## International Journal of Health Systems and Medical Sciences

ISSN: 2833-7433 Volume 2 | No 12 | Dec -2023



# Ways to Naturally Reduce Blood Pressure

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**Abstract:** Elevated arterial pressure is a pathology that affects a third of the population. Even in its mild form, hypertension signifies a disruption in the cardiovascular system, leading to premature aging and impaired cerebral blood circulation, as evidenced by studies conducted by California scientists. Hypertension is defined by systolic blood pressure readings of 130 mmHg and above, and diastolic readings of 80 mmHg and above. Contemporary treatment for hypertension involves the use of medications that block angiotensin receptors, relax blood vessels, thereby reducing arterial pressure. However, persistent use of these medicinal preparations contributes to the development of oncological tumors and induces a range of serious pathologies in the body. Regular consumption of foods that strengthen the heart muscle, vessel walls, and normalize arterial pressure can not only alleviate the condition of the patient during hypertensive episodes but also reduce the quantity of medications taken.

## Kiwi

This fruit is known as a source of vitamin C, but it is also rich in other beneficial substances, including potassium, magnesium, fiber, polyphenols, and antioxidants.

## Leafy Greens

The high content of micro- and macro-elements in leafy greens makes them one of the most valuable products that can be used to lower blood pressure. Spinach and Swiss chard, in particular, are rich in potassium and magnesium. Consuming 175 grams of cooked Swiss chard is sufficient to cover 20% of the body's daily potassium requirement and 36% of magnesium. In 2022, a study was conducted, revealing that each gram of potassium in the diet contributes to a 2.4 mmHg reduction in blood pressure. The participants were women who consumed a high-sodium diet known to elevate blood pressure [3]. Spinach contains dietary nitrates, previously thought to have carcinogenic properties. However, studies show that dietary nitrates from spinach can benefit the cardiovascular system by lowering blood pressure. Additionally, spinach is a source of antioxidants, potassium, magnesium, and calcium. A study involving 27 individuals demonstrated that those who consumed 500 ml of spinach soup daily for a week had lower systolic and diastolic blood pressure compared to those who consumed asparagus soup with lower nitrate content [4]. Although this fact was not consistently confirmed in other experiments, further research is warranted.



## Legumes

Beans, lentils, and peas are all rich in potassium and magnesium. In 2023, an analysis of 16 clinical studies failed to establish a clear connection between legume consumption and a reduction in blood pressure. However, researchers conducting the review still believe that legumes may assist individuals with hypertension. They argue that more extensive studies are needed, especially considering that such studies already exist [5].

## **Citrus Fruits**

Grapefruits, lemons, and oranges constitute a natural vitamin and mineral complex aimed at supporting heart health. In 2021, a comprehensive review of research conducted over the past 10 years regarding the impact of citrus fruits on blood pressure indicators was carried out. Scientists found that daily inclusion of 530-600 grams of fruits in the diet indeed reduces the risk of developing hypertension [1]. Equally beneficial is natural orange and grapefruit juice. However, caution is advised with the latter, as grapefruit and beverages based on it can affect the absorption of certain medications. If you are undergoing therapy with certain drugs, consult your doctor before introducing grapefruit into your diet to avoid undesirable interactions.

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## **Fatty Fish Varieties**

In 2022, an analysis of 71 studies involving 4,973 individuals was conducted. The aim of the analysis was to understand the correlation between blood pressure indicators and the regular intake of Omega-3 fatty acids from food and dietary supplements. It was found that with daily consumption of 2-3 grams of Omega-3 fatty acids, the maximum effect in terms of lowering blood pressure can be achieved [2]. Fatty varieties of sea fish are rich in natural Omega-3 fats, so including them in the diet is recommended for preventive purposes.

#### Seeds and Nuts

Pumpkin and flax seeds, chia seeds, pistachios, almonds, and walnuts are high in fiber and the amino acid arginine. Arginine is essential for the production of nitric oxide, a key endogenous regulator of the cardiovascular system. Some studies suggest that nuts and seeds can lower blood pressure, but conflicting results exist, possibly due to the brief duration of some studies, making it challenging to identify potential benefits.

#### Berries

Berries contain anthocyanins, which give them their vibrant color. These compounds can increase nitric oxide levels and decrease the intensity of molecules responsible for restricting blood flow. This combination helps lower blood pressure. Including blueberries, raspberries, strawberries, grapes, cranberries, and black currants in the diet is recommended. In 2020, scientists analyzed several studies and proved that whole berries and their juices contribute to a blood pressure reduction of more than 3 mmHg, with cranberry juice showing the highest activity in this regard.

#### **Olive Oil**

In 2020, a review of studies on the benefits of olive oil for the cardiovascular system confirmed that its inclusion in the diet helps reduce blood pressure. This is possible due to the presence of oleic acid, Omega-9, and polyphenols in the oil, which possess antioxidant activity.

#### **Amaranth and Whole Grains**

To lower blood pressure, one can consume amaranth flour or whole grain products such as oats, brown rice, and corn. It is also advisable to add whole grain bread and pasta made from hard wheat to the diet. Scientists analyzed 28 studies, revealing that increasing daily intake of whole grain products by 30 grams reduces the risk of hypertension by 8% [11]. As for amaranth, it is particularly rich in magnesium. Consuming 246 grams of amaranth allows covering 38% of the body's daily magnesium requirement.



## Carrots

Carrots hold a special place in the diet of people, with an average adult consuming around 10 kg of this nutritious and beneficial vegetable. And for good reason. In 2023, a study showed that daily consumption of 100 grams of raw carrots reduces the risk of hypertension by approximately 10%.

## **Tomatoes and Tomato-Based Products**

Tomatoes contain a significant array of beneficial substances, including an ample amount of potassium and lycopene. This carotenoid pigment has protective properties for the cardiovascular system, as its intake helps lower blood pressure, confirmed by the analysis of 21 studies.

## Eggs

In 2023, a study involving 2,349 adults found that those who consumed 5 or more eggs per week had lower blood pressure by 2.5 mmHg compared to those who ate less than half an egg over the same period. Furthermore, scientists believe that individuals consuming such amounts of eggs have a lower long-term risk of developing hypertension [13]. Another study demonstrated that consuming one egg per day is sufficient to lower levels of "bad" cholesterol and improve the function of "good" cholesterol. The research found an increase in antioxidant content in the blood plasma of participants.

#### Broccoli

To lower blood pressure, it is advisable to include broccoli in the diet. This vegetable is an excellent source of antioxidants, which work to improve the function of blood vessels and promote the production of nitric oxide, essential for the normal functioning of the cardiovascular system. In a large study involving 187,453 people, it was found that consuming 4 or more servings of broccoli per week for 7 days helps reduce the risk of developing hypertension compared to those who eat them less than once a month.

## Herbs and Spices

For the prevention and correction of hypertension, attention should be paid to celery seeds, garlic, black and red pepper, saffron, cilantro, onions, lemongrass, chili, oregano, cumin, cinnamon, ginseng, cardamom, basil, and ginger. In 2021, a study involving 71 participants with elevated risks of cardiovascular diseases was conducted. They were observed by scientists for a month. One group consumed a mixture of various herbs and spices totaling 6.6 grams per day, the second group 3.3 grams, and the third group 0.5 grams per day. Those participants who received the high dose showed lower blood pressure readings.

## Yogurt

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#### Potatoes

In 173 grams of baked potatoes with the skin, there is 20% of the daily potassium requirement, equivalent to 941 mg. This is more than in bananas, although bananas are recommended as a source of this mineral. In 2021, a small study was conducted, gathering a group of 30 individuals with a history of hypertension and elevated risks of cardiovascular diseases. One group included potatoes in their menu in an amount that provided 1000 mg of potassium daily. The potatoes were prepared in various ways: baked, boiled, and pan-fried. The experiment lasted for 17 days, and scientists concluded that adding potatoes to the diet reduces systolic blood pressure when used as part of a healthy diet.



## Low-fat meat

Low-fat meat is considered a meat product that contains no more than 10g of fat, 4.5g of saturated fat, and 95mg of cholesterol per 100g. Examples meeting these criteria include skinless chicken breast, pork and beef tenderloin, and turkey. In a six-week study, replacing pork with chicken and fish was found to lower blood pressure. Chinese researchers also concluded that individuals with high blood pressure should carefully choose their meat products. Those who include various types of animal protein in their diet have a 66% lower likelihood of developing hypertension. Sources of lean protein can include poultry, lean beef and pork, and fish.

**Conclusion.** While these foods can help reduce the risk of cardiovascular diseases, they are not a panacea. Their effectiveness is contingent upon lifestyle adjustments, the elimination of harmful habits, and increased physical activity.

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