



Blood Pressure Measurement, Guidelines & Education for Community Health Workers

Danielle Wing, MPH
Community Health Educator Sr.
Chronic Disease Prevention and Control Program
Nebraska Department of Health & Human Services
301 Centennial Mall South | Lincoln, NE 68509-5026
Phone: (402)471-6439 | danielle.wing@nebraska.gov





Objective

- What is High Blood Pressure
- Why is blood pressure so important
- What are the risk factors for high blood pressure
- Describe and review procedures for automated blood pressure measurement and reporting.
- What can you do to help
- Where can I find blood pressure resources

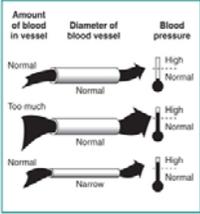


Let's Learn About You!

Do you plan to or are you already taking part in a high blood pressure detection program as part of your work?

What is High Blood Pressure?

- High Blood Pressure is the force of blood pushing against the walls of the arteries as the heart pumps blood.
- High blood pressure occurs when the force of the blood flowing through your vessels is too high and your heart must work harder. This increased pressure puts extra stress on the blood vessels and on vital organs such as your heart and kidneys.
- If you have high blood pressure, this excessive force is damaging the inside of your blood vessels, and that damage can lead to stroke, heart attack, heart failure, kidney failure, or blindness.



What's the big deal about High Blood Pressure?

- High blood pressure, or hypertension, is a very common condition.
 - Commonly known as the "Silent Killer"
 - Largely a symptomless condition
- 67 million adults have high blood pressure – that's 1 in 3 adults.
- High blood pressure is the leading cause of heart disease and stroke in the United States.
 - You are 4 times more likely to die from a stroke.
 - You are 3 times more likely to die from heart disease.
- Only about 52 percent of people have their high blood pressure under control.
- High blood pressure costs the nation an estimated \$51 billion each year.

Source: Million Hearts Initiative, Your Guide to Lowering Blood Pressure, www.ahrq.gov

Who is at risk for high blood pressure?

Risk factors beyond our control:

- Individuals with a family history of high blood pressure
 - Parents, brother, sister
- Increasing age
- Gender
 - Women – after menopause
 - Men – early middle age
- Race
 - More common among African Americans
 - 4 in 10 African Americans have high blood pressure



<https://www.youtube.com/watch?v=XH1mbyDUE>
 National Heart, Lung, and Blood Institute

Who is at risk for high blood pressure?

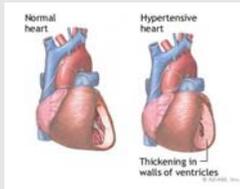
Risk factors within our control:

- Excess weight
- Inactivity
- Tobacco Use
- Stress
- Sodium Intake
- Excessive Alcohol



So what is normal blood pressure?

- Everybody should know their own blood pressure because people with high blood pressure are more likely to develop heart disease and stroke.
- Normal blood pressure is at or below 120 over 80 (120/80) for adults.
- If your blood pressure is above 120/80 you may be at risk for high blood pressure, and the only way to tell if you have high blood pressure is to have your blood pressure checked.



How is blood pressure measured?

- Blood pressure cuff, gauge, stethoscope or electronic sensor.
- Millimeters of mercury (mmHg)
- Two numbers are shown as a fraction
 - Systolic/Diastolic
 - Example: 120/80
- Always requires more than one reading measured at more than one visit to be diagnosed by a healthcare provider with high blood pressure.
- Diagnoses can only be made by a licensed healthcare professional such as a physician or doctor.



What do the numbers mean?

- Blood pressure is given two numbers, such as 120/80. The higher number is called your systolic pressure and the bottom number is called your diastolic pressure.
- **Systolic** (top number) is the pressure in the arteries when the heart is beating.
- **Diastolic** (bottom number) is the pressure when the heart is at rest.

Blood Pressure Classification Chart

BP Category	Systolic BP (top number)	Diastolic BP (bottom number)	Behavioral and Management Advice (Referral)
Normal	Less than 120 AND	Less than 80	<ul style="list-style-type: none"> • Tell the client what their blood pressure reading is, of 110/70, "say 110 over 70" • Explain the blood pressure categories (left column) and where their reading fits into the chart (middle column)
Elevated	120-130 OR	80-90	<ul style="list-style-type: none"> • Tell the client what their blood pressure reading is, of 130/80, "say 130 over 80" • Explain the blood pressure categories (left column) and where their reading fits into the chart (middle column)
Hypertension Stage 1	140-159 OR	90-99	<ul style="list-style-type: none"> • Tell the client what their blood pressure reading is, of 140/90, "say 140 over 90" • Explain the blood pressure categories (left column) and where their reading fits into the chart (middle column) • Say, "Your blood pressure is high and in the high BP range, but one high reading does not mean you have hypertension. Tell the client to recheck their blood pressure."
Hypertension Stage 2	160 and higher OR	100 and higher	<ul style="list-style-type: none"> • Tell the client what their blood pressure reading is, of 170/100, "say 170 over 100" • Explain the blood pressure categories (left column) and where their reading fits into the chart (middle column) • Say, "Your blood pressure is elevated and in the high BP range and I am going to recommend you see a health care provider as soon as you can." • Ask, "Are you on treatment for your blood pressure?" • If not on treatment, refer to a provider for LABORATORY evaluation and consult with the client and monitoring the client until 1 month. • If on treatment, say "Your BP is not controlled today and should be lowered to 140/90 or less. I encourage you to continue taking your medication as prescribed and see your provider as soon as possible to discuss your BP goals." Consult with the client that appointments take that address it needs. • Review the Lifestyle Modification Chart and inform patient of monitoring re-appointment.

WARNING:
ACUTE LIFE THREATENING EVENT: If Systolic BP is greater than 200mmHg and/or Diastolic BP is greater than 120mmHg, **EMERGENCY REFERRAL** is required. Inform your organization in emergency procedures immediately.

Common Errors in Blood Pressure Measurement

Error	Effect on Systolic/Diastolic	What to do to Correct Error
Sitting with back unsupported	Increases 6 to 10 points	Support back by sitting in a chair
Feet not flat on the floor or legs are crossed	Increases 2 to 8 points	Have client sit with feet flat on the floor without crossing legs or ankles
Full Bladder	Increases or is equal to adding 10 to 15 points	Empty bladder before measurement
Tobacco, Caffeine use or Exercise	Increases 6 to 20 points	Advise client to avoid for 30 minutes before measurement
Talking, hand gestures or active listening	Increases 7 to 10 points	No talking during measurement
Arm not supported on firm surface	Increases 1 to 10 points	Rest arm on firm surface. Do not hold client's arm

How to use your Blood Pressure Monitor?

How to Measure Arm Circumference

- PREPARE FOR MEASUREMENT**
 - 1. Do not eat, drink, or smoke for 30 minutes before measurement.
 - 2. Rest for 5 minutes before measurement.
- MEASURE ARM**
 - 1. Measure the arm at the midpoint between the elbow and the shoulder.
 - 2. Measure the arm at the midpoint between the elbow and the shoulder.
 - 3. Measure the arm at the midpoint between the elbow and the shoulder.
- SELECT CUFF SIZE**
 - 1. The cuff should be 1 to 2 cm wider than the arm circumference.
 - 2. The cuff should be 1 to 2 cm wider than the arm circumference.
 - 3. The cuff should be 1 to 2 cm wider than the arm circumference.

HOW TO TAKE BLOOD PRESSURE with an Automatic Blood Pressure Monitor

- PREPARE FOR MEASUREMENT**
 - 1. Do not eat, drink, or smoke for 30 minutes before measurement.
 - 2. Rest for 5 minutes before measurement.
- SELECT AND APPLY CUFF**
 - 1. Select the correct cuff size.
 - 2. Apply the cuff to the arm.
 - 3. Place the arm in the device.
- MEASURE BLOOD PRESSURE**
 - 1. Press the power button.
 - 2. Wait for the measurement to complete.
 - 3. Read the blood pressure on the display.
- RECORD BLOOD PRESSURE**
 - 1. Record the blood pressure reading.
 - 2. Record the blood pressure reading.
 - 3. Record the blood pressure reading.

MonitorBP.ne.gov

Let's Practice using your Omron Blood Pressure Monitor!!!

Benefits of Accuracy of Detection & Appropriate Treatment & Control

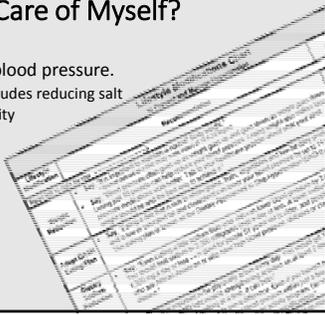
- Decrease incidence of:
 - Stroke 35 – 45%
 - Heart Attack 20 – 25%
 - Heart Failure more than 50%
- High blood pressure is a factor in 69% of heart attacks and 77% of strokes.



Prevent and Control America's High Blood Pressure: Mission Possible. National High Blood Pressure Education Program, U.S. Department of Health and Human Resources, National Institute of Health, National Heart Lung and Blood Institute, NHI Publication No. 04-5072 March 2004.

If I Have High Blood Pressure, What Can I Do to Take Care of Myself?

- 7 ways to help control high blood pressure.
 - 1) Eat a better diet, which includes reducing salt
 - 2) Enjoy regular physical activity
 - 3) Maintain a healthy weight
 - 4) Manage stress
 - 5) Avoid tobacco smoke
 - 6) Comply with medication prescriptions
 - 7) Limit alcohol consumption



What can you do to help?

- **Teach** community members about the importance of being screened for high blood pressure. Keep it basic.
- **Refer** to a healthcare provider and/or existing community resources
- **Encourage** community members to ask their doctor what their goals should be for blood pressure and encourage them in accomplishing their goals
- **Support** those with high blood pressure in achieving set goals and lifestyle modifications. Be proactive in client follow-ups.
- **Communicate** with your clients, healthcare providers, and community resources and programs to help improve the coordination of care for your client.



Resources

- Million Hearts <http://www.millionhearts.hhs.gov/>
- Center for Disease Control & Prevention <http://www.cdc.gov/bloodpressure/>
- National Heart, Lung, & Blood Institute <http://www.nhlbi.nih.gov/health/educational/hearttruth/>
- American Heart Association <http://www.heart.org/>
- Measure Up Pressure Down <http://www.measureuppressuredown.com/>



Resources

- Nebraska Department of Health & Human Services Chronic Disease Prevention & Control Program
 - Heart Disease & Stroke
 - Diabetes
 - Nutrition
 - Physical Activity
 - Breastfeeding







Questions?



<https://www.youtube.com/watch?v=XbLmloyDJuE>
