

Hypertension: Human Silent Enemy

Alan Cole, Josh Jnr. Marcos and Wayne Arthur

Department of Biomedical Science, Teesside University, Middlesbrough, England, United Kingdom.

ABSTRACT

Hypertension or High blood pressure occurs when your blood pressure increases to unhealthy levels. Your blood pressure measurement takes into account how much blood that is passing through your blood vessels and the amount of resistance the blood meets while the heart is pumping. Hypertension is mainly of two types, the essential or primary and the secondary hypertension. A person with high blood pressure and the cause is unknown — this condition is called essential, or primary, hypertension. When
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a cause can be found, the condition is called secondary hypertension. It is equally known that Hypertension is generally in a silent condition with little or no symptoms for many years. Some medications like Beta-blockers, Alpha-2 agonists, Diuretics, and Calcium channel blockers etc, are used in treating hypertension. Healthy lifestyle can help you control the factors that cause hypertension e.g., Developing a healthy diet, Increasing physical activity, and Reaching a healthy weight etc.

INTRODUCTION

Most people with high blood pressure have no signs or symptoms, even if blood pressure readings reach dangerously high levels. You can have high blood pressure (hypertension) for years without any symptoms, and damage to blood vessels and your heart continues and can't be detected. Uncontrolled high blood pressure increases your risk of serious health problems, including heart attack and stroke [1].

High blood pressure generally develops over many years, and it affects nearly everyone eventually. Fortunately, high blood pressure can be easily detected. And once you know you have high blood pressure, you can work with your doctor to control it. Everyone is at risk from high blood pressure. However, the elderly tend to have a different hypertension profile compared with younger people; it is an independent predisposing factor for heart failure, coronary artery disease, stroke, renal disease, and peripheral arterial disease. It is the most important risk factor for cardiovascular morbidity and

mortality in industrialized countries [2]. Though essential hypertension remains somewhat mysterious, it has been linked to certain risk factors. High blood pressure tends to run in families and is more likely to affect men than women. Age and race also play a role [3].

Types and Causes of Hypertension

There are two primary hypertension types. For 95 percent of people with high blood pressure, the cause of their hypertension is unknown this is called essential, or primary, hypertension. When a cause can be found, the condition is called secondary hypertension.

Primary hypertension

Primary hypertension is also called essential hypertension. This kind of hypertension develops over time with no identifiable cause. Most people have this type of high blood pressure [4]. Researchers are still unclear what mechanisms cause blood pressure to slowly increase. A combination of factors may play a role. These factors include:

- **Genes:** Some people are genetically predisposed to hypertension. This may be from gene mutations or genetic abnormalities inherited from your parents.
- **Physical changes:** If something in your body changes, you may begin experiencing issues throughout your body. High blood pressure may be one of those issues. For example, it's thought that changes in your kidney function due to aging may upset the body's natural balance of salts and fluid. This change may cause your body's blood pressure to increase.
- **Environment:** Over time, unhealthy lifestyle choices like lack of physical activity and poor diet can take their toll on your body. Lifestyle choices can lead to weight problems. Being overweight or obese can increase your risk for hypertension. Smoking, alcohol and diet all play a role in essential hypertension.

Secondary hypertension

The most common cause of secondary hypertension is an abnormality in the arteries supplying blood to the kidneys [5]. Other causes include airway obstruction during sleep, diseases and tumors of the adrenal glands, hormone abnormalities, thyroid disease, and too much salt or alcohol in the diet. Drugs can cause secondary hypertension, including over-the-counter medications such as ibuprofen (Motrin, Advil, and others) and pseudoephedrine (Afrin, Sudafed, and others) [6]. The good news is that if the cause is found, hypertension can often be controlled. Secondary hypertension often occurs quickly and can become more severe than primary hypertension.

Several conditions that may cause secondary hypertension include:

- Kidney disease
- Obstructive sleep apnea
- Congenital heart defects
- Problems with your thyroid
- Side effects of medications

- Use of illegal drugs
- Alcohol abuse or chronic use
- Adrenal gland problems
- Certain endocrine tumors

Symptoms of hypertension

Hypertension is generally a silent condition. Many people won't experience any symptoms. It may take years or even decades for the condition to reach levels severe enough that symptoms become obvious [7]. Even then, these symptoms may be attributed to other issues.

Symptoms of severe hypertension can include:

- headaches
- shortness of breath
- nosebleeds
- flushing
- dizziness
- chest pain
- visual changes
- blood in the urine

These symptoms require immediate medical attention. They don't occur in everyone with hypertension, but waiting for a symptom of this condition to appear could be fatal. The best way to know if you have hypertension is to get regular blood pressure readings [8]. Most doctors' offices take a blood pressure reading at every appointment. If you only have a yearly physical, talk to your doctor about your risks for hypertension and other readings you may need to help you watch your blood pressure [9].

For example, if you have a family history of heart disease or have risk factors for developing the condition, your doctor may recommend that you have your blood pressure checked twice a year. This helps you and your doctor stay on top of any possible issues before they become problematic.

Effects of high blood pressure on the body

Because hypertension is often a silent condition, it can cause damage to your body for years before symptoms become obvious. If hypertension isn't treated, you may face serious, even fatal, complications [10].

Complications of hypertension include the following.

Damaged arteries

Healthy arteries are flexible and strong. Blood flows freely and unobstructed through healthy arteries and vessels.

Hypertension makes arteries tougher, tighter, and less elastic. This damage makes it easier for dietary fats to deposit in your arteries and restrict blood flow. This damage can lead to increased blood pressure, blockages, and, eventually, heart attack and stroke [11].

Damaged heart

Hypertension makes your heart work too hard. The increased pressure in your blood vessels forces your heart's muscles to pump more frequently and with more force than a healthy heart should have to. This may cause an enlarged heart. An enlarged heart increases your risk for the following:

- heart failure
- arrhythmias
- sudden cardiac death
- heart attack

Damaged brain

Your brain relies on a healthy supply of oxygen-rich blood to work properly. High blood pressure can reduce your brain's supply of blood:

- Temporary blockages of blood flow to the brain are called transient ischemic attacks (TIAs).
- Significant blockages of blood flow causes brain cells to die. This is known as a stroke.

Uncontrolled hypertension may also affect your memory and ability to learn, recall, speak, and reason. Treating hypertension often doesn't erase or reverse the effects of uncontrolled hypertension. It does, however, lower the risks for future problems [12].

Medication for high blood pressure

Many people go through a trial-and-error phase with blood pressure medications. You may need to try different medicines until you find one or a combination of medications that work for you.

Some of the medications used to treat hypertension include:

- **Beta-blockers:** Beta-blockers make your heart beat slower and with less force. This reduces the amount of blood pumped through your arteries with each beat, which lowers blood pressure. It also blocks certain hormones in your body that can raise your blood pressure.
- **Diuretics:** High sodium levels and excess fluid in your body can increase blood pressure. Diuretics, also called water pills, help your kidneys remove excess sodium from your body. As the sodium leaves, extra fluid in your bloodstream moves into your urine, which helps lower your blood pressure [13].
- **ACE inhibitors:** Angiotensin is a chemical that causes blood vessels and artery walls to tighten and narrow. ACE (angiotensin converting enzyme) inhibitors prevent the body from producing as much of this chemical. This helps blood vessels relax and reduces blood pressure.
- **Angiotensin II receptor blockers (ARBs):** While ACE inhibitors aim to stop the creation of angiotensin, ARBs block angiotensin from binding with receptors. Without the chemical, blood vessels won't tighten. That helps relax vessels and lower blood pressure.
- **Calcium channel blockers:** These medications block some of the calcium from entering the cardiac muscles of your heart. This leads to less forceful heartbeats and a lower blood pressure. These medicines also work in the blood vessels, causing them to relax and further lowering blood pressure.
- **Alpha-2 agonists:** This type of medication changes the nerve impulses that cause blood vessels to tighten. This helps blood vessels to relax, which reduces blood pressure [14].

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Home remedies for high blood pressure

Healthy lifestyle changes can help you control the factors that cause hypertension. Here are some of the most common home remedies.

Developing a healthy diet

A heart-healthy diet is vital for helping to reduce high blood pressure. It's also important for managing hypertension that is under control and reducing the risk of complications. These complications include heart disease, stroke, and heart attack.

A heart-healthy diet emphasizes foods that include:

- fruits
- vegetables
- whole grains
- lean proteins like fish

Increasing physical activity

Reaching a healthy weight should include being more physically active. In addition to helping you shed pounds, exercise can help reduce stress, lower blood pressure naturally, and strengthen your cardiovascular system [15].

Aim to get 150 minutes of moderate physical activity each week. That's about 30 minutes five times per week.

Reaching a healthy weight

If you are overweight or obese, losing weight through a heart-healthy diet and increased physical activity can help lower your blood pressure.

Managing stress

Exercise is a great way to manage stress. Other activities can also be helpful. These include:

- meditation
- deep breathing
- massage
- muscle relaxation
- yoga or tai chi

These are all proven stress-reducing techniques. Getting adequate sleep can also help reduce stress levels.

Adopting a cleaner lifestyle

Hypertension is one of the most common chronic diseases worldwide. However, many people have hypertension without awareness and treatment of the disease,

If you're a smoker, try to quit. The chemicals in tobacco smoke damage the body's tissues and harden blood vessel walls.

If you regularly consume too much alcohol or have an alcohol dependency, seek help to reduce the amount you drink or stop altogether. Alcohol can raise blood pressure.

Dietary recommendations for people with high blood pressure

One of the easiest ways you can treat hypertension and prevent possible complications is through your diet. What you eat can go a long way toward easing or eliminating hypertension.

Here are some of the most common dietary recommendations for people with hypertension.

Eat less meat, more plants

A plant-based diet is an easy way to increase fiber and reduce the amount of sodium and unhealthy saturated and trans fat you take in from dairy foods and meat. Increase the number of fruits, vegetables, leafy greens, and whole grains you're eating. Instead of red meat, opt for healthier clean proteins like fish, poultry etc.

Reduce dietary sodium

People with hypertension and those with an increased risk for heart disease may need to keep their daily sodium intake between 1,500 milligrams and 2,300 milligrams per day. The best way to reduce sodium is to cook fresh foods more often. Avoid eating restaurant food or prepackaged foods, which are often very high in sodium [9].

Cut back on sweets

Sugary foods and beverages contain empty calories but don't have nutritional content. If you want something sweet, try eating fresh fruit or small amounts of dark chocolate that haven't been sweetened as much with sugar, regularly eating dark chocolate may reduce blood pressure.

CONCLUSION

indicating it is necessary to provide some basic knowledge and essential information of hypertension to our audience, upper primary pupils at early

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stage of their lives to prepare them early in prevention or management of this disorder in their future life. Hypertension is often called 'the silent killer' because it shows no early symptoms and, simultaneously, is the single most

significant risk factor for atherosclerosis and all clinical manifestations of atherosclerosis. It is an independent predisposing factor for heart failure, coronary artery disease, stroke, renal disease, and peripheral arterial disease.

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