The top number (119/79) of your blood pressure measurement is the systolic pressure. This is the force of blood against your arteries when your heart is sending blood to your body. The lower number (119/79) is the diastolic pressure. This is the force of blood against your arteries while your heart relaxes between beats. Both numbers are important. Here are the ranges for different levels of blood pressure:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Blood Pressure Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>119 / 79 or lower</td>
</tr>
<tr>
<td>Pre-hypertension</td>
<td>120-139 / 80-89</td>
</tr>
<tr>
<td>Hypertension</td>
<td>140 / 90 or higher</td>
</tr>
<tr>
<td></td>
<td>130 / 80 or higher</td>
</tr>
<tr>
<td></td>
<td>if you have diabetes or kidney disease</td>
</tr>
</tbody>
</table>

What are the most commonly used hypertension medicines and how do they work?

- Hydrochlorothiazide (HCTZ) or chlorthalidone are examples of diuretics. Diuretics work in the kidneys by helping your body get rid of extra water and sodium through urine. Having extra fluid can contribute to high blood pressure.
- Lisinopril is an example of an ACE inhibitor. ACE inhibitors work by causing the blood vessels to relax and widen. This increases the supply of blood and oxygen to the organs (heart, brain and kidneys) and helps the heart beat more easily. This medicine can be especially helpful for people who have other conditions that affect blood vessels (such as diabetes, kidney problems, heart disease, heart failure, or for people who have had a stroke).
- Prinzide is a combination of HCTZ (a diuretic) and lisinopril (an ACE inhibitor). This medication gives a person the benefit of both of these medicines. Because most people with high blood pressure need to take two or more medicines to control their blood pressure, this drug is a convenient and inexpensive way to get two good blood pressure medications in one pill. If you take a diuretic and an ACE inhibitor, ask your doctor if you can switch to Prinzide.
- Atenolol is an example of a beta blocker. Beta blockers relax the heart muscle and slow down the heart rate. This lessens the work of the heart and allows it to pump blood more easily.
- Felodipine or nifedipine are examples of a calcium channel blocker. This medicine relaxes the muscles around your arteries. Relaxing the muscles around your arteries makes it easier for your heart to pump blood.

Will I need to take medicine for high blood pressure for the rest of my life?

Most people who take blood pressure medicines do need to take them for the rest of their lives. Taking these drugs lowers blood pressure and lessens the
chances of having a heart attack or stroke or of developing heart disease. Given this, you must weigh the small risk of having side effects against the chances of having a heart attack or stroke. Talk with your doctor about any side effects you have. This can help you and your doctor choose the medicine and dose that works best for you.

How do lifestyle changes work with medications?
Making healthy changes can help your medicines work even better to lower your blood pressure. If you are overweight, focusing on losing 5-10 percent of your body weight may be the most effective way to lower your blood pressure naturally. Because making healthy choices can lower your blood pressure, focusing on them is important while you are taking your blood pressure medication. Here are the most important changes to make:

• Losing weight
• Regular physical activity
• Staying smoke-free or quitting if you smoke
• Eating foods lower in salt
• Limiting or cutting out alcohol

What should I do if I have side effects?
Be sure to tell your doctor if there are reasons why you cannot take any medication that's prescribed. Also, tell your doctor if you seem to have trouble remembering to take your medication.

How can I remember to take my medications?
Everyone sometimes has trouble remembering to do things that they don't do regularly. Here are some tips to help you remember:

• Use a pillbox that has 7 sections, one for each day of the week.
• Establish a daily routine for taking your medications, such as at bedtime, mealtime, or at the beginning of a daily TV show.
• Make a simple chart. Post it in a place where you will see it every day, like on the mirror in the bathroom.
• Set an alarm clock or watch for a reminder.
• Record your medications on a wallet card or calendar.
• Can you think of others?

Are there any special instructions I need to be aware of?

• Keep a personal medication record card (wallet card) with you and keep it up to date. Write down the medications you are taking. Also list any drug or food allergies that you may have, and any non-prescription medications, herbs or supplements that you are taking.
• Review your medication record card regularly with your doctor or other medical professional, including your dentist.
• When you buy any medicines, including over-the-counter medications, ask the pharmacist to check for possible drug interactions with your current medications.
• Refill your medications at least 1 to 2 week(s) before you run out.
• If a doctor or other health professional recommends it, carry some kind of medical identification like a Medic Alert bracelet. For more information, call 1-888-633-4298, or go to MedicAlert.org/.

Other resources
• Connect to our Web site at kp.org to access health and drug encyclopedias, interactive programs, health classes, and much more.
• Check your Kaiser Permanente Healthwise Handbook.
• Contact your Kaiser Permanente Health Education Center or Department for health information, programs, and other resources.

This information is not intended to diagnose health problems or to take the place of medical advice or care you receive from your physician or other health care professional. If you have persistent health problems, or if you have additional questions, please consult with your doctor. If you have questions or need more information about your medication, please speak to your pharmacist. Kaiser Permanente does not endorse the medications or products mentioned. Any trade names listed are for easy identification only.