

**WHAT WE SHOULD KNOW ABOUT HYPERTENSION**

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<https://doi.org/10.5281/zenodo.15646424>**Annotation:**

This article provides detailed information about hypertension, one of the most widespread chronic diseases affecting millions of people worldwide. It explains the causes, symptoms, stages, complications, and preventive measures of high blood pressure. The article also emphasizes the importance of healthy lifestyle choices, early diagnosis, and regular medical monitoring in managing and preventing hypertension, especially among the elderly during hot summer months.

**Keywords:**

Hypertension, blood pressure, cardiovascular disease, risk factors, prevention, healthy lifestyle, diagnosis, treatment, hypertensive crisis, elderly health

**Introduction:**

Hypertension, commonly known as high blood pressure, is one of the most prevalent and pressing public health concerns in the modern world. Affecting approximately 20–30% of the adult population globally, this condition poses a serious threat to human health, particularly among the elderly. During the hot summer months, many elderly individuals report difficulties due to increased blood pressure, highlighting the importance of awareness and proper management of this condition. If left uncontrolled, hypertension can lead to life-threatening complications such as stroke, heart attack, and kidney failure. This article aims to shed light on the causes, symptoms, stages, risk factors, and prevention methods of hypertension, providing essential knowledge for maintaining cardiovascular health and overall well-being.

**Main body.**

During the scorching summer days, elderly individuals often complain about their deteriorating health, primarily due to rising blood pressure levels. In response to these frequent concerns, we will discuss this very relevant issue in detail.

**What is Hypertension?**

Hypertension is a condition related to increased blood pressure (140/90 mmHg or higher). If high blood pressure persists over time, it can put extra strain on the heart and blood vessels, leading to life-threatening complications such as stroke, myocardial infarction, kidney failure, and others. Regular monitoring of blood pressure helps detect hypertension in a timely manner.

Arterial hypertension, or high blood pressure, is one of the most common diseases in the world, affecting about 20–30% of the adult population globally. Its main symptom is elevated blood pressure, caused by various internal and external factors, which can lead to different complaints and complications, making it a serious modern health concern.

The optimal blood pressure for a healthy person is less than 120/80 mmHg. About 90% of hypertension cases are primary (essential hypertension), meaning they develop independently. The remaining 10% are secondary, appearing as a symptom of other diseases.

#### Who is More Prone to Hypertension?

Hypertension can develop in anyone regardless of age or gender. Several risk factors contribute to its development: unstable nervous systems, frequent stress or anxiety, family problems, workplace stress, sudden fear, and a family history of hypertension. It plays a significant role in the development of cardiovascular diseases, myocardial infarction, stroke, chronic heart and kidney failure, and even death.

#### Stages of Hypertension

Hypertension progresses in several stages. Prehypertension is diagnosed when blood pressure ranges from 120–139/80–89 mmHg. Stage 1 hypertension involves a systolic pressure of 140–159 mmHg and diastolic pressure of 90–99 mmHg. Stage 3 is marked by a blood pressure of 180/110 mmHg or higher.

From Stage 2 onward, vital organs like the heart, brain, kidneys, and blood vessels (known as target organs) begin to suffer. Stage 3 can lead to serious complications such as myocardial infarction, stroke, retinal hemorrhage, kidney failure, aneurysms, and vascular occlusion.

#### What Other Conditions Can Raise Blood Pressure?

Other diseases can also lead to high blood pressure, including:

Chronic kidney diseases (e.g., glomerulonephritis, pyelonephritis)

Diabetes mellitus

Primary aldosteronism

Pheochromocytoma (adrenal gland tumor)

Cushing's syndrome

Hyperthyroidism (diffuse toxic goiter)

Congenital heart defects (e.g., aortic coarctation)

Atherosclerosis of heart, brain, and kidney vessels

Obesity

#### Symptoms of High Blood Pressure

When blood pressure rises, patients may experience:

Headaches

Chest pain

Heart palpitations

Dizziness

Shortness of breath

Nausea

Cold sweat

Fatigue

In case of a sudden spike in blood pressure, a condition called "hypertensive crisis" may occur, which can be life-threatening. It comes in two types — one related to the brain and the other to the heart. Immediate medical attention is critical. Until help arrives, the patient should rest in a calm environment, use a warm compress on the feet, and drink herbal teas like mint, lemon balm, or motherwort. Blood pressure should be lowered gradually to avoid severe complications.

### Do You Know These Vital Health Numbers?

Blood Pressure: Measure several times daily; 140/90 mmHg or higher is considered hypertension.

Cholesterol:

≤ 5.2 mmol/L – Normal

5.3–5.6 mmol/L – Risk of atherosclerosis

6.6–8 mmol/L – Dietary intervention needed for 3–6 months

Body Mass Index (BMI):

BMI = weight (kg) / height<sup>2</sup> (m<sup>2</sup>); ≤ 25 is normal, > 25 is overweight

Blood Sugar: Up to 6.6 mmol/L is normal

Cardiovascular risks are doubled in people with diabetes

ECG: All patients with chest pain should undergo an electrocardiogram

Recommendations for Patients with Hypertension

Patients must be under regular medical supervision and take prescribed medications consistently. Drugs such as diuretics, beta- and alpha-blockers, calcium antagonists, ACE inhibitors, and angiotensin II receptor blockers (ARBs) are commonly used. These should only be taken under a doctor's advice.

Can Hypertension Be Prevented?

Yes, prevention is possible. Patients should:

Measure their blood pressure twice a day

Take their prescribed medications regularly

Understand that adherence to these habits is crucial to maintaining health

Additionally, adopting a healthy lifestyle—valuing health before illness, balancing work and rest, exercising regularly, and maintaining hygiene—is key to preventing most diseases. Modern society faces a rise in metabolic disorders, making prevention efforts even more urgent. As the saying goes: "Eat to live, not live to eat", and in the words of Avicenna: "If you seek dignity – speak less; if you seek health – eat less."

How Can We Reduce Blood Pressure and Slow Down Hypertension?

To reduce hypertension risk among the population:

1. Lower blood pressure

2. Reduce dependency on antihypertensive drugs

3. Eliminate risk factors and underlying causes

Non-Medication Prevention Methods for Hypertension

1. Quit smoking

2. Normalize body weight, reduce intake of fatty and high-carb foods; increase intake of vitamins, minerals, proteins, and unsaturated fats

3. Limit alcohol consumption:

Women: < 20 mg/day

Men: < 30 mg/day

4. Increase physical activity – at least 30–40 minutes of aerobic exercise, 4 times per week

5. Reduce salt intake to < 5 g/day

6. Eat healthy – focus on plant-based foods rich in potassium, calcium, magnesium (e.g., vegetables, fruits, whole grains, dairy)

7. Practice relaxation techniques (psychotherapy)

8. Cut down on sugary foods

9. Avoid high-fat, high-cholesterol, and processed foods; prefer lean meats, fish, poultry, rice, whole grains

By following these recommendations, you can prevent hypertension from affecting your life.

#### Conclusion:

Hypertension remains one of the most widespread and dangerous chronic conditions affecting millions of people around the world. Despite its often silent progression, it can lead to severe complications if not detected and managed in time. Public awareness, regular health check-ups, and healthy lifestyle choices play a crucial role in its prevention and control. It is essential for individuals, especially those at higher risk, to take responsibility for their health by maintaining a balanced diet, exercising regularly, and following medical advice. With early diagnosis and proper treatment, hypertension can be effectively managed, allowing individuals to live longer, healthier lives.

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