# Hypertension - signs and symptoms, useful and dangerous products, folk remedies

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**Abstract.** Hypertension is a disease closely associated with an increase in blood pressure of a periodic or constant nature. The norm for a healthy person is considered to be a pressure of 120 to 80 mmHg. The top indicator is *systolic pressure*, which shows the number of contractions of the heart walls. The lower indicator is *diastolic pressure*, which reflects the amount of relaxation of the heart walls.

*Key words:* Hypertension, description, causes, types and symptoms, complications, prevention, treatment, healthy products, folk remedies, dangerous products

## Causes of development of hypertension

One of the main reasons for the development of hypertension is the narrowing of the lumen between small vessels, which leads to impaired blood flow. As a result, the pressure on the walls of blood vessels increases, and blood pressure increases accordingly. This is explained by the fact that the heart requires more strength to push blood along the channel.

Also, hypertension can appear against the background of diabetes mellitus [1], obesity [2], kidney disease, bad habits (especially smoking), and leading a sedentary (sedentary) lifestyle.

People who are obese and have reached the age of 55 years (for males) and 65 years (for females) are at risk. This should also include people who have relatives with cardiovascular diseases.

In addition, blood pressure can increase due to malfunction of the thyroid gland [3], coarctation (narrowing of the aorta), and in the presence of heart disease.

In general, all risk factors can be divided into 2 large groups.

- 1. In the first group, medical workers include risk factors that can be adjusted. Namely: high cholesterol [4], obesity, diabetes, smoking.
- 2. The second group includes reasons that, unfortunately, cannot be influenced. These include heredity and age.

### **Degrees of hypertension**

There are 3 degrees of hypertension: mild, moderate and severe.

- In **mild form** (*stage 1 hypertension*), blood pressure levels range from 140/90 mm Hg to 159/99 mm Hg. First-degree hypertension is characterized by an abrupt increase in blood pressure. The pressure can independently return to normal levels and suddenly rise again.
- With a moderate form (hypertension of the 2nd degree), the upper indicator fluctuates around 160 179 mm Hg, and the lower indicator is at the level of 100 109 mm Hg. This degree of

hypertension is characterized by a longer increase in blood pressure, which rarely returns to normal on its own.

• In **severe form** (*stage 3 hypertension*), the systolic pressure is above 180 mm Hg, and the diastolic pressure is above 110 mm Hg. With this form of hypertension, high blood pressure remains firmly in the area of pathological indicators.

With improper treatment of hypertension or in its absence, the first degree smoothly passes into the second, and then sharply into the third degree.

a hypertensive crisis may occur.

### A hypertensive crisis is a sudden, sharp, but short-term increase in blood pressure.

The cause of a hypertensive crisis is a disruption of the mechanisms that regulate blood pressure levels, as well as a disorder of blood circulation in the internal organs. Such disruptions can occur due to a sudden change in psycho-emotional state, abuse of salt, or sudden changes in weather.

A hypertensive crisis can occur in several forms (neurovegetative, edematous or convulsive). Each form has its own characteristics. Let's look at everything separately.

- In *the neurovegetative form*, the patient experiences tremors in the hands, dry mouth, an uncontrollable (unconditional) feeling of fear, increased heartbeat, and the patient is in a state of overexcitation.
- In the *edematous form*, the patient experiences persistent drowsiness, swelling of the eyelids, and confusion.
- In *the convulsive form*, the patient suffers from convulsions until he loses consciousness. This form of hypertensive crisis is the most dangerous and complex.

## **Complications of hypertensive crisis**

A hypertensive crisis can provoke myocardial infarction, pulmonary and cerebral edema, impair blood circulation in the brain and lead to death.

It is worth noting that hypertensive crisis is more common among women.

### Symptoms of hypertension and hypertensive crisis

Most often, patients suffer from severe headaches in the back of the head, temples and crown. Intensifies during mental and physical stress.

This disease is characterized by pain in the heart area. Basically, the pain is aching in nature, radiating to the shoulder blade. But they can also be short-term stabbing.

Also, with hypertension, there is a rapid heartbeat, the appearance of "floaters" before the eyes, dizziness and confusion.

### Useful foods for hypertension

Treatment of hypertension initially begins with nutritional adjustments (regardless of the chosen tactics). In most cases, as practice shows, this technique is sufficient to normalize blood pressure and maintain it within normal limits.

The first priority for hypertension is **weight control** through sensible caloric restriction.

Everyone knows that excess weight contributes to the development of hypertension, so if the patient's actual weight is much higher than normal, it is necessary to reduce the calorie content of meals. It is worth noting that such a reduction should not be carried out through fasting or exclusion from protein consumption [5]. It is necessary to limit the consumption of sweet, starchy, fatty foods.

The rule about reducing salt consumption is no less important.

When preparing food, only one teaspoon of salt is allowed in dishes per day. To enhance the taste characteristics of dishes, it is recommended to use various greens, herbs and spices. In addition, you can buy salt with a reduced sodium level in the store [6] (the taste of regular salt is no different from this).

It is better to replace foods rich in cholesterol [7] with additional amounts of vegetable oil, fruits, vegetables, lean meat and fish.

When it comes to dairy products, it is better to opt for low-calorie or low-fat products.

It is imperative to add more foods rich in magnesium [8] and potassium [9] to the patient's diet. These microelements increase the resistance of the heart muscles [10] to harmful factors, strengthen the nervous system, enhance the excretory function of the kidneys, and reduce the tendency of blood vessels to spasm.

You can replenish your body with magnesium and potassium by eating prunes, pumpkin [11], apricots [12], potatoes [13], cabbage, rose hips [14], bananas [15], bran bread, millet, oatmeal [16], buckwheat [17], carrots [18], black currants [19], parsley [20], beets [21], lettuce.

To normalize blood pressure, it is necessary to add foods rich in vitamin C to the diet [22]. It helps strengthen the walls of blood vessels [23]. Vitamin C is found in large quantities in sea buckthorn [24], citrus fruits, black currants, Sudanese rose flowers and rose hips. To increase its intake, you need to eat more fresh fruits and vegetables, and, if possible, reduce their heat treatment.

These nutritional rules and maintaining a healthy lifestyle will help stabilize blood pressure.

### **Traditional medicine for hypertension**

Since ancient times, traditional medicine has been used to treat high blood pressure. Herbal medicine (herbal treatment) is considered the most effective method. The basis of therapy is medicinal plants that have sedative (calming) abilities. These include: chamomile [25], hawthorn, lemon balm [26], peppermint [27], rose hips. Honey [28], citrus fruits and green tea are also used to lower blood pressure.

Traditional medicine helps reduce the development of hypertension. There are many recipes, so let's look at the most effective and common ones.

- To quickly reduce pressure, compresses on the heels of 5% or apple cider vinegar are recommended [29]. They need to moisten a piece of cloth on a simple base and apply it to the heels for 5-10 minutes. It is worth noting that the method works well, so you need to monitor the pressure so as not to lower it too much. After normalization of the pressure level, the compress should be removed. Foot baths with mustard also help.
- Take 2 heads of garlic [30] (small size), place in a saucepan with a glass of milk, bring to a boil. Cook until the garlic becomes soft. Filter. Take 1 teaspoon three times a day for 2 weeks. It is better to cook this garlic decoction daily, maximum once every two days.
- Take mulberry root, rinse thoroughly, remove the bark, chop, add a glass of water, boil for 15-20 minutes, leave for 24 hours. You need to drink this decoction instead of water.
- You can drink pomegranate peel tea in unlimited quantities [31]. This tea reduces blood pressure smoothly, without sudden changes.
- With the sclerotic form of hypertension, you need to eat a small onion [32] and one clove of garlic several times a day during meals.
- Valerian decoctions are also used to reduce blood pressure [33]. To prepare it, you need to take 10 grams of valerian rhizomes, rinse, chop, add a glass of hot water, and boil over medium heat for 7-10 minutes. Then the broth should be left to infuse for 2 hours. After which it is filtered. Drink a quarter glass per dose 3-4 times a day.
- For hypertension, one of the effective plants is considered to be meadow clover [34], collected during the period of full flowering. To prepare a medicinal decoction, use a teaspoon of flowers. This number of inflorescences is poured into 250 ml of boiled water and left to infuse for an hour. Take 1.5 glasses per day (you can drink only ½ of a glass at one time).
- To eliminate headaches [35] and improve sleep [36], take an infusion of calendula [37]. For 20 grams of calendula flowers you will need 100 ml of vodka. You need to insist in a dark, cool place for 7 days. You need to take 25-30 drops per dose. The number of techniques is three.
- Juice from hawthorn [38] and beetroot [39], taken in a ratio of 1 to one, works well to normalize blood pressure. Drink 1 tablespoon of this concentrated juice 3 times a day.
- Lingonberry juice is a great way to remove excess fluid in the body. It must be taken regularly and swelling under the eyes, swelling of the ankles, and feet will disappear. Lingonberries are one of those berries that retain their properties even after freezing.
- With regular consumption of jacket potatoes [40], blood pressure normalizes on its own without medication. The same applies to blue honeysuckle. Medicinal tea is made from fresh berries.
- A good remedy for night anxiety and insomnia is a decoction of pumpkin with honey [41]. To prepare this decoction you need to boil 200 grams of diced pumpkin. There should be a little water (it should just cover the pumpkin). Cook until done, then strain. Add a teaspoon of honey to ½ glass of broth and drink 30 minutes before bedtime.

When using traditional medicine methods, it is necessary to take into account the characteristics of your body (namely, the presence of allergic or any other reactions). Also, you need to constantly

monitor your blood pressure levels, undergo regular examinations and go to consultations with specialists.

## Dangerous and harmful products for hypertension

With high blood pressure, it is necessary to limit the consumption of salty, fatty, spicy and sweet foods.

Hypertensive patients are strictly prohibited from eating smoked meats, pickles, marinades, chips, salted cheeses, and canned foods. You need to give up the habit of adding salt to already prepared food (if any). This is explained by the fact that an excess amount of sodium in the body delays the excretion of water (spasmodic vasoconstriction occurs) and, as a result, the level of pressure increases.

Also, dishes rich in cholesterol [42] (brains, internal organs of animals, caviar) should be excluded from the patient's diet.

Sour cream, cheeses, sausages, lard, cutlets, butter [43], margarine must be replaced with fresh vegetables and fruits. This transition should occur gradually, without sudden changes.

Products containing caffeine are contraindicated [44]: strong tea, coffee, alcohol, soda, hot spices.

Dairy products should not be combined with foods rich in magnesium [45] and potassium [46]. With this combination, the absorption of these microelements is reduced to a minimum.

It is strictly forbidden to smoke, lead a sedentary lifestyle and gain excess weight, work night shifts and sleep less than 7 hours a day.

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