

Hypertension

HEALTHCARE



Definition

Hypertension (high blood pressure) is when the pressure in your blood vessels is too high ($\geq 140/90$ mmHg or higher). It is common but can be serious if not treated.

Introduction

- People with high blood pressure may not feel symptoms. The only way to know is to get your blood pressure checked.

Things that increase the risk of having high blood pressure include:

- older age
- genetics
- being overweight or obese
- not being physically active
- high-salt diet
- drinking too much alcohol

Lifestyle changes like eating a healthier diet, quitting tobacco and being more active can help lower blood pressure. Some people may still need to take medicines.

Blood pressure is written as two numbers. The first (systolic) number represents the pressure in blood vessels when the heart contracts or beats. The

second (diastolic) number represents the pressure in the vessels when the heart rests between beats.

Hypertension is diagnosed if, when it is measured on two different days, the systolic blood pressure readings on both days is ≥ 140 mmHg and/or the diastolic blood pressure readings on both days is ≥ 90 mmHg.



Risk factors

Modifiable risk factors include unhealthy diets (excessive salt consumption, a diet high in saturated fat and trans fats, low intake of fruits and vegetables), physical inactivity, consumption of tobacco and alcohol, and being overweight or obese. In addition, there are environmental risk factors for hypertension and associated diseases, where air pollution is the most significant.

Non-modifiable risk factors include a family history of hypertension, age over 60 years and co-existing diseases such as diabetes or kidney disease.

Symptoms

Most people with hypertension don't feel any symptoms. Very high blood pressures can cause headaches, blurred vision, chest pain and other symptoms.

Checking your blood pressure is the best way to know if you have high blood pressure. If hypertension isn't treated, it can cause other health conditions like kidney disease, heart disease and stroke.

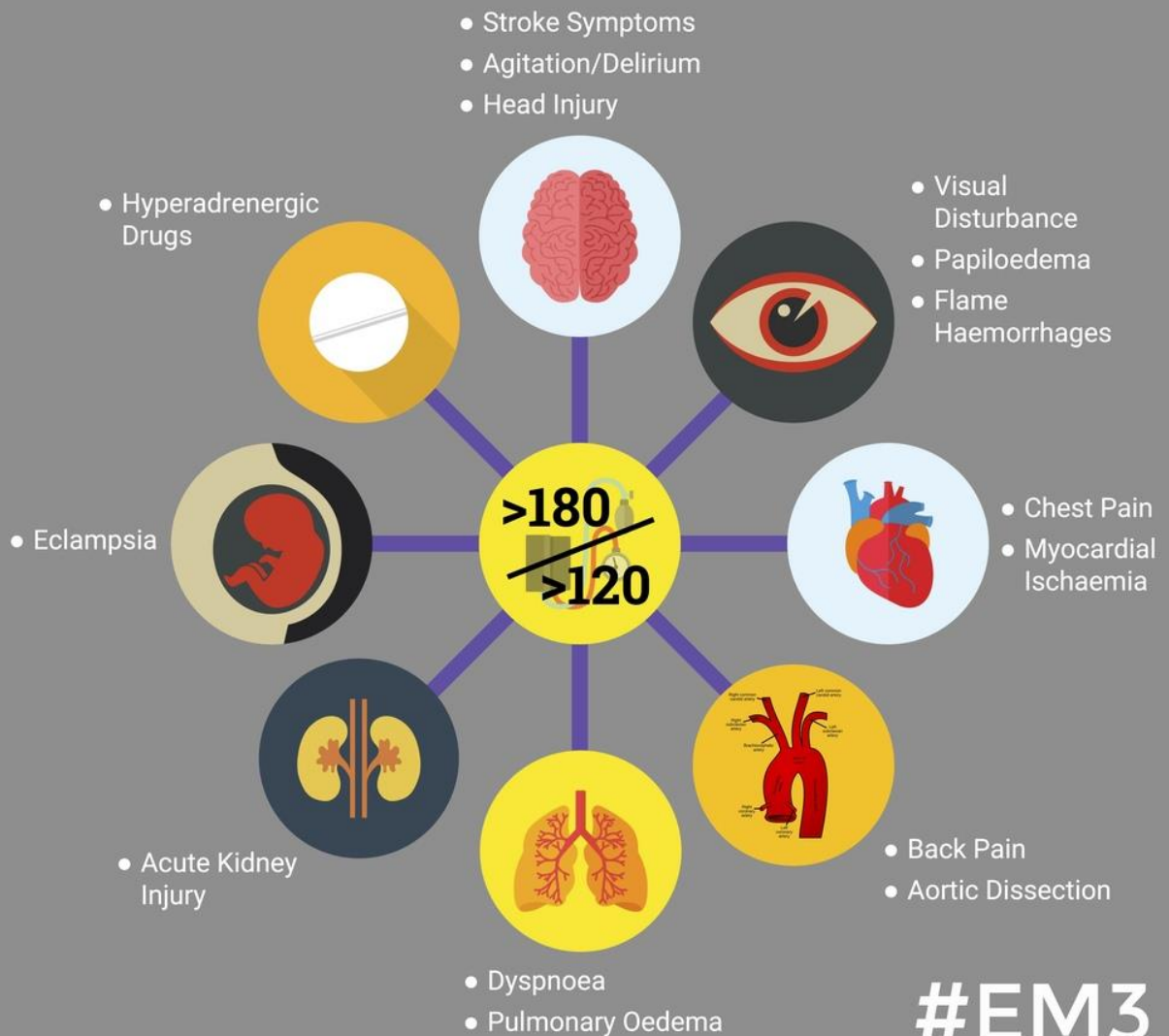
People with very high blood pressure (usually 180/120 or higher) can experience symptoms including:

- severe headaches
- chest pain
- dizziness
- difficulty breathing
- nausea
- vomiting
- blurred vision or other vision changes
- anxiety
- confusion
- buzzing in the ears
- nosebleeds
- abnormal heart rhythm

If you are experiencing any of these symptoms and a high blood pressure, seek care immediately.

The only way to detect hypertension is to have a health professional measure blood pressure. Having blood pressure measured is quick and painless. Although individuals can measure their own blood pressure using automated devices, an evaluation by a health professional is important for assessment of risk and associated conditions.

Hypertensive Emergencies:



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• Pulmonary Oedema
• Dyspnoea

#EM3

• Acute Kidney Injury

• Aortic Dissection
• Back Pain

Treatment

Lifestyle changes can help lower high blood pressure. These include:

- eating a healthy, low-salt diet
- losing weight
- being physically active
- quitting tobacco.

If you have high blood pressure, your doctor may recommend one or more medicines. Your recommended blood pressure goal may depend on what other health conditions you have.

Blood pressure goal is less than 130/80 if you have:

- cardiovascular disease (heart disease or stroke)
- diabetes (high blood sugar)
- chronic kidney disease
- high risk for cardiovascular disease.

For most people, the goal is to have a blood pressure less than 140/90.

There are several common blood pressure medicines:

- ACE inhibitors including enalapril and lisinopril relax blood vessels and prevent kidney damage.
- Angiotensin-2 receptor blockers (ARBs) including losartan and telmisartan relax blood vessels and prevent kidney damage.

- Calcium channel blockers including amlodipine and felodipine relax blood vessels.
- Diuretics including hydrochlorothiazide and chlorthalidone eliminate extra water from the body, lowering blood pressure.

Prevention

Lifestyle changes can help lower high blood pressure and can help anyone with hypertension. Many who make these changes will still need to take medicine.

These lifestyle changes can help prevent and lower high blood pressure.

Do:

- Eat more vegetables and fruits.
- Sit less.
- Be more physically active, which can include walking, running, swimming, dancing or activities that build strength, like lifting weights.
 - Get at least 150 minutes per week of moderate-intensity aerobic activity or 75 minutes per week of vigorous aerobic activity.
 - Do strength building exercises 2 or more days each week.

- Lose weight if you're overweight or obese.
- Take medicines as prescribed by your health care professional.
- Keep appointments with your health care professional.

Don't:

- eat too much salty food (try to stay under 5 grams per day)
- eat foods high in saturated or trans fats
- smoke or use tobacco
- drink too much alcohol (1 drink daily max for women, 2 for men)
- miss or share medication.

Reducing hypertension prevents heart attack, stroke and kidney damage, as well as other health problems.

Reduce the risks of hypertension by:

- reducing and managing stress
- regularly checking blood pressure
- treating high blood pressure
- managing other medical conditions
- reducing exposure to polluted air.

Complications of uncontrolled hypertension

Among other complications, hypertension can cause serious damage to the heart. Excessive pressure can harden arteries, decreasing the flow of blood and oxygen to the heart. This elevated pressure and reduced blood flow can cause:

- chest pain, also called angina;
- heart attack, which occurs when the blood supply to the heart is blocked and heart muscle cells die from lack of oxygen. The longer the blood flow is blocked, the greater the damage to the heart;
- heart failure, which occurs when the heart cannot pump enough blood and oxygen to other vital body organs; and
- irregular heart beat which can lead to a sudden death.

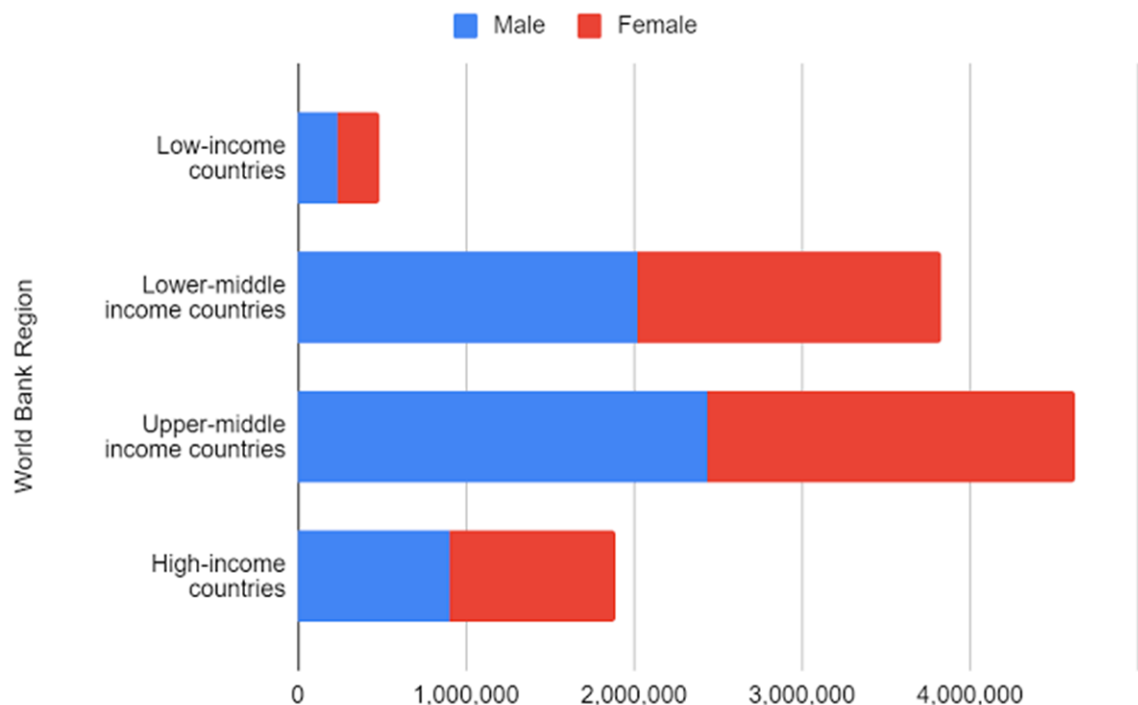
Hypertension can also burst or block arteries that supply blood and oxygen to the brain, causing a stroke.

In addition, hypertension can cause kidney damage, leading to kidney failure.

Prevalence of hypertension

The prevalence of hypertension varies across regions and country income groups. The WHO Eastern Mediterranean Region has the highest prevalence of hypertension (38%) while the WHO Western Pacific Region has the lowest prevalence of hypertension (29%).

The number of adults with hypertension increased from 600 million in 1990 to 1.4 billion in 2024, with the increase seen largely in low- and middle-income countries. This increase is due mainly to a rise in the number of older adults in those countries.



**Why Do Doctors Recommend Upper Arm Blood Pressure Monitors?*

If you've been told to monitor your blood pressure at home, you're probably wondering which device to buy. With so many options out there—from wrist cuffs to smartwatches—it's easy to feel overwhelmed. But here's something you'll hear from nearly every doctor: **“Use an upper arm blood pressure monitor.”** And when it comes to trusted brands, **OMRON leads the way** in delivering **clinically validated, and doctor-recommended blood pressure monitors.**

Let's break down the reasons and look at the science behind the recommendation.

1. Higher Accuracy: Backed by Clinical Guidelines

The most important reason doctors prefer upper arm monitors is **accuracy**. According to the **American Heart Association (AHA)**, **upper arm monitors are more effective** for home blood pressure monitoring.

2. Validated for Medical Use

Upper arm monitors are more often **clinically validated** according to international standards like the **Association for the Advancement of Medical Instrumentation (AAMI)** and **European Society of Hypertension (ESH)** protocols. These validations ensure that the monitor has passed strict tests for accuracy and reliability.

OMRON's upper arm blood pressure monitors are not only **clinically validated**, but many models also meet the **international standards set by AAMI and ESH**. You're not just getting any device—you're getting medically trusted technology.

3. Better for People with Hypertension or Heart Conditions

For people with existing cardiovascular risks—such as **hypertension, diabetes, or arrhythmias**—accurate monitoring is non-negotiable. Small errors can lead to incorrect dosing or medication adjustments. For people with irregular heart rhythms (such as atrial fibrillation), wrist monitors may be less reliable.

Bluetooth Models like the **OMRON HEM-7361T** make it easy to detect possible AFib and track your blood pressure over time and share data with your doctor—helping to manage your condition more effectively.

ξ. Less Affected by Body Position and Movement

Wrist monitors must be held **exactly at heart level** to be accurate, which can be difficult for many people—especially seniors or those with mobility issues. Arm monitors, particularly automatic ones with built-in positioning guides or cuffs, are **more forgiving** in terms of arm positioning.



OMRON models like the **OMRON HEM-7100T** and **Complete** are especially popular for their **360° IntelliWrap™ Cuff**, which reduces the risk of incorrect placement and ensures **accurate readings regardless of arm position** – it reads accurately from any angle.

◊. Better Long-Term Monitoring at Home

Doctors often recommend **home blood pressure monitoring** for people with white-coat hypertension, masked hypertension, or as part of routine chronic disease management. Upper arm monitors provide a **more reliable baseline**, especially when readings are tracked over time.

So why choose OMRON's Blood Pressure Monitors?

There's a reason why **doctors recommend upper arm blood pressure monitors**. With advanced technology, medical-grade accuracy, and ease of use, OMRON helps you stay in control of your heart health with confidence. So, if you're serious about tracking your blood pressure at home, choose a brand that's backed by **clinical validation, global trust, and millions of users**.

Reference

<https://www.who.int/news-room/fact-sheets/detail/hypertension>