



## DIGESTIVE SYSTEM

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**Anotatsiya:** This article provides an in-depth discussion of the digestive system, its structure, and its vital role in maintaining human health. It also examines the causes, symptoms, and natural treatment methods of stomach and intestinal diseases. The pathogenesis and clinical features of conditions such as gastritis, peptic ulcers, enterocolitis, and Crohn's disease are scientifically described. Additionally, the therapeutic effects and correct usage of natural remedies — including honey, turmeric, licorice root, garlic, probiotics, and herbal teas — are presented. The article further analyzes the advantages and safety of combining natural treatments with modern medical therapies.

**Keywords:** Digestive system, stomach, intestine, gastritis, peptic ulcer, enterocolitis, natural treatment, diet, honey, licorice root, turmeric, garlic, probiotics, herbal teas, chamomile, healthy nutrition.

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### The Digestive System

The digestive system is a complex group of organs that process food and ensure the breakdown and absorption of nutrients in both humans and animals.

In many unicellular organisms (for example, *Amoeba*), food digestion occurs within food vacuoles. In some unicellular organisms (such as *Paramecium*), there are specialized structures for food intake and waste expulsion.

In lower multicellular animals (e.g., sponges, coelenterates, and flatworms), digestion occurs within specialized cells. Among invertebrates, the structure of the digestive system varies widely. The simplest organisms (such as coelenterates and ctenophores) possess a gastrovascular cavity with a single opening serving as both mouth and anus.

In more complex invertebrates (such as nemerteans, annelids, mollusks, and arthropods), the digestive system consists of three sections — anterior, middle, and posterior — connected to the external environment through the mouth and anus.

In humans and vertebrates, the structure of the digestive system is adapted to their dietary habits and environmental conditions. The anterior portion forms the mouth cavity, pharynx, and esophagus. Within the mouth are the jaws, teeth, mucous membranes, salivary glands, and tongue.

The middle portion consists of the stomach, small intestine, liver, and pancreas. The posterior portion includes the large intestine, rectum, and anal opening. Together, the esophagus, stomach, and intestines form the alimentary canal, whose wall comprises mucosal, muscular, and serous layers.

Through evolution, the mucosal surface area of the digestive tract expanded via folding, villi formation, and gland development (such as the liver and pancreas). Beneath the mucosa are lymphoid follicles that perform protective functions.

The digestive system is richly supplied with blood and lymphatic vessels, and its activity is regulated by complex neurohumoral and hormonal mechanisms. Digestive hormones play a particularly vital role in this process.



### Stomach and Intestinal Diseases

The human digestive system performs essential functions, including the mechanical and chemical breakdown of food, nutrient absorption, and waste elimination. The stomach and intestines are the central organs of this system, and any disruption in their normal activity leads to various diseases.

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#### Stomach Disorders

Stomach diseases arise from inflammation, functional disturbances, or damage to the stomach wall or glands.

**Gastritis** — inflammation of the gastric mucosa — is commonly caused by infection or poor dietary habits. Chronic gastritis may lead to atrophic changes, pyloric stenosis, or even gastric cancer.

**Peptic ulcer** — a deep lesion in the mucosa — often develops due to *Helicobacter pylori* infection, which weakens mucosal defense and allows gastric acid to erode the tissue.

Key symptoms include upper abdominal pain, nausea, bloating, and sometimes vomiting of blood. In *Dieulafoy's lesion*, severe bleeding occurs due to rupture of a gastric artery.

A rare congenital disorder, **pernicious anemia**, results from the loss of parietal cells, preventing vitamin B12 absorption.

Common symptoms of stomach diseases include dyspepsia, vomiting, loss of appetite, and weight loss. Diagnosis involves endoscopy, biopsy, and laboratory tests. Treatment includes antibiotics, acid-suppressing medications, and dietary adjustments.

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#### Intestinal Disorders

The intestines — the longest part of the digestive tract — are divided into the small and large intestines. Diseases affecting them can result from infectious, autoimmune, or physiological factors.

**Enterocolitis** is inflammation of the intestines, often due to infection, and is characterized by diarrhea.

Chronic inflammation can lead to **Crohn's disease** or **ulcerative colitis**, which cause abdominal pain, diarrhea, anemia, and weight loss.

Other intestinal problems include constipation, obstruction, or **intussusception** (telescoping of one segment into another). Impaired blood circulation in the intestines causes **ischemia**, a condition requiring urgent medical attention.

Diagnosis is made through colonoscopy, X-ray, CT scan, and stool analysis. Infectious cases are treated with antibiotics, while inflammatory types require immunosuppressants. Surgery may be necessary in severe cases.

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#### Small Intestine Disorders

The small intestine consists of three parts: the **duodenum**, **jejunum**, and **ileum**. Inflammation in this area is known as **enteritis** — specifically **duodenitis**, **jejunitis**, or **ileitis** depending on the segment affected.

Rare diseases such as **Curling's ulcer**, **Whipple's disease**, and **Milroy's syndrome** also involve the small intestine. Benign and malignant tumors — such as lipomas, carcinoids, and stromal tumors — may also develop here.



Symptoms include diarrhea, weight loss, malabsorption, fatigue, and anemia. Diagnosis relies on endoscopy, biopsy, and blood tests, including iron and calcium levels. Treatment involves dietary modification, antibiotics, and vitamin therapy.

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## Natural Treatment of Stomach Diseases

### 1. Diet and Nutrition

Dietary correction is crucial in managing gastritis and ulcers. Avoid alcohol, spicy, fatty, and processed foods. Include more fruits and vegetables rich in antioxidants. Eat small, frequent meals throughout the day.

### 2. Honey

Honey protects the gastric mucosa and accelerates ulcer healing. Its antibacterial properties help fight *Helicobacter pylori*.

**Usage:** Dissolve one teaspoon of natural honey in warm water and drink it on an empty stomach each morning.

### 3. Licorice Root (*Glycyrrhiza glabra*)

Licorice root extract protects the mucosa and reduces inflammation.

**Usage:** Taken as a decoction or in pharmaceutical extract form.

### 4. Turmeric

The curcumin in turmeric reduces inflammation and supports gastric tissue regeneration.

**Usage:** Add ½ teaspoon to meals or mix with warm milk.

### 5. Garlic

Garlic acts as a natural antibiotic, effectively combating bacteria that cause stomach infections.

**Usage:** Consume 1–2 cloves of raw garlic daily with food.

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## Natural Treatment of Intestinal Diseases

### Probiotics

Yogurt, kefir, kimchi, and other fermented foods help restore intestinal flora and reduce inflammation by increasing beneficial bacteria.

### Fiber-Rich Foods

Whole grains, vegetables, and fruits improve bowel movement and prevent constipation — especially important for patients with colitis or irritable bowel syndrome.

### Herbal Teas and Infusions

- **Chamomile tea:** reduces inflammation and soothes the stomach and intestines.
- **Cumin and fennel seed infusions:** relieve gas and abdominal discomfort.
- **Aloe vera juice:** aids in healing intestinal mucosa.

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## Conclusion

If the digestive system is unhealthy, the entire body's function becomes impaired. The main causes of stomach and intestinal diseases include poor diet, stress, infections, and unhealthy lifestyle habits. Natural remedies — such as honey, licorice root, turmeric, garlic, chamomile, and probiotics — reduce inflammation, restore mucosa, and improve digestion.

However, these should complement — not replace — prescribed medical treatments. Maintaining a proper diet, avoiding harmful foods, and leading a healthy lifestyle remain the most effective natural strategies for preventing digestive diseases.

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