining the diet.

Key Insights:

- Do not remove major food groups without medical and dietitian guidance.
- Keep a food and symptom diary to identify possible patterns.
- Maintain adequate calories, protein, vitamins, and minerals.
- Eat smaller meals when early fullness or nausea is present.
- Choose gentle, easily tolerated foods during symptom flare-ups.
- Stay adequately hydrated, particularly when diarrhea or vomiting occurs.
- Consider a specialist-supervised elimination diet when recommended.
- Avoid relying only on allergy testing to select foods for removal.
- Reintroduce eliminated foods according to a structured medical plan.
- Use nutritional supplements when dietary intake is inadequate.



Medications & Treatment Options

Treatment aims to reduce symptoms, control eosinophilic inflammation, maintain nutrition, and prevent complications. There is currently no universally accepted treatment protocol for EoD, and therapy is often based on disease severity and specialist experience. Corticosteroids and dietary therapy are commonly used, while several steroid-sparing and biologic approaches remain under study or are used selectively.

Treatment Options

- **Observation and monitoring:** May be appropriate for mild disease with limited symptoms.
- **Systemic corticosteroids:** Prednisone or a similar medicine may rapidly control severe inflammation.
- **Budesonide therapy:** Specialist-directed formulations may target the proximal small intestine while limiting systemic exposure.
- **Proton pump inhibitors:** May help when acid-related irritation, erosions, or ulcers are also present.
- **Food elimination therapy:** Removes selected common food triggers under professional supervision.
- **Elemental diet:** Uses amino-acid-based formula in selected severe or treatment-resistant cases.
- **Iron supplementation:** Treats iron deficiency or anemia.
- **Vitamin and mineral replacement:** Corrects nutritional deficiencies.
- **Intravenous fluids:** Treat dehydration caused by severe vomiting or diarrhea.



Advanced Therapies & Procedures

Advanced care may be needed when symptoms are severe, inflammation persists, nutrition declines, or standard treatments are unsuccessful. Because EoD is uncommon, patients with complex disease may benefit from coordinated care involving gastroenterology, allergy and immunology, pathology, nutrition, and sometimes hematology.

Therapy Options:

- **Repeat upper endoscopy:** Reassesses duodenal appearance and inflammation.
- **Mapping biopsies:** Collect samples from several digestive regions to define the extent of disease.
- **Targeted budesonide therapy:** Delivers topical corticosteroid treatment to the proximal small intestine.
- **Short-term systemic steroid therapy:** Induces remission in severe or extensive disease.
- **Dietitian-directed elimination therapy:** Removes and later reintroduces potential food triggers systematically.
- **Elemental nutrition therapy:** Uses amino-acid formula for selected severe cases.
- **Biologic therapy:** May be considered at specialist centers for refractory disease, often through off-label use or clinical trials.
- **Clinical-trial participation:** Provides access to emerging therapies targeting eosinophilic or type 2 inflammation.

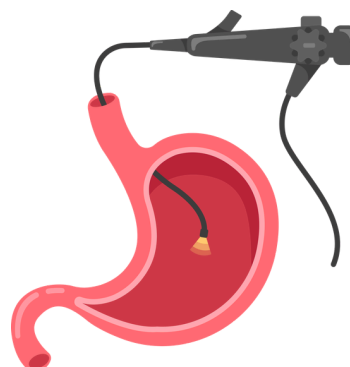


Coping With Eosinophilic Duodenitis

Living with eosinophilic duodenitis may involve managing recurring symptoms, dietary restrictions, medication effects, and uncertainty about food triggers. A coordinated care plan can help patients maintain nutrition, track symptoms, and recognize complications. Regular follow-up is important because symptoms and biopsy findings do not always improve at the same rate.

Practical Strategies

- Take prescribed medications exactly as directed.
- Attend gastroenterology and allergy follow-up appointments.
- Work with a registered dietitian before restricting foods.
- Keep a daily record of meals, symptoms, and bowel movements.
- Monitor body weight and appetite.
- Eat smaller meals when early fullness is present.
- Maintain adequate fluids during diarrhea or vomiting.
- Complete recommended blood tests.
- Ask whether repeat endoscopy and biopsies are needed.
- Carry an updated list of medicines and food restrictions.
- Avoid restarting eliminated foods without a reintroduction plan.



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Q1: What is eosinophilic duodenitis?

A: Eosinophilic duodenitis is an immune-mediated condition in which abnormally high numbers of eosinophils collect in the duodenum and cause gastrointestinal symptoms. It is a type of non-esophageal eosinophilic gastrointestinal disease.

Q2: What causes eosinophilic duodenitis?

A: The exact cause is not fully understood. Food antigens, allergic immune responses, genetic susceptibility, and intestinal barrier changes may contribute. Before confirming EoD, doctors must exclude parasites, medication reactions, celiac disease, inflammatory bowel disease, autoimmune conditions, and other causes of tissue eosinophilia.

Q3: How is eosinophilic duodenitis diagnosed?

A: Diagnosis usually requires digestive symptoms, upper endoscopy with multiple duodenal biopsies, increased tissue eosinophils, and testing to exclude secondary causes. Blood tests, stool testing, allergy history, and imaging may also be included.



Take Action

If you experience persistent abdominal pain, nausea, bloating, vomiting, early fullness, diarrhea, unexplained weight loss, or recurring nutritional deficiencies, do not ignore the symptoms. Eosinophilic duodenitis can resemble several other digestive conditions, making endoscopic evaluation and properly reviewed biopsies important.

Schedule a consultation with GastroDoxs for expert guidance on managing your digestive health.

For additional resources, visit GastroDoxs.com.

**Your health starts with knowledge.
Take the first step today!**

SCHEDULE AN APPOINTMENT



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