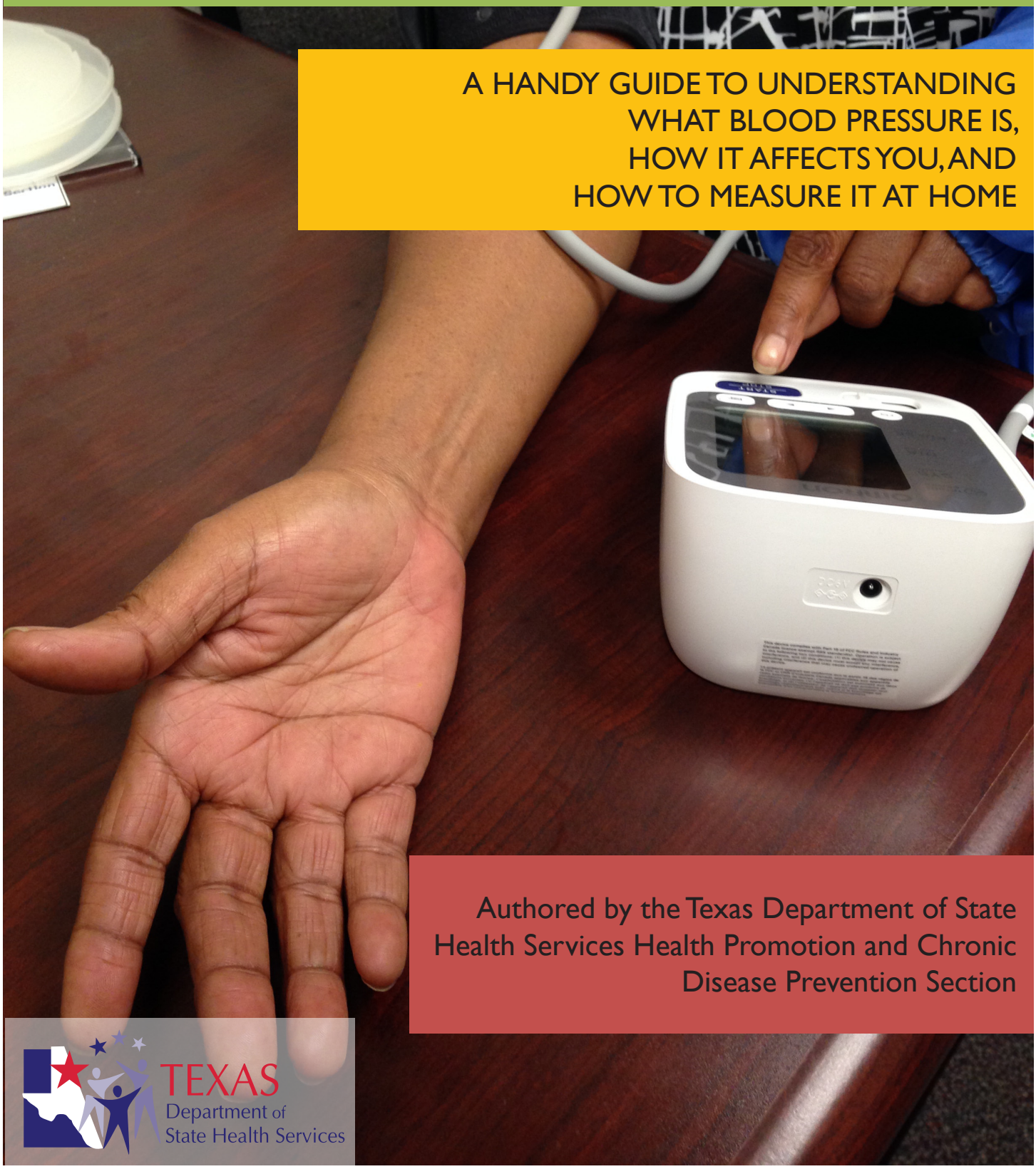
UNDERSTANDING BLOOD PRESSURE



A HANDY GUIDE TO UNDERSTANDING WHAT BLOOD PRESSURE IS, HOW IT AFFECTS YOU, AND HOW TO MEASURE IT AT HOME

Authored by the Texas Department of State Health Services Health Promotion and Chronic Disease Prevention Section

TEXAS Department of State Health Services

ACKNOWLEDGMENTS PAGE

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UNDERSTANDING BLOOD PRESSURE

What is blood pressure?

Your heart pumps blood around your body through tubes called blood vessels. Blood pressure is the pressure of blood against your blood vessels as it moves through your body. This pressure is necessary to make the blood flow, delivering nutrients and oxygen throughout your body. However, high blood pressure, also called hypertension, means there is too much pressure in your blood vessels. This can damage your blood vessels and cause health problems.

What is high blood pressure?

High blood pressure, also called hypertension, is blood pressure that is higher than normal. Anyone can develop high blood pressure, but it becomes more common as you get older. If you have diabetes or chronic kidney disease, it is even more important to manage your blood pressure. Once you have high blood pressure, it usually needs to be monitored for life.

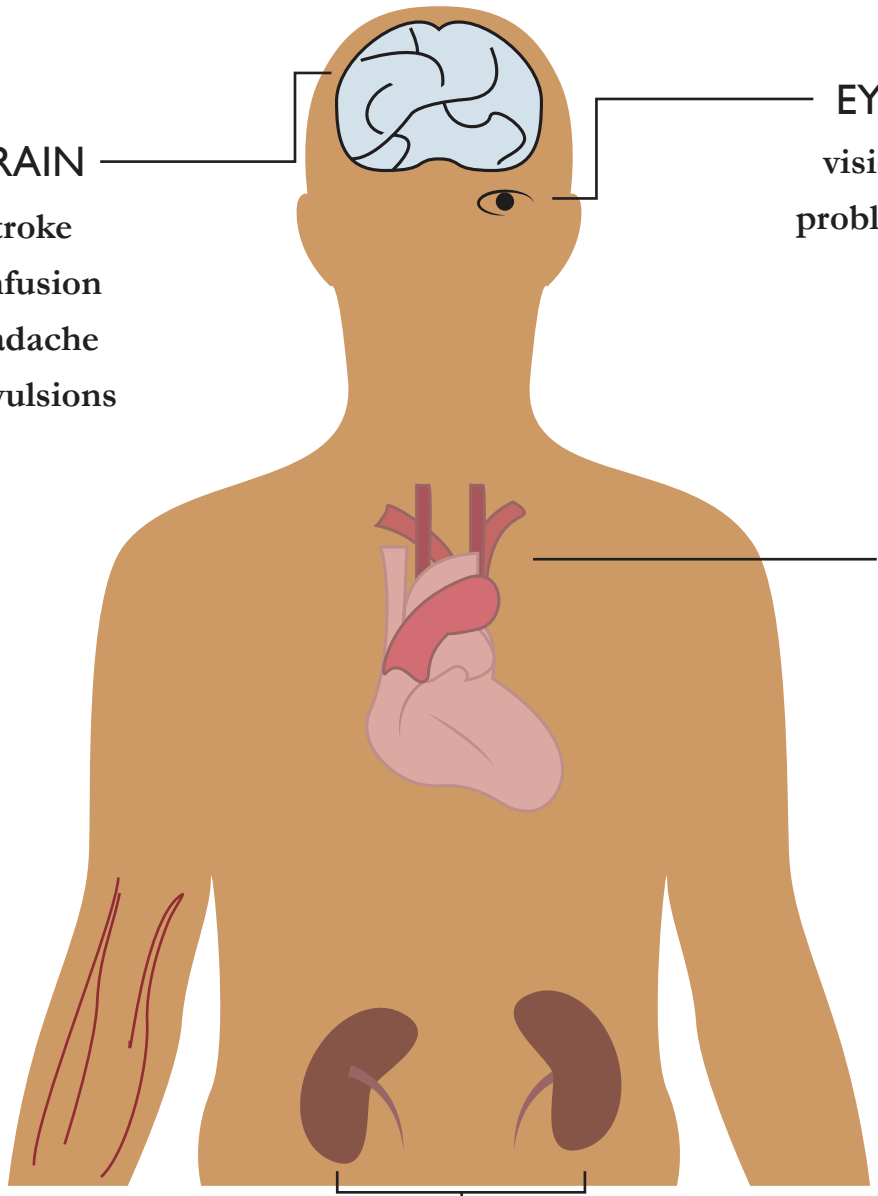
Why does high blood pressure matter?

High blood pressure can lead to strokes, heart attacks, heart failure and kidney failure. Finding and treating high blood pressure early helps prevent these problems. Making changes to the way you live, like eating better and exercising, and taking your medications as prescribed by your doctor or pharmacist, will help you to control high blood pressure.

Whether or not you have high blood pressure, it is important to have your blood pressure checked regularly. High blood pressure has no warning signs or symptoms – which is why it is often called a 'silent killer.' Have your blood pressure checked at least once every year by a health care provider, or more often if your blood pressure is high. You can also check your blood pressure at home. If home blood pressure readings are done properly, they may reflect your usual pressure more than those done in the doctor's office. Regular blood pressure checks help make sure that high blood pressure is diagnosed and controlled before it leads to serious health problems.

HOW DOES HIGH BLOOD PRESSURE AFFECT THE BODY?

Complications of persistent high blood pressure



BRAIN

stroke
confusion
headache
convulsions

EYE

vision
problems

HEART

heart attack
heart
failure

KIDNEYS

kidney
failure

WHAT CAN I DO ABOUT HIGH BLOOD PRESSURE?

In most cases, high blood pressure can be prevented and controlled. To prevent hypertension or better control your blood pressure, you can make some simple and effective lifestyle changes:

Follow a Healthy Diet

Choose the following more often: vegetables, fruits, low-fat dairy products, whole grains, lean meat, fish and poultry. Limit fast foods, canned foods or foods that are bought prepared or those that are high in salt and sugar, saturated or trans-fat, such as shortening, palm or coconut oil and lard.

Eat Less Sodium (salt)

Often times, food that comes in a can, like soup, or is frozen, like chicken nuggets or frozen dinners, and many snack foods, like potato chips, cookies, and crackers, have more sodium. These foods are often called 'processed' foods. Eating less sodium can reduce your blood pressure and prevent high blood pressure. Try to eat less than 2000 mg of sodium per day. Children should eat even less sodium.

Drink Less Alcohol

It's important to know how much alcohol your drink contains. In the United States, one "standard" drink means:

- 12 ounces of regular beer, (usually 5% alcohol)
- 5 ounces of wine, (usually 12% alcohol)
- 1.5 ounces of distilled spirits, (usually 40% alcohol)

If you drink alcohol, limit yourself to a weekly maximum of 7 drinks for women and 14 for men; that's one drink a day for women and two for men.

Ways to reduce sodium in your diet:

- Buy and eat more fresh fruit and vegetables.
- Eat less food at restaurants and fast food outlets and ask for less salt to be added.
- Avoid processed foods whenever possible. If you can't, choose processed food brands with the lowest percentage of sodium on the food label.
- Eat foods with less than 120 mg of sodium and/or less than 5% of the daily value per serving.
- Avoid foods with more than 360 mg of sodium or more than 15% of the daily value per serving.
- Avoid buying or eating heavily salted foods. (e.g. pickled foods, salted crackers or chips, processed meats, etc.)
- Don't add salt in cooking or at the table.
- Wash canned foods or other salty foods in water before eating or cooking.
- Use unsalted or sodium free spices to make foods taste better.
- Use less sauce on your food (e.g. ketchup, seafood sauce).

WHAT CAN I DO ABOUT HIGH BLOOD PRESSURE?

Stay Physically Active

Be physically active for 30 to 60 minutes, four to 7 days a week. Try walking, biking, swimming, running or any other physical activity that you enjoy. Remember that even a little bit of physical activity is better than no activity. Keep active.

Lower Stress

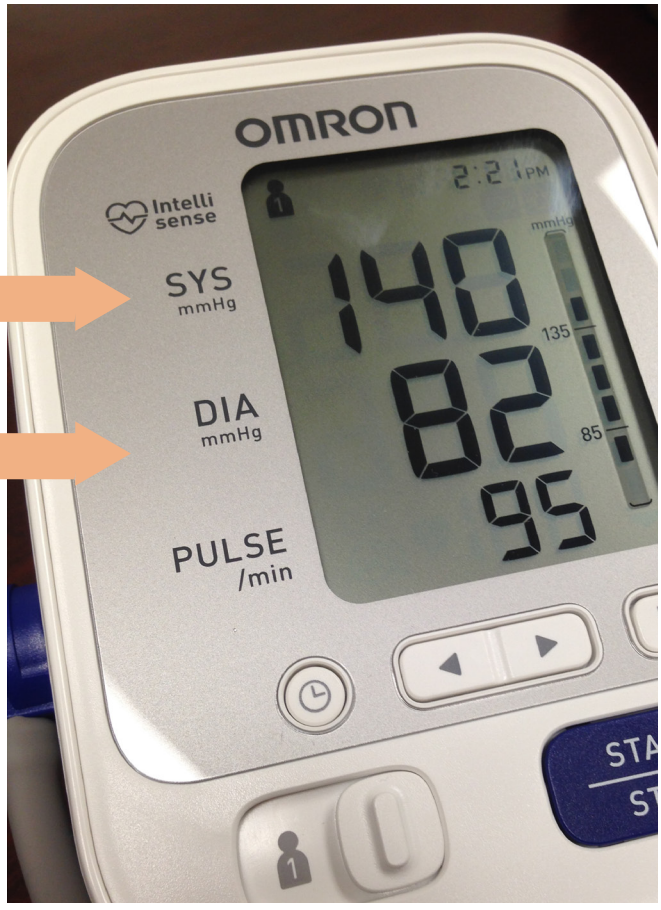
Taking steps to lower your stress can help improve your health, including your blood pressure.

Don't Smoke

Smoking increases the risk of developing heart problems and other diseases. Living and working in places that are smoke-free is also important. If you smoke, a variety of treatments can help you stop. Stopping smoking reduces your risk of developing many serious diseases, such as cancer and heart disease.

MEASURING AND MANAGING MY BLOOD PRESSURE AT HOME

Measuring your blood pressure at home helps you and your doctor to understand how well your blood pressure is controlled on a day-to-day basis.



Understanding your Blood Pressure Monitor

Systolic (SYS)

Systolic pressure occurs when your heart contracts and is the higher of the two numbers.

Diastolic (DIA)

Diastolic (DIA) pressure is the lower number and it occurs when your heart relaxes and fills with blood.

Blood pressure monitors may also include your pulse, which measures how many times your heart beats in a minute.

MEASURING AND MANAGING MY BLOOD PRESSURE AT HOME

How to measure blood pressure

Read the following directions on how to take your blood pressure the right way using your blood pressure monitor:

- Only measure and write down your blood pressure if you have time to do it correctly.

- Measure your blood pressure when you are comfortable, NOT when you are cold, anxious, stressed or in pain.

- If needed, empty your bladder and bowels before taking your blood pressure.

- Wait for at least two hours after a big meal or any heavy physical activity and for at least 30 minutes after drinking caffeine or smoking.

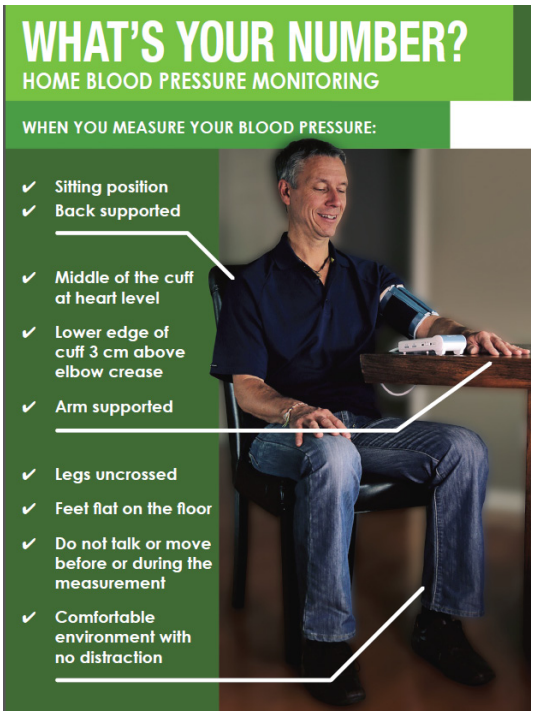
- Blood pressure should be measured in the morning and evening before taking your blood pressure medications.

- Measure your blood pressure in the morning and in the evening using these instructions for 7 days before your appointment, or after any change in your blood pressure medication.

- Bring your blood pressure record to every medical visit.

MEASURING AND MANAGING MY BLOOD PRESSURE AT HOME

How do I measure my blood pressure with a home monitor?



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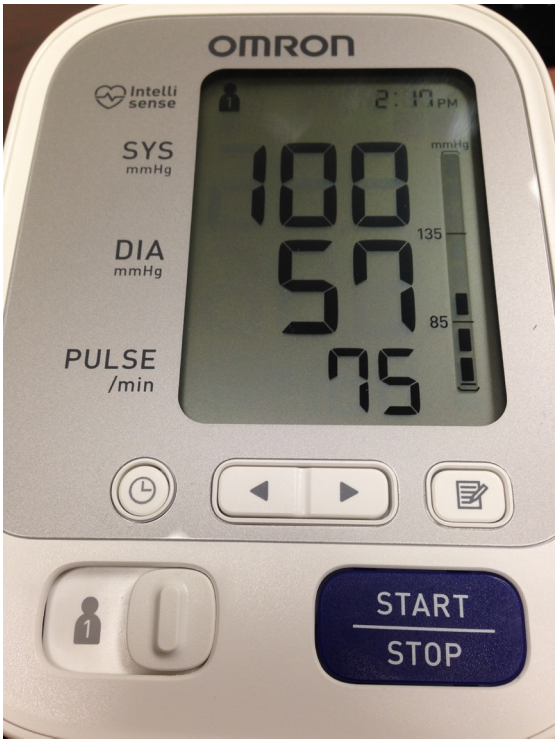
1. Find a comfortable place with no distractions (such as TV, computer or phone).
2. Sit in a chair that supports your back and beside a table that supports your arm.
3. Take all clothing off upper arm and put cuff on.
4. If needed, use a pillow or towel to ensure the center of the cuff is at heart level.
5. Keep your feet flat on the floor.
6. Put the cuff on your upper left arm against the skin, not over a sleeve.
7. Rest and relax for 5 minutes before taking the first reading.
8. **Take at least 2-3 readings, 1 – 2 minutes apart.**
9. Record all readings with the date and time in your blood pressure record.
10. Take and record your readings twice a day; once in the morning, and once in the evening.



Blood Pressure Readings

Date	Time	Systolic (Top number)	Diastolic (Bottom number)
April 6	(AM)/PM	100	57
April 6	(AM)/PM	101	58
April 6	AM/(PM)	111	59
April 6	AM/(PM)	105	59
April 7	(AM)/PM	108	51
April 7	(AM)/PM	103	52
	AM/PM		
	AM/PM		
	AM/PM		
	AM/PM		
	AM/PM		
	AM/PM		
	AM/PM		

WHAT TO DO IF YOUR BLOOD PRESSURE IS TOO LOW OR TOO HIGH

Call your health care provider if your blood pressure is too high or too low. When blood pressure reaches a level that is too high (180/110 or higher), it is called a hypertensive emergency or crisis. Blood pressure at this level can lead to organ damage.

If you are having any of the following symptoms and your blood pressure is 180/110 or higher, call 9-1-1:

- Chest pain
- Shortness of breath
- Back pain
- Numbness/weakness
- Change in vision
- Difficulty speaking
- Severe headaches
- Nosebleeds
- Severe anxiety

Blood Pressure Category	Systolic mm Hg (upper #)		Diastolic mm Hg (lower #)
Normal	less than **120**	and	less than **80**
Prehypertension	**120 – 139**	or	**80 – 89**
High Blood Pressure (Hypertension) Stage 1	**140 – 159**	or	**90 – 99**
High Blood Pressure (Hypertension) Stage 2	**160** or higher	or	**100** or higher
Hypertensive Crisis (Emergency care needed)	Higher than **180**	or	Higher than **110**

Take your blood pressure medications as instructed by your doctor or pharmacist and keep a current list of your medications including the name, dose, and how often you take them. Report any side effects you may experience to your health care provider.

QUESTIONS AND ANSWERS

Who Can Take The Measurement?

- You can, or a friend or family member can assist you

When Should I Take The Readings?

- Before breakfast and 2 hours after dinner/ DO NOT eat a big meal for 2 hours before measuring your BP
- Before taking your medication
- After emptying bladder and bowel if you need to
- After a 5 minute rest
- No tobacco, no caffeine in the hour before
- No exercise 30 minutes before
- Do not take blood pressure in a hurry, uncomfortable, anxious, stressed or in pain
- Do not cross your feet
- Do not talk or watch TV during a measurement

What Device Should I Use?

- Automated validated devices
- According to arm circumference (small, medium, large, or x-large)

What Procedures Should I Use At Home?

- Measure 2-3 times in the morning and 2-3 times in the evening
- Wait 1-2 minutes between each reading
- Record all readings

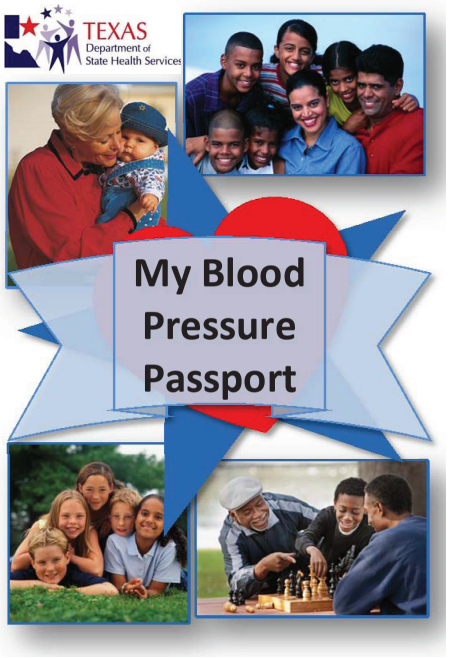
When Should I Monitor Blood Pressure At Home?

- Following any change or addition of a medication
- During dosing adjustments
- When you have new symptoms (example: dizziness)
- The week before an appointment with a health care professional
- Or as often as advised by a health care professional

What Is My Target?

- Average should be below 140/90 mm Hg

- REST 5 minutes before taking the first blood pressure reading.
- WAIT 1 minute before taking the second blood pressure reading.
- MEASURE before taking your blood pressure medications and before eating or 2 hours after eating.
- TAKE your blood pressure 10 to 12 hours apart when doing AM & PM measurements.
- KNOW your numbers.
- TALK to your doctor for more information about home blood pressure monitoring.
- BRING your blood pressure log and your blood pressure medications to every appointment with your health care provider.



Home blood pressure monitoring can help you control your blood pressure.

MY BLOOD PRESSURE GOAL IS:

_____ / _____

Taking Your Blood Pressure at Home

- Rest 5 minutes before taking your blood pressure.
- Don't smoke or drink caffeinated beverages for at least 30 minutes before.
- Take your blood pressure before (not after) you eat.
- Sit comfortably with your back supported and both feet on the floor (don't cross your legs).
- Elevate your arm to heart level on a table or a desk.
- Use the proper sized cuff. It should fit smoothly and snugly around your arm. There should be enough room to slip a fingertip under the cuff.
- Take 2 or 3 measurements in the AM and 2 or 3 measurements in the PM, for a total of between 4 and 6 measurements.

My Medication List

Bring this to your next appointment with your doctor or visit your pharmacist and ask him/her to review.

Medication Name	Instructions
Aspirin (white pill)- blood thinner	*Take once a day at night with food*

Blood Pressure

What is the recommendation for healthy blood pressure?

Blood Pressure Category	Systolic mm/hg (Top Number)		Diastolic mm/hg (Bottom Number
Normal	Less than 120	and	Less than 80
Prehypertension	120-139	or	80-89
High Blood Pressure (Hypertension) Stage 1	140-159	or	90-99
High Blood Pressure (Hypertension) Stage 2	160 or higher	or	100 or higher
Hypertensive Crisis (Emergency Care Needed)*	Higher than 180	or	Higher than 110

*If your blood pressure is at this level, call 911.

Blood Pressure Readings

Date	Time	Systolic (Top Number)	Diastolic (Bottom Number)
	AM/PM		
	AM/PM		
	AM/PM		
	AM/PM		
	AM/PM		

A Heart-Healthy Lifestyle

- If you smoke, think about quitting. Call 1-800-YES-QUIT for help and talk to your doctor.
- Get at least 30 minutes of exercise a day.
- Follow a low sodium diet like the Dietary Approaches to Stop Hypertension (DASH) Diet.
- Take your blood pressure medication as prescribed every day.
- Reduce your alcohol intake.
- Reduce your stress.
- Know your blood pressure numbers.

Contact Us

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