

# Nutrition at asthma

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**Abstract.** Asthma is a chronic respiratory disease characterized by periodic attacks. In asthma, the inflammatory process in the airways during breathing provokes spasms of obstructive origin, even attacks of suffocation <sup>[3]</sup>.

Today this pathology is a real scourge of our time. Asthma affects both men, women, and children, in total up to 10% of the total population of the planet <sup>[5]</sup>. Moreover, about 250 thousand cases end in death. In developed countries of the world, healthcare costs to combat bronchial asthma account for at least 2% of the total cost.

*Key words:* asthma, description , causes occurrence , types and symptoms , complications , prevention , treatment, useful products , folk dangerous means \_ products

## Classification and causes

Depending on its origin, asthma is classified into:

- endogenous - this form of the disease can be provoked by cold air, infectious pathologies, severe nervous tension;
- exogenous – caused by allergens entering the respiratory tract;
- mixed - develops with the activity of exogenous and endogenous factors.

Depending on the symptoms, asthma is classified into:

1. intermittent - this type of disease is characterized by fairly rare exacerbations - once every 15-20 days;
2. **mild persistent** - attacks bother the patient 3-4 times a week, less often at night, no more than once every 7 days;
3. **persistent moderate severity** is characterized by daily attacks during the daytime and regular nighttime ones, approximately once every 5-6 days;
4. **persistent high severity** - asthma attacks bother the patient several times during the day, both day and night.

Depending on the clinical manifestations, the following types of asthma are distinguished:

- **allergic** – caused by triggers in the form of allergens, occurs as an inflammatory process of the respiratory tract;
- **non-allergic** - has a chronic course and does not depend on allergens;
- **obstructive** – characterized by blockage of the airways in the bronchi, which interferes with normal air circulation;
- **asthma in obesity** - characterized by poor airway opening;
- **late onset** – typical for women older than middle age, usually a reaction to certain medications.

The main risk factors for developing bronchial asthma include:

1. increased stress load;
2. genetic predisposition - if both parents suffer from asthma, the likelihood of their child developing asthma is 70%;
3. natural and climatic conditions;
4. frequent pneumonia;
5. smoking, both active and passive;
6. the presence of other pathologies of allergic origin - allergic rhinitis or dermatitis;
7. obesity;
8. exposure to frequent colds;
9. constant contact with allergens - house dust, pet hair or pollen from domestic flowers;
10. chemical irritants at work;
11. polluted air in megacities;
12. excessive physical activity.

### Asthma symptoms

The main symptom of the disease is a severe attack of suffocation, which usually consists of 3 stages:

- **harbingers** that let patients know that a severe asthmatic condition is approaching. These include: inability to take a full deep breath, incessant sneezing, wet cough, copious discharge from the nose and respiratory tract;
- **height** - during this period of time the patient has problems breathing, each inhalation and exhalation is accompanied by whistling and wheezing. In order to alleviate the condition, the patient sits down and tilts his body forward;
- **reverse development** - breathing becomes easier, the amount of wheezing decreases, sputum begins to disappear, thus gradually the attack subsides.

However, it is not only by attacks that the disease can be diagnosed. The main symptoms of bronchial asthma include:

1. cough, the intensity of which increases at night;
2. frequent colds with respiratory complications;
3. pain in the sternum, which is accompanied by general weakness and tachycardia;
4. pronounced shortness of breath, which intensifies even with light physical exertion;
5. cyanosis of the skin of the face;
6. feeling of anxiety, panic;
7. breathing accompanied by wheezing and whistling;
8. severe cough with sputum;
9. increased sweating;
10. in some cases, increased pressure;
11. allergic reactions in various manifestations;

The patient's condition worsens upon contact with smoke, allergens, changes in air temperature and physical exertion.

### Complications

Asthma can cause serious complications that can be life-threatening:

- pathologies of the respiratory tract of an infectious nature;
- vascular and heart diseases;
- narrowing of the bronchi, which makes breathing significantly more difficult;

- pulmonary emphysema - a violation of gas exchange that provokes changes in lung tissue;
- bronchiectasis – chronic pathology of the lungs and bronchi;
- status asthmaticus;
- pneumothorax;
- side effects of drugs that the patient has been taking for a long time to stabilize severe asthma.

## **Forecast**

The prognosis of bronchial asthma with adequate therapy is favorable. At the first signs of illness, it is important not to self-medicate, but to seek medical help as quickly as possible so that the pulmonologist can select the most effective treatment regimen.

## **Prevention**

To prevent the development of asthma, the following measures must be taken:

1. during epidemics - compliance with all preventive measures, as well as vaccination;
2. minimizing contact with allergens;
3. maintain cleanliness in the home and workplace;
4. eliminate mold at work and at home;
5. adhere to breastfeeding;
6. use only hypoallergenic cosmetics;
7. treat colds in a timely manner;
8. If possible, avoid stress and increased emotional tension;
9. change air conditioner filters on time;
10. do not open windows during the flowering period;
11. stop smoking, avoid passive smoking.

To prevent new attacks and the development of complications, patients with bronchial asthma should:

- periodically take vitamin complexes;
- give up alcohol;
- get rid of dust-accumulating items in the house, such as carpets, massive soft toys, rugs;
- ventilate the apartment every day and do wet cleaning;
- do breathing exercises;
- use hypoallergenic detergents and cleaning products;
- limit communication with pets, including ornamental fish, whose food may contain allergens;
- replace upholstered furniture with fabric upholstery with leather or leatherette ;
- use blankets and pillows only with synthetic fillers.

## **Treatment of asthma in official medicine**

It is impossible to diagnose asthma based solely on the patient's complaints. First, the doctor uses a stethoscope to listen to the patient's lungs; with asthma, wheezing and whistling are clearly audible. If necessary, the pulmonologist prescribes spirometry, the results of which show the volume and speed of air movement during inhalation and exhalation.

Pathology can occur differently in each patient, and accordingly, the method of therapy is selected individually <sup>[8]</sup>. To stop an attack, you should first calm the patient down, give him 150 g of warm water to drink in small sips, and only then use the inhaler. The most important thing is to prevent panic from developing. Many patients endure asthma attacks more easily and quickly in a sitting position. If the patient does not feel better within 20-30 minutes, it is better to call an ambulance.

Drug treatment involves a basic course that controls the course of asthma: glucocorticosteroids and monochannel antibodies, as well as a symptomatic course aimed at preventing pathology: xanthines, antibacterial and expectorants <sup>[6]</sup>.

To minimize the number and intensity of attacks, patients with AB should:

1. get rid of fleecy blankets, bedspreads and carpets from your home;
2. use air purifiers at home and at work <sup>[4]</sup>;
3. minimize contact with any pets;
4. Get rid of insects and dust mites in the house in a timely manner.

Good results in the fight against asthma can be achieved with the help of allergen-specific immunotherapy, which involves long-term vaccination over 4-5 years. In this case, the patient is injected with microscopic doses of the allergen, which leads to a decrease in the sensitivity of the immune system.

The success of treatment is also influenced by the conscious behavior of the patient himself; he must adhere to the following rules:

- do not miss routine examinations with a doctor and, if attacks worsen, seek medical help;
- do not make changes to the treatment regimen on your own <sup>[7]</sup>;
- read popular scientific medical literature about asthma.

### **Healthy foods for asthma**

Proper nutrition for asthma allows you to normalize metabolism, stop the inflammatory process, and speed up recovery, so diet No. 9 is recommended for such patients, which involves consuming the following foods:

1. the maximum amount of fresh vegetables and fruits to saturate the weakened body with microelements and vitamins;
2. lean meat;
3. bakery products made from rye flour;
4. porridge with butter <sup>[9]</sup>;
5. dairy products;
6. light, non-rich first courses;
7. compotes and fruit drinks.

In this case, meals should be small and frequent, and dishes should be steamed, baked, boiled or stewed <sup>[10]</sup>.

### **Folk remedies for the treatment of asthma**

- To thin sputum during an attack, traditional healers recommend drinking 50 g of dry wine. Valerian tincture has a similar effect <sup>[11]</sup>;
- rub the patient's chest with rendered bear fat;
- take a solution of hydrogen peroxide, on the first day, 1 drop three times a day, in subsequent days increase by 1 drop, thus bringing up to taking 3 drops 3 times a day <sup>[1]</sup>;
- during an attack, apply mustard plasters to the calves;
- Eucalyptus oil is famous for its decongestant effect, so a piece of cotton wool soaked in oil is placed at the patient's head in the evening so that the patient inhales its vapors all night;

- you can get rid of accumulated phlegm by taking a solution of water and honey [12,13] in a 1:1 ratio with the addition of cinnamon;
- eat ½ head of onion every day [14], which relieves inflammation and narrows the bronchi [15];
- drink ginger [16] tea daily to relieve spasms in the bronchi;
- drink 100 g of birch leaf decoction three times a day;
- for 10 days, drink a tincture of peeled aloe leaves in dry red wine with the addition of honey [2];
- Warm tea with viburnum berries will help relieve an attack [17];
- A decoction of dry celandine leaves will help cope with shortness of breath;
- A drink made from fresh figs drenched in warm milk will help you overcome an asthma attack.

### **Dangerous and harmful products for asthma**

In case of exacerbation, foods with increased antigenic activity should be removed from the diet, such as:

- baked goods and baked goods made from white flour;
- alcoholic drinks;
- fatty meats;
- spices;
- store-bought mayonnaise and sauces;
- sweet carbonated drinks;
- first courses based on strong, rich broths of meat and fish;
- offal;
- smoked products;
- chocolate;
- citrus;
- strawberries, raspberries, melon, tomatoes, eggplants [18-22].

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