



**Hypertension and Cardiovascular Disease:
Improving Blood Pressure Control**

Heart, Disease, Stroke and Diabetes Prevention Program
Community Based Prevention Section

PUBLIC HEALTH
OUR BEST OPPORTUNITY FOR A HEALTHIER AND
HEALTHIER COMMUNITY



Today's Presenters

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Washington State Department of Health



Special Note

Information contained in this presentation is not medical advice. Every individual needs to consult with their primary health care provider regarding their medical conditions, blood pressure, medications and any other medical concerns.



Objectives

Learn about the connections between cardiovascular health and chronic disease

Understand why blood pressure control is important

Learn what the blood pressure numbers mean

Learn how to check blood pressure accurately

Learn how to support self-management as a Health Home Care Coordinator



Words You Will Hear

- **Hypertension**
 - Also known as elevated or high blood pressure, is a chronic condition.
 - If left uncontrolled, **it can lead to damage of the heart, the brain and kidneys.**



Words You Will Hear

- **Cardiovascular disease (CVD)**
 - Includes any disorders that affect the circulatory system. This includes coronary heart disease, congestive heart failure and stroke.
- **Heart disease**
 - Includes any condition that impairs the structure or function of the heart (i.e., atherosclerotic and hypertensive diseases, congenital heart disease, rheumatic heart disease and cardiomyopathies).



Words You Will Hear

- **Myocardial Infarction (MI)**
 - Commonly known as heart attack -- Most heart attacks happen when a [clot](#) in the coronary artery blocks the supply of blood and oxygen to the heart.
- **Stroke**
 - Also called cerebrovascular disease or a brain attack, is the interruption of blood supply to the brain.
 - Can lead to some level of cognitive or physical disability if not fatal.



Other Words You May Hear

- **Peripheral Vascular Disease (PVD)**
 - Narrowing of the blood vessels outside of the heart, causing arteries to narrow or become blocked. Can reduce or stop blood flow, usually to the legs. If severe enough, blocked blood flow can cause tissue death and may lead to amputation of the foot or leg.
- **Chronic Kidney Disease (CKD)**
 - Means kidneys are damaged and can't filter blood as they should. Diabetes and high blood pressure are the most common causes of CKD. Also, chronic kidney disease can cause high blood pressure.

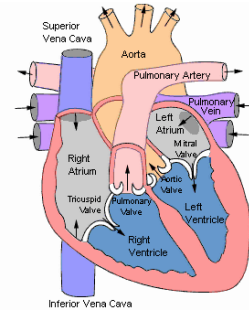


Other Words You May Hear

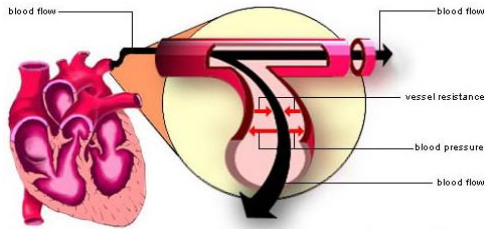
- **Angina Pectoris**
 - Angina is [chest pain](#) or discomfort you feel when there is not enough blood flow to your heart muscle.
- **Arrhythmias**
 - An arrhythmia is a problem with the rate or rhythm of your heartbeat. It means that your heart beats too quickly, too slowly or with an irregular pattern.
 - The most common type of arrhythmia is [atrial fibrillation](#), which causes an irregular and fast heart beat.



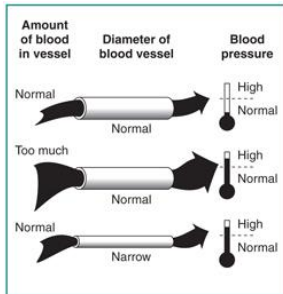
How The Heart Works



What Is Blood Pressure?



What Is Blood Pressure?



Blood Pressure Levels For Adults

Blood Pressure Category	Systolic mm Hg (upper #)	and	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



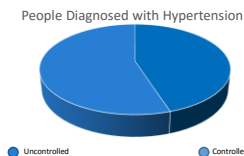
Facts About High Blood Pressure

- **1 in 3** adults (about 70 million people) in the US has high blood pressure (HBP)
- Less than **one-half** of those with HBP have it controlled
- People with HBP may not be know, because they do not feel bad or have any symptoms
- It can lead to many chronic diseases (i.e., heart disease, stroke, chronic kidney disease)

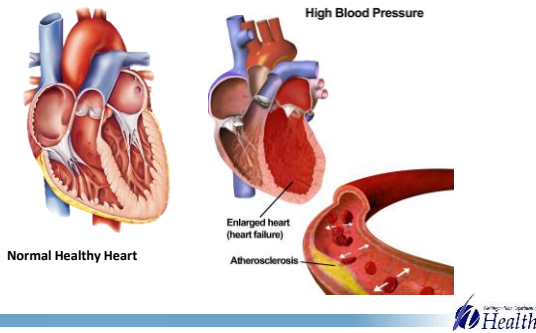


Hypertension: A Major Risk Factor

- The Centers for Disease Control and Prevention (CDC) has identified uncontrolled hypertension as a major modifiable risk factor for cardiovascular disease (CVD), stroke, and chronic kidney disease (CKD)



What Does High Blood Pressure Do to Our Bodies?



Risk Factors for Heart Disease and Stroke

- **Non-modifiable**
 - Age
 - Family-History or Genetics
- **Modifiable**
 - **Hypertension**
 - High Blood Cholesterol
 - Diabetes
 - Difficulty Managing Healthy Weight
 - Smoking
 - Physical Inactivity
 - Poor Nutrition



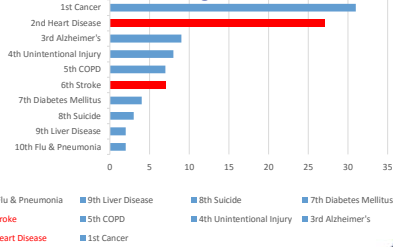
Who Is At Higher Risk?

- People with a **family history** of high blood pressure
- **African Americans, Native Americans, and Alaskan Natives**
- People **35 years or older**
- People who are **not at a healthy weight**
- People who **use tobacco**
- People who eat foods with **too much salt**
- People who do **not eat enough fruits and vegetables**
- People who drink **too much alcohol**
- Women who **use birth control pills**
- People who **do not exercise**
- **Pregnant women**



2014 Washington State 10 Leading Causes of Death

- Heart Disease and Stroke combined are the #1 cause of death in Washington State



Signs of a Heart Attack

- Chest Pressure or Tightness
- Pain in the Chest, Neck, Back, Arms, or Jaw
- Palpitations, fluttering in the chest, abnormal heartbeat
- Anxiety
- Fatigue
- Shortness of Breath
- Lightheadedness
- Sweating (cold sweats)
- Nausea, vomiting, indigestion or gas-like pain



Signs & Symptoms of a Stroke

- Sudden numbness of arm, face, or leg
- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing
- Sudden trouble walking
- Severe headache



F.A.S.T.

- If you **THINK** the person is having a **STROKE**: **CALL 9-1-1 IMMEDIATELY!**
- F.A.S.T. is an easy way to remember the sudden signs of stroke.
 - When you can spot the signs, you'll know that you need to **call 9-1-1 for help** right away.
- F.A.S.T. is:
 - **F** **Face Drooping** – Does one side of the face droop or is it numb? Ask the person to smile. Is the person's smile uneven?
 - **A** **Arm Weakness** – Is one arm weak or numb? Ask the person to raise both arms. Does one arm drift downward?
 - **S** **Speech Difficulty** – Is speech slurred or hard to understand? Ask the person to repeat a simple sentence, like "The sky is blue." Is the sentence repeated correctly?
 - **T** **Time to call 9-1-1** – If you see any of these signs, even if the symptoms go away, **call 9-1-1**. Check the time so you'll know when the first symptoms appeared.



Treatment for High Blood Pressure

Modification	Recommendation	Approximate SBP Reduction (Range)
Reduce weight	Maintain normal body weight (body mass index 18.5–24.9 kg/m ²)	5–20 mm Hg/ 10 kg
Adopt DASH eating plan	(dietary approaches to stop hypertension) Consume a diet rich in fruits, vegetables, and low-fat dairy products with a reduced content of saturated and total fat	8–14 mm Hg
Lower sodium intake	a. Consume no more than 2,400 mg of sodium/day; b. Further reduction of sodium intake to 1,500 mg/day is desirable, since it is associated with even greater reduction in BP; c. Reduce sodium intake by at least 1,000 mg/day since that will lower BP, even if the desired daily sodium intake not achieved	2–8 mm Hg
Physical activity	Engage in regular aerobic physical activity such as brisk walking (at least 30 min per day, most days of the week)	4–9 mm Hg
Moderation of alcohol consumption	Limit consumption to no more than 2 drinks per day in most men, and to no more than 1 drink per day in women and lighter weight persons	2–4 mm Hg



Common Medications

- Diuretics (Thiazide)
 - “Water pills,” which help the kidneys flush extra water and salt from your body and decrease blood volume
- Angiotensin converting enzyme (ACE) inhibitors and Angiotensin II receptor blockers (ARBs)
 - Reduce blood pressure by relaxing blood vessels
- Beta blockers
 - Cause the heart to beat with less force



Common Medications cont.

- Calcium channel blockers (CCBs) and other direct dilators (relaxers) of blood vessels
 - Drugs that directly relax the blood vessels.
- Alpha blockers
 - Reduce nerve impulses that tighten blood vessels
- Nervous system inhibitors
 - Control nerve impulses from the brain to relax blood vessels



When Might A Specialist Be Needed?

When primary care unable to control hypertension after following standard protocols
 Usually nephrologists, internists
 Cardiologists only involved when heart disease is present



Before Measuring Blood Pressure

- Do not drink coffee for at least 30 minutes before measuring.
- Do not use tobacco products for at least 30 minutes before measuring.
- Do not exercise or eat a large meal two hours before measuring.
- Use the rest room. A full bladder can affect the reading.

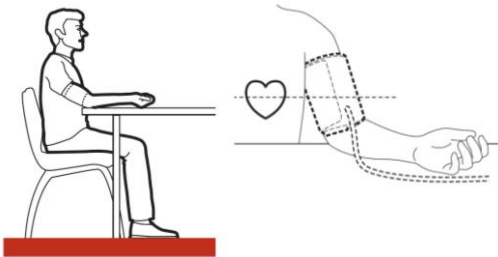


Seating Posture and Proper Cuff Placement

- Sit quietly in a chair for 5 minutes before measuring
- Keep your back supported and feet flat on the ground. Do not cross legs.
- Remove clothing from your upper arm.
- The bottom of the fitted and correctly positioned blood pressure cuff should be about a half inch above your elbow. Arrow over the brachial artery



Seating Posture and Proper Cuff Placement



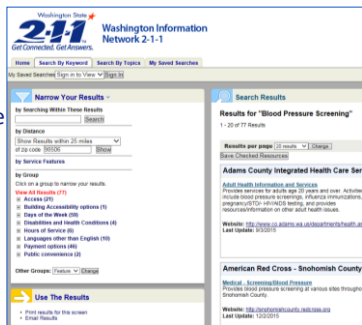
Taking Your Blood Pressure (automated)

- Support your arm at the level of your heart on a table or high armrest.
- Stay in a seated position and avoid talking when taking a measurement.
- Press the **START** button to start the monitor.
- The cuff will inflate and feel tight for a few seconds, then it will relax and display the reading.
- **RECORD THE READING**
- Press the **STOP** button to clear the display.



Other Place to Have BP Taken

- Search on win211.org
- Provider office
- Fire stations
- Drug stores/ Pharmacies



Blood Pressure Guidelines

- Unless told otherwise by your provider,
- If Blood Pressure (BP) is less than 120 (systolic) and less than 80 (diastolic); **Normal BP**:
This is the recommended blood pressure level
 - If Blood Pressure is 120 – 139 (systolic) or 80 – 89 (diastolic); **Pre-hypertension stage**
At this stage, lifestyle modifications to prevent the development of HBP are recommended
 - If Blood Pressure is 140 – 159 (systolic) or 90 – 99 (diastolic); **Hypertension Stage 1**
Medical Follow-up Needed; See your Doctor
 - If Blood Pressure is 160 or higher (systolic) or 100 or higher (diastolic); **Hypertension Stage 2**
Medical Follow-up Needed; Call Provider for appointment
 - If Blood Pressure is 180 or higher (systolic) or higher than 110 (diastolic); **Hypertensive Crisis**:
Emergency Care Needed; Call 911

Websites for Tracking Measurement

- American Heart Association
 - Heart360.org
- Healthy Circles
 - Healthycircles.com



Blood Pressure Measurement

- American Heart Association reports that blood pressure measurements are one of the most **inaccurately performed** measurement in health care.
- Measuring blood pressure (BP) correctly is the **most effective tool** in helping a person self-manage their blood pressure



The Benefit of Care Coordination on Blood Pressure Measurement

- **Health Home Care Coordinators** can help clients by
 - providing coaching and education
 - encouraging clients to include blood pressure measurement in the Health Action Plan
- **Health Home Care Allied Staff** can help by **reminding and encouraging clients to use their home BP Monitor**




Individual and Family Support: one of the core HH services

- Health Home (HH) Care Coordinators can:
 - Provide health promotion and education
 - Locate resources
 - Chronic Disease Self-Management Program
 - Places to check blood pressure
 - Physical activity supports
 - Healthy eating supports
 - Mental health supports
 - Support the client to remember appointments and schedule transportation
 - Assist the client in setting up a system to take medications as prescribed
 - Encourage blood pressure self-measurement



Starting the Conversation

Consider using this assessment to begin brainstorming about potential short-term goals



Self-Efficacy for Managing Chronic Disease 6-Item Scale

One minute to do this scale. Use the answer key to check your answers. Print out the following checklist to use during the course for a written demonstration of your performance before the final activity at the point of care.

- How often do you check your blood pressure?
 - How often do you check your blood pressure? (1 = never, 2 = once a week, 3 = once a month, 4 = once a year, 5 = never)
- How often do you check your cholesterol?
 - How often do you check your cholesterol? (1 = never, 2 = once a year, 3 = once every 2 years, 4 = once every 3 years, 5 = never)
- How often do you check your blood sugar?
 - How often do you check your blood sugar? (1 = never, 2 = once a week, 3 = once a month, 4 = once a year, 5 = never)
- How often do you check your blood pressure?
 - How often do you check your blood pressure? (1 = never, 2 = once a week, 3 = once a month, 4 = once a year, 5 = never)
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 - How often do you check your cholesterol? (1 = never, 2 = once a year, 3 = once every 2 years, 4 = once every 3 years, 5 = never)
- How often do you check your blood sugar?
 - How often do you check your blood sugar? (1 = never, 2 = once a week, 3 = once a month, 4 = once a year, 5 = never)



Suggestions for Short Term Goals

- Follow up with primary care provider
- Learn how to accurately measure blood pressure
 - Action step: Care Coordinator will provide a paper tracker for client to record BP
 - Action step: Care Coordinator will help client locate an application for their computer or phone to track BP (Heart360.org, Healthycircles.com)
- Ask pharmacist or doctor what my medications are and what they do



Suggestions for Short Term Goals

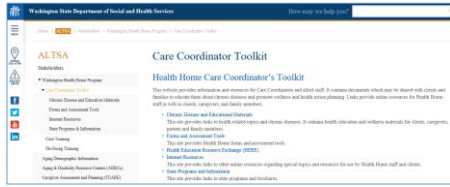
- Caregiver will accompany client to medical appointments
- Client will attend a Chronic Disease Self-Management course
- Client will reduce sodium in their diet
- Client will work towards 30 minutes/day of moderate activity
- Client will begin to check for sodium, fat and saturated fat on food labels



Resources

Health Home Care Coordinators Toolkit:

<https://www.dshs.wa.gov/altsa/home-and-community-services/care-coordinator-toolkit>



Resources cont.

American Heart Association:

http://www.heart.org/HEARTORG/HealthyLiving/HealthyEating/Nutrition/The-American-Heart-Associations-Diet-and-Lifestyle-Recommendations_UCM_305855_Article.jsp#Vx_SQX_2biU



Resources cont.

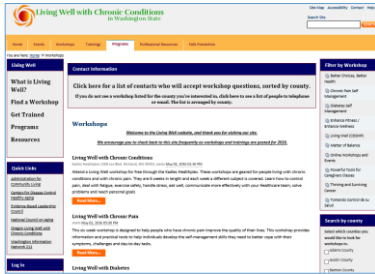
HERE: Health Education Resource Exchange:

<http://here.doh.wa.gov/>



Resources cont.

Living Well with Chronic Conditions: <http://livingwell.doh.wa.gov/programs/workshops>

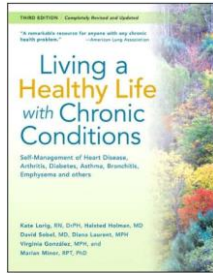


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Resources cont.

Living a Healthy Life with Chronic Conditions by Lorig, Sobel, Gonzalez, and Minor

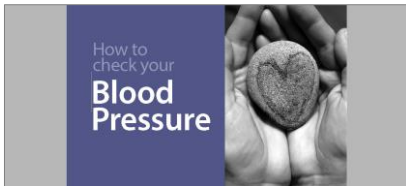


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Resources cont.

How to Check Your Blood Pressure brochure



Series of horizontal lines for notes.



Resources cont.

Printables

Blood
Pressure
Tracker



BLOOD PRESSURE TRACKER - PRINTABLE TRACKER

INSTRUCTIONS:

- Take your pressure at the same time each day, such as morning or evening, or as your healthcare professional recommends.
- Go with your back straight and supported and your feet flat on the floor.
- Your arm should be supported on a flat surface with the upper arm at heart level.
- Make sure the middle of the cuff is placed directly over your brachial artery. Refer to the instructions page of this tracker for a picture, or check your monitor's instructions, or have your healthcare provider show you how.
- Each time you measure, take two or three readings, one minute apart, and record all the results.

NAME: _____ MY BLOOD PRESSURE TARGET GOAL IS: ____ / ____ mm Hg

DATE/TIME	READING 1 2009 mm Hg 60 Beats Per Min	READING 2 120/80 mm Hg 70 Beats Per Min	READING 3 130/85 mm Hg 72 Beats Per Min	COMMENTS



Recommended Videos for Your Client and You

- Unnatural Causes Video clip.
<https://www.youtube.com/watch?v=bXBkOYMCAro>
- Blood Pressure Demo "MILLION HEARTS INITIATIVE" by the UCD School of Pharmacy.
https://www.youtube.com/watch?v=Blqei6_s6JO



Questions:



References

- American Family Physician; Practice Guidelines – New AHA Recommendations for Blood Pressure Measurement; Vol 72, Number 7, Oct. 2005
- JNC-7 Express:
www.nhlbi.nih.gov/guidelines/hypertension/express.pdf
- Pickering TJ et. al. Recommendation for Blood Pressure Measurement in Humans and Experimental Animals. Part 1. Blood Pressure Measurement in Humans. A Statement for Professionals from the Subcommittee of Professional and Public Education of the American Heart Association Council on High Blood Pressure Research. Circulation 2005;111:697-716.
- Million Hearts website
(<http://millionhearts.hhs.gov/resources/toolkits.html#bpToolkit>)
- American Heart Association website (<http://www.heart.org/HEARTORG/>)
- Washington State Department of Health. How to Check Your Blood Pressure. Available at: <http://here.doh.wa.gov>



Washington State Department of Social and Health Services

Please Take Our Survey



<https://www.surveymonkey.com/r/9N6VI2P>

We welcome your feedback and suggestions!



Join Us Next Month



- Thursday, June 9, 2016
- 9:00 AM – 10:30 AM
- **Topic: Long Term Services and Supports: Part 2 – Discharge Resources**

– Make your reservation now at:

<https://attendeegotowebinar.com/register/605190261531158273>





Certificate of Completion

Hypertension and Cardiovascular Disease

presented by Cheryl Farmer and Sara Eve Sarliker
Washington State Department of Health
Lacey, Washington

Webinar aired on: June 9, 2016 in Lacey, Washington
for Health Home Care Coordinators and Allied Staff

Training Credit of 1.5 Hours

Please sign and date to attest that you attended this webinar

Your Signature Date

Supervisor's Signature Date



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Post Webinar Discussion

1. Do you work with clients with uncontrolled high blood pressure?
2. As a result of this webinar do you feel more comfortable discussing the importance of frequent and accurate blood pressure measurement ?
3. Has your client included any short term goals and action steps related to their heart disease or blood pressure? Do you think you might suggest this when the client revises their HAP?
4. Do you know of any educational resources in your community that can help your clients better control their blood pressure and manage their chronic heart disease?

