

A Guide to Understanding Blood Pressure...



High Blood Pressure

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- What Is High Blood Pressure? • What Causes High Blood Pressure? • Who Gets High Blood Pressure? •
 - Signs & Symptoms Of High Blood Pressure • Treating High Blood Pressure • Preventing High Blood Pressure •
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NEBRASKA

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About High Blood Pressure

What Is High Blood Pressure?

High blood pressure is a blood pressure reading of 140/90 mmHg or higher. Both numbers are important. Nearly one in three American adults has high blood pressure. Once high blood pressure develops, it usually lasts a lifetime. The good news is that it can be treated and controlled.

High blood pressure is called "the silent killer" because it usually has no symptoms. Some people may not find out they have it until they have trouble with

their heart, brain, or kidneys. When high blood pressure is not found and treated, it can cause:

- ✓ The heart to get larger, which may lead to heart failure.
- ✓ Small bulges (aneurysms) to form in blood vessels. Common locations are the main artery from the heart (aorta), arteries in the brain, legs, and intestines, and the artery leading to the spleen.
- ✓ Blood vessels in the kidney to narrow, which may cause kidney failure.
- ✓ Arteries throughout the body to "harden" faster, especially those in the heart, brain, kidneys, and legs. This can cause a heart attack, stroke, kidney failure, or amputation of part of the leg.
- ✓ Blood vessels in the eyes to burst or bleed, which may cause vision changes and can result in blindness.

What Is Blood Pressure?

Blood is carried from the heart to all parts of your body in vessels called arteries. Blood pressure is the force of the blood pushing against the walls of the arteries. Each time the heart beats (about 60-70 times a minute at rest), it pumps out blood into the arteries. Your blood pressure is at its highest when the heart beats, pumping the blood. This is called systolic pressure. When the heart is at rest, between beats, your blood pressure falls. This is the diastolic pressure.

Blood pressure is always given as these two numbers, the systolic and diastolic pressures. Both are important. Usually they are written one above or before the other, such as 120/80 mmHg. The top



number is the systolic and the bottom the diastolic. When the two measurements are written down, the systolic pressure is the first or top number, and the diastolic pressure is the second or bottom number (for example, 120/80). If your blood pressure is 120/80, you say that it is "120 over 80."

Blood pressure changes during the day. It is lowest as you sleep and rises when you get up. It also can rise when you are excited, nervous, or active.

Still, for most of your waking hours, your blood pressure stays pretty much the same when you are sitting or standing still. That level should be lower than 120/80. When the level stays high, 140/90 or higher, you have high blood pressure. With high blood pressure, the heart works harder, your arteries take a beating, and your chances of a stroke, heart attack, and kidney problems are greater.

What's Normal?

A blood pressure reading below 120/80 is considered normal. In general, lower is better. However, very low blood pressures can sometimes be a cause for concern and should be checked out by a doctor.

- ✓ Doctors classify blood pressures under 140/90 as either "normal," or "prehypertension."
- ✓ "Normal" blood pressures are lower than 120/80.
- ✓ "Prehypertension" is blood pressure between 120 and 139 for the top number, or between 80 and 89 for the bottom number. For example, blood pressure

readings of 138/82, 128/89, or 130/86 are all in the "prehypertension" range. If your blood pressure is in the prehypertension range, it is more likely that you will end up with high blood pressure unless you take action to prevent it.

What's High?

A blood pressure of 140/90 or higher is considered high blood pressure. Both numbers are important. If one or both numbers are usually high, you have high blood pressure. If you are being treated for high blood pressure, you still have high blood pressure even if you have repeated readings in the normal range.

There are two levels of high blood pressure: Stage 1 and Stage 2 (see the chart below).

The guidelines apply to adults 18 and older who:

- ✓ Are not on medicine for high blood pressure
- ✓ Are not having a short-term serious illness
- ✓ Do not have other conditions such as diabetes and kidney disease

Note: When systolic and diastolic blood pressures fall into different categories, the higher category should be used to classify blood pressure level. For example, 160/80 would be stage 2 high blood pressure.

There is an exception to the above definition of high blood pressure. A blood pressure of 130/80 or higher is considered high blood pressure in persons with diabetes and chronic kidney disease.

Blood Pressure Readings

Blood Pressure Classification	Systolic (mmHg)		Diastolic (mmHg)	Lifestyle Modification
Normal	less than 120	and	less than 80	Encourage
Prehypertension	120-139	or	80-89	Yes
Stage 1 Hypertension	140-159	or	90-99	Yes
Stage 2 Hypertension	160 or higher	or	100 or higher	Yes

Source: http://www.nhlbi.nih.gov/health/dci/Diseases/Hbp/HBP_WhatIs.html

Understanding The Causes



What Causes High Blood Pressure?

In many people with high blood pressure, a single specific cause is not known. This is called essential or primary high blood pressure. Research is continuing to find causes.

In some people, high blood pressure is the result of another medical problem or medication. When the cause is known, this is called secondary high blood pressure.

Who Gets High Blood Pressure?

About 65 million American adults—nearly 1 in 3—have high blood pressure.

In the U.S., high blood pressure occurs more often in African Americans. Compared to other groups, blacks:

- ✓ Tend to get high blood pressure earlier in life
- ✓ Usually have more severe high blood pressures
- ✓ Have a higher death rate from stroke, heart disease, and kidney failure.

Many people get high blood pressure as they get older. Over half of all Americans age 60 and older have high blood pressure. This is not a part of healthy aging! There are things you can do to help keep your blood pressure normal, such as eating a healthy diet and getting more exercise.



Your chances of getting high blood pressure are also higher if you:

- ✓ Are overweight
- ✓ Are a man over the age of 45
- ✓ Are a woman over the age of 55
- ✓ Have a family history of high blood pressure
- ✓ Have "prehypertension (120-139/80-89)"

Other things that can raise blood pressure include:

- ✓ Eating too much salt
- ✓ Drinking too much alcohol
- ✓ Not eating enough potassium
- ✓ Not exercising
- ✓ Taking certain medicines
- ✓ Stress that is long-lasting

“About 65 million American adults—nearly 1 in 3—have high blood pressure.”



Recognizing The Symptoms

How Do You Know If You Have High Blood Pressure?

Only your doctor can tell you if you have high blood pressure. Most doctors will check your blood pressure several times on different days before deciding that you have high blood pressure. A diagnosis of high blood pressure is given if repeated readings are 140/90 or higher or 130/80 or higher if you have diabetes or chronic kidney disease.

Having your blood pressure tested is quick and easy. Your doctor or nurse will use some type of a gauge, a stethoscope (or electronic sensor), and a blood pressure cuff, also called a sphygmomanometer (sfig-mo-ma-NOM-e-ter).

Blood pressure readings are usually taken when you are sitting or lying down and relaxed. Below are things you can do before going to get your blood pressure taken:

- ✓ Do not drink coffee or smoke cigarettes 30 minutes before having your blood pressure taken.
- ✓ Wear short sleeves.
- ✓ Go to the bathroom before the reading. Having a full bladder can change your blood pressure reading.
- ✓ Sit for 5 minutes before the test.
- ✓ You should ask the doctor or nurse to tell you the blood pressure reading in numbers.

You also can check your blood pressure at home with a home blood pressure measurement device, or monitor. It is important that you understand how to use the monitor properly. Your doctor, nurse, or pharmacist can help you check the monitor and teach you how to use it correctly. You also may ask for their help in choosing the right blood pressure monitor for you. Blood pressure monitors can be bought at discount chain stores and pharmacies. Below are additional things to do when taking your blood pressure at home:

- ✓ Sit with your back supported and your feet flat on the floor.
- ✓ Rest your arm on a table at the level of your heart.



- ✓ Take two readings, at least 2 minutes apart, and average the results.

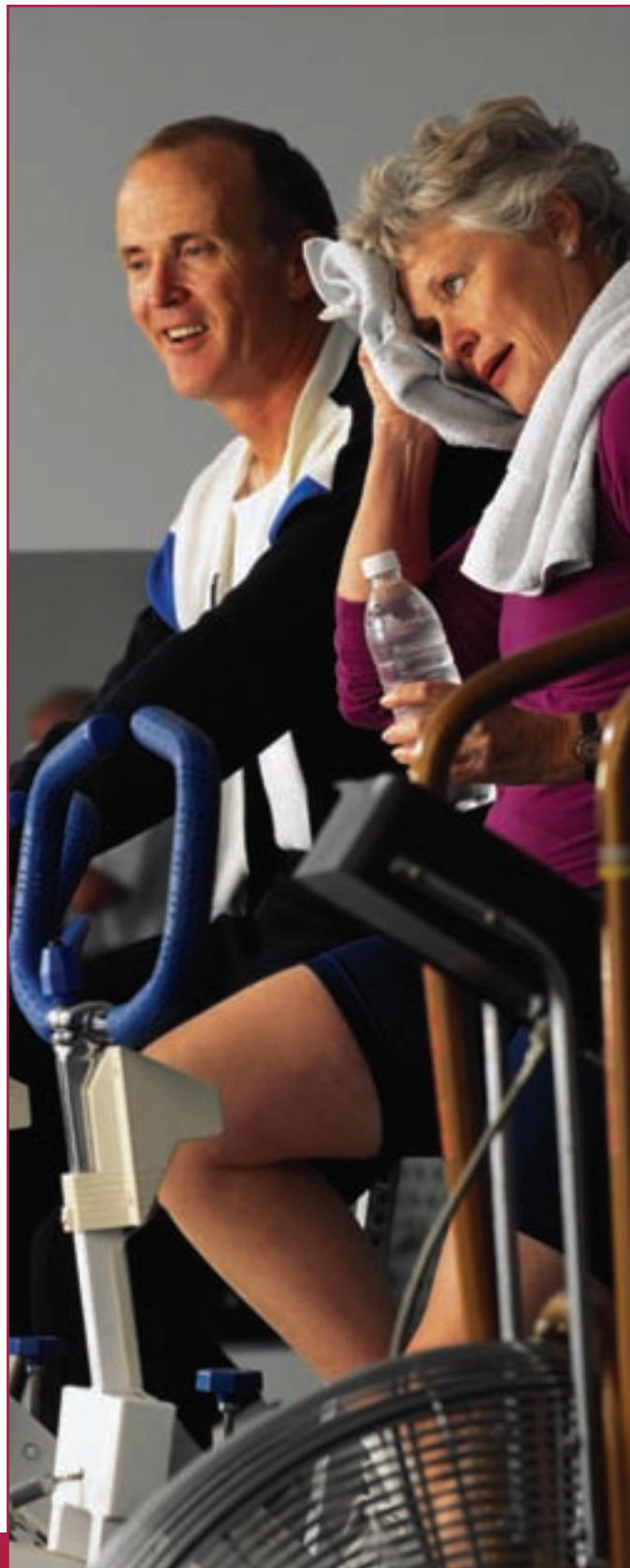
Some people's blood pressure is high only when they visit the doctor's office. This condition is called "white coat" hypertension. If your doctor suspects this, you may be asked to check and record your blood pressure at home with a home monitor. Another way to check blood pressure away from the doctor's office is by using an ambulatory blood pressure monitor. This device is worn for 24 hours and can take blood pressure every 30 minutes.

How Can I Prevent High Blood Pressure?

You can take steps to prevent high blood pressure. These steps include:

- ✓ Keeping a healthy weight
- ✓ Being physically active
- ✓ Following a healthy eating plan that emphasizes fruits, vegetables, and low-fat dairy foods
- ✓ Choosing and preparing foods with less salt and sodium
- ✓ Drinking alcohol in moderation if you drink.

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Treating High Blood Pressure

How is High Blood Pressure Treated?

Usually, the goal is to keep your blood pressure below 140/90 (130/80 if you have diabetes or chronic kidney disease). Ask your doctor what your blood pressure goal should be.



Some people can prevent or control high blood pressure by changing to healthier habits, such as:

- ✓ Eating healthy foods that include fruits, vegetables, and low-fat dairy products
- ✓ Cutting down on salt and sodium in the diet
- ✓ Losing excess weight and staying at a healthy weight
- ✓ Staying physically active (for example, walking 30 minutes a day)
- ✓ Limiting alcohol intake.

Sometimes blood pressure stays too high even when a person makes these kinds of healthy changes. In that case, it is necessary to add medicine to help lower blood pressure. Medicines will control your blood pressure but they cannot cure it. You will need to take high blood pressure medicine for a long time.

Blood pressure medicines work in different ways to lower blood pressure. Often, two or more drugs work better than one. Some drugs lower blood pressure by removing extra fluid and salt from your body. Others affect blood pressure by slowing down the heartbeat, or by relaxing and widening blood vessels.

Below are the types of medicines used to treat high blood pressure:

- ✓ **Diuretics** are sometimes called "water pills." They work by helping your kidneys flush excess water and salt from your body. This reduces the amount of fluid in your blood, and your blood pressure goes down. There are different types of diuretics. They are often used along with other high blood pressure medicines and may be combined with another medicine in one pill.

- ✓ **Beta blockers** help your heart beat slower and with less force. Your heart pumps less blood through the blood vessels, and your blood pressure goes down.
- ✓ **Angiotensin converting enzyme (ACE) inhibitors** keep your body from making a hormone called angiotensin II, which normally causes blood vessels to narrow. ACE inhibitors prevents this narrowing so your blood pressure goes down.
- ✓ **Angiotensin II Receptor Blockers (ARBs)** are newer blood pressure drugs that protect your blood vessels from angiotensin II. As a result, the blood vessels relax and become wider, and your blood pressure goes down.
- ✓ **Calcium channel blockers (CCBs)** keep calcium from entering the muscle cells of your heart and blood vessels. This causes blood vessels to relax, and your blood pressure goes down.
- ✓ **Alpha blockers** reduce nerve impulses that tighten blood vessels, allowing blood to pass more easily and causing blood pressure to go down.
- ✓ **Alpha-beta blockers** reduce nerve impulses to blood vessels the same way alpha blockers do, but they also slow the heartbeat, as beta blockers do. As a result, blood pressure goes down.
- ✓ **Nervous system inhibitors** relax blood vessels by controlling nerve impulses from the brain. This causes blood vessels to become wider and blood pressure to go down.
- ✓ **Vasodilators** open blood vessels by directly relaxing the muscle in the vessel walls, causing blood pressure to go down.

It is important that you take your blood pressure medication the same time each day.



Living With High Blood Pressure



Living With High Blood Pressure

If you have high blood pressure, it is important that you:

- ✓ **Keep track of your blood pressure.** Learn to take your own blood pressure at home or have it regularly checked by a health care professional. Write it down each time (with date).
- ✓ **Talk to your health care provider** about the names and dosages of your blood pressure medicines and how to take them.
- ✓ **If you think you're having other problems** (side effects) from taking your medicine, talk to your doctor. Another medicine may be better for you, or the problem may not be related to the medicine.
- ✓ **Refill your blood pressure medicines** before they run out.
- ✓ **Take your blood pressure medicines** exactly as directed.
- ✓ **Keep your follow up appointments** with your health care provider.
- ✓ **Choose healthier habits**—for example, eat a heart healthy diet, exercise regularly, and don't smoke.
- ✓ **Ask your doctor or health care provider questions** about your treatment and what you need to do to take care of yourself and lower your high blood pressure.

Remember, high blood pressure has no symptoms. If you have it, you cannot tell by the way you feel when your blood pressure level is high.

Start A Walking Program

Walking does wonders in helping to reduce the harmful effects of high blood pressure.

But you have to leave time in your busy schedule to follow a walking program that will work for you. In planning your walking program, keep the following points in mind:

- ✓ **Choose a safe place to walk.** Find a partner or group of people to walk with you. Your walking partner(s) should be able to walk with you on the same schedule and at the same speed.
- ✓ **Wear shoes with thick flexible soles** that will cushion your feet and absorb shock.
- ✓ **Wear clothes that will keep you dry** and comfortable. Look for synthetic fabrics that absorb sweat and remove it from your skin.
- ✓ **For extra warmth in winter, wear a knit cap.** To stay cool in summer, wear a baseball cap or visor.
- ✓ **Do light stretching** before and after you walk.
- ✓ **Think of your walk in three parts.** Walk slowly for 5 minutes. Increase your speed for the next 5 minutes. Finally, to cool down, walk slowly again for 5 minutes.
- ✓ **Try to walk at least three times per week.** Add 2 to 3 minutes per week to the fast walk. If you walk less than three times per week, increase the fast walk more slowly.
- ✓ **To avoid stiff or sore muscles or joints, start gradually.** Over several weeks, begin walking faster, going further, and walking for longer periods of time.

The more you walk, the better you will feel. You also will use more calories.

Is It OK For Me To Walk?

Answer the following questions before you begin a walking program.

- Has your health care provider ever told you that you have heart trouble?
Yes No
- When you are physically active, do you have pains in your chest or on your left side (neck, shoulder, or arm)?
Yes No
- Do you often feel faint or have dizzy spells?
Yes No
- Do you feel extremely breathless after you have been physically active?
Yes No
- Has your health care provider told you that you have high blood pressure?
Yes No
- Has your health care provider told you that you have bone or joint problems, like arthritis, that could get worse if you are physically active?
Yes No
- Are you over 50 years old and not used to a lot of physical activity?
Yes No
- Do you have a health problem or physical reason not mentioned here that might keep you from starting a walking program?
Yes No

If you answered yes to any of these questions, please check with your health care provider before starting a walking program or other form of physical activity.

Source: <http://win.niddk.nih.gov/publications/walking.htm>



Living With High Blood Pressure

Women And High Blood Pressure

In some women, blood pressure can increase if they use birth control pills, become pregnant, or take hormone therapy during menopause.

Pregnancy

Many pregnant women with high blood pressure have healthy babies. However, high blood pressure can be dangerous for both the mother and the baby. High blood pressure can harm the mother's kidneys and other organs, and it can cause low birth weight and early delivery.

If you are thinking about having a baby and you have high blood pressure, talk first to your doctor or nurse. You can take steps to control your blood pressure before and during pregnancy. Regular prenatal care (health care during pregnancy) is very important for you and your baby's health.

Before Becoming Pregnant:

- ✓ Be sure your blood pressure is under control. Making changes such as limiting the salt and sodium in your diet, exercising regularly, and losing weight if you are overweight can be helpful.
- ✓ Discuss with your doctor how high blood pressure might affect you and your baby during pregnancy, and what you can do to prevent or lessen problems.
- ✓ If you take medicines for your blood pressure, ask your doctor what you should do about taking them during pregnancy. Women who take ACE inhibitors should talk to their doctor before they become pregnant.



While You Are Pregnant:

- ✓ Be sure to get regular prenatal health care.
Don't miss any appointments.
- ✓ Don't drink alcohol or smoke.
- ✓ Talk to your doctor about any over-the-counter or prescribed medicines you are taking or are thinking about taking.

Some women develop high blood pressure for the first time in the middle of their pregnancy. In the most serious cases, the mother develops a condition called preeclampsia or "toxemia of pregnancy." This condition can threaten the lives of both the mother and the unborn child.

Even though high blood pressure during pregnancy can be serious, most women with high blood pressure and those who develop preeclampsia have successful pregnancies. Getting early and regular prenatal care is the most important thing you can do for you and your baby.

Oral Contraceptives (Birth Control Pills)

Women taking birth control pills usually have a small increase in both systolic and diastolic blood pressure. If you have high blood pressure and are using birth control pills, get your blood pressure checked regularly and talk to your doctor about a possible rise in blood pressure and what you can do about it.

If you have high blood pressure, are age 35 or older, and also smoke, you should not take birth control pills unless you quit smoking. Women age 35 and older who smoke and use birth control pills are more likely to develop heart disease or have a stroke. High blood pressure also raises your chances of stroke and heart disease.

If you are age 35 or older, are healthy, do not smoke, and your high blood pressure is controlled, it may be safe for you to use birth control pills. Ask your doctor if birth control pills are safe for you.



Hormone Therapy (HT) for Menopause

A recent study indicated that blood pressure does not increase significantly with HT in most women with and without high blood pressure. However, a few women may have a rise in blood pressure due to estrogen therapy.

If you start taking HT, you should have your blood pressure checked regularly. Your doctor can help answer your questions.

Frequently Asked Questions



Q How do I know if I'm having a heart attack?
The most common symptoms associated with a heart attack include: a burning, crushing, and/or squeezing pain or pressure in the chest; pain in the arms, neck, back, and/or jaw; or pain that doesn't go away or lasts longer than 15 minutes.

Q What is normal blood pressure?
A blood pressure reading below 120/80 is considered normal. In general, lower is better.

Q If my blood pressure is in the "prehypertension" category, what should I do?
You should talk to your doctor or other health care provider about your blood pressure and what you can do to lower it. You may be able to lower your blood pressure by making changes in your diet, losing weight, exercising more often, or drinking less alcohol. You have "prehypertension" blood pressure when your systolic pressure is usually 120 to 139, or your diastolic pressure is usually 80 to 89.

Q Can drinking alcohol raise blood pressure?
Drinking too much alcohol can raise blood pressure. If you drink alcohol, limit your drinks to just two a day for men and one a day for women. One drink is 12 ounces of beer, 5 ounces of wine, or 1 ounce of 80-proof whiskey.

Q Do children ever get high blood pressure?

Yes. However, high blood pressure is not as common in children as it is in adults. High blood pressure in younger children is often related to another health problem. Children with a family history of high blood pressure or who are overweight are more likely to develop high blood pressure.

Q Is salt and sodium the same thing?

The chemical name for salt is sodium chloride, so salt is partly sodium. Salt and other forms of sodium are found in many foods. Most Americans eat too much salt and sodium, and for many, that means higher blood pressure. Eating less salt and sodium in your diet can help lower your high blood pressure. Many snack foods, soups, lunchmeats, and other foods have a lot of sodium in them. Look at food labels to find products that are lower in sodium.



Q How do I know if I'm overweight?

Body mass index (BMI) is an easy way to find out if you are overweight or obese. BMI is calculated by relating how much you weigh to how tall you are. It gives an approximation of total body fat. As BMI goes up, so does your chance of getting high blood pressure, heart disease, and other diseases related to being overweight. Overweight is defined as a BMI of 25 to 29.9; obesity is defined as a BMI equal to or more than 30.

Summary

- ✓ You have high blood pressure if your top (systolic) blood pressure number is usually 140 or higher, OR your bottom (diastolic) number is usually 90 or higher. Both numbers are important.
- ✓ Exception: If you have diabetes or chronic kidney disease, you have high blood pressure if your top number is usually 130 or higher, OR your bottom number is usually 80 or higher.
- ✓ High blood pressure usually has no signs or symptoms.
- ✓ Uncontrolled high blood pressure is dangerous and can lead to stroke, heart failure, heart attack, kidney failure, and blindness.
- ✓ Blacks are more likely to have high blood pressure than whites.
- ✓ Over half of adults age 60 and over have high blood pressure.
- ✓ The most common form of high blood pressure in older adults is when only the (systolic) blood pressure number is usually 140 or higher. (You have high blood pressure when one or both numbers are high.)
- ✓ Having your blood pressure checked is quick and easy.
- ✓ It is important to keep track of your blood pressure and keep it under control.
- ✓ You can help prevent high blood pressure by choosing a healthy way of life.
- ✓ You can control your high blood pressure through healthy habits and taking medicines, if needed.



High Blood Pressure

A Guide to Understanding Blood Pressure

Important information on High Blood Pressure

About High Blood Pressure

High blood pressure is a blood pressure reading of 140/90 mmHg or higher. Both numbers are important.

Nearly one in three American adults has high blood pressure. Once high blood pressure develops, it usually lasts a lifetime.

High blood pressure is called "the silent killer" because it usually has no symptoms. Some people may not find out they have it until they have trouble with their heart, brain, or kidneys.

The good news is that it can be treated and controlled.

This behavior change guide is designed to help you better understand the medical diagnosis of high blood pressure and how you can keep it in check. More importantly, information is provided to help you prevent this silent killer altogether.

High Blood Pressure: A Guide To Understanding Blood Pressure

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