Self-Monitoring Blood Pressure Program Step-by-Step Implementation Guide

Everything you need to know about starting a self-monitoring blood pressure program in clinical practice

Developed in collaboration with Nevada Health Centers, the Nevada Division of Public and Behavioral Health, and the Southern Nevada Health District

“This publication was supported by the Nevada Division of Public and Behavioral Health through Grant Number 6 NU58DP0004820 from Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Division or the Centers for Disease Control and Prevention.”
# Contents

Executive Summary ........................................................................................................................................... 3

Engaging Patients in Hypertension Self-Management ............................................................................. 4

Burden of Hypertension ............................................................................................................................... 5
  • Prevalence and Hypertension Control ....................................................................................................... 5

Self-Monitoring Blood Pressure ................................................................................................................ 6
  • Definition and Clinical Indications ............................................................................................................. 6

Action Steps for Clinical Care Providers .................................................................................................. 7
  • Integration of Community Health Workers ............................................................................................. 9

Elements of a SMBP Program in Patient Care ............................................................................................ 10

Guidelines for Diagnosis, Patient Interaction, Documentation, and Management ................................ 12
  • Patient Selection Criteria and Enrollment Process .................................................................................. 12

Selection Criteria for Home Blood Pressure Monitor ................................................................................ 15

Self-Monitoring Blood Pressure Techniques ............................................................................................. 17
  • Steps to Obtaining an Accurate Blood Pressure ..................................................................................... 17
  • Blood Pressure Measurement Protocol .................................................................................................. 18

Conclusion ...................................................................................................................................................... 20

References ..................................................................................................................................................... 21

Health Care Provider Resources .................................................................................................................. 22
  • Steps to Obtaining an Accurate Blood Pressure ..................................................................................... 23
  • Taking Blood Pressure Manually ............................................................................................................ 27
  • What the Readings Mean .......................................................................................................................... 28
  • High Blood Pressure Algorithm ............................................................................................................. 29

Patient Resource Materials ........................................................................................................................ 32
  • What You Need to Know About High Blood Pressure ........................................................................... 33
  • Supporting Your Loved One with High Blood Pressure (English/Spanish) ........................................... 35
  • I Will Take My Meds Commitment Card ................................................................................................. 39
  • A Journal to Help You Manage High Blood Pressure .......................................................................... 41

Appendix A: Clinical Competency Patient Self-Measured Blood Pressure (SMBP) at Home .......... 61
Appendix B: Monthly Blood Pressure Log .................................................................................................. 62
Appendix C: Self-Monitoring Blood Pressure Enrollment Form ............................................................... 63
Appendix D: How to Measure Blood Pressure Accurately at Home .......................................................... 64
Executive Summary

The Southern Nevada Health District, in collaboration with Nevada Health Centers and the Nevada Division of Public and Behavioral Health, is committed to providing quality health care services to the community aimed at eliminating health care disparities across all racial/ethnic groups. Heart disease and stroke are both leading causes of death in the United States and Nevada. In the United States, one out of every three deaths is caused by heart disease or stroke. The prevalence and cost of heart disease and stroke are expected to significantly increase over the next two decades. Eighty percent of heart disease is preventable. There are modifiable risk factors that increase the risk of heart disease: tobacco use, lack of physical activity, obesity or overweight, high blood pressure, and high cholesterol.

This Self-Monitoring Blood Pressure (SMBP) Program guide for clinicians is a clinical support resource for implementation with patients at-risk for or diagnosed with hypertension. One in three American adults diagnosed and receiving treatment for high blood pressure do not have it under control. Self-monitoring blood pressure programs help empower patients to make hypertension control a priority.

In 2017 the American Heart Association and American Medical Association developed new hypertension guidelines. The new hypertension guidelines suggest providers emphasize self-monitoring for high blood pressure diagnosis, treatment, and management. Appropriate management of hypertension helps reduce mortality rate of stroke and coronary heart disease. Studies indicate a majority of patients with hypertension reported facing challenges to achieving their treatment goals. The factor that is known to be a cause of uncontrolled hypertension is patients’ lack of adherence to a therapeutic treatment regimen. Self-monitoring blood pressure interventions support patient adherence to prescribed treatment regimens. Patients involved in SMBP management become aware of their blood pressure levels and actively engage in a treatment plan.

Clinicians can help to improve self-monitoring outcomes by providing training to patients on how to accurately monitor their blood pressure at home. This guide describes methods to implement and facilitate a successful SMBP management program with adequate clinical support and tools.
**Engaging Patients in Hypertension Self-Management**

The Self-Monitoring Blood Pressure (SMBP) Program is one strategy that can help reduce the risk of death or disability in patients with uncontrolled hypertension. Patients identified by clinicians as having uncontrolled hypertension could be considered for further clinical interventions. SMBP is a tool designed for health care professionals to actively engage patients in blood pressure self-management. The program is sometimes referred to as, “home blood pressure monitoring” or “self-measured blood pressure monitoring.”

*Patients enrolled in the SMBP program measure their blood pressures at home, record the results, and discuss them with their provider during their appointments. This program helps manage high blood pressure and reduce the risk of heart disease and stroke, while allowing the patient to be actively involved in their health care.*

This comprehensive guide provides action steps and resources for clinicians who want to make hypertension control a priority in patient care. Implementation of a SMBP includes regular measurement of blood pressure conducted by the patient outside of the clinical setting. The patient-obtained measurement is not intended to replace clinical implications or clinical judgement. The clinical concept of a SMBP program entails the following elements:

- Integration of a SMBP in clinical practice
- Training health care support team on patient engagement and education
- Guidance on selecting a reliable self-monitoring blood pressure device
- Identify current health insurance coverage for SMBP or institute blood pressure monitor loaner program
- Suggestions for program evaluation and patient blood pressure management tracking.

The elements detailed in this guide will describe clinician action steps that can facilitate effective implementation of the SMBP. The core components include clinical support interventions, resources to empower patients to actively participate in their health care, and SMBP preparation and techniques for accurate blood pressure readings.
The Burden of Hypertension

Prevalence and Hypertension Control

Hypertension is also referred to as high blood pressure. Blood pressure is the pressure of the blood against the walls of the blood vessel as it moves through the body. Blood pressure readings vary throughout the day, but if it is consistently elevated, it can lead to serious health problems. Even small elevations in blood pressure increase the risk for cardiovascular disease and mortality. The risk of stroke doubles for every 20mmHg increase in systolic blood pressure (SBP) or 10 mmHg increase in diastolic blood pressure (DBP). An estimated 70 million adults (29 percent) are diagnosed with hypertension. The burden of hypertension contributes to many major health conditions including heart failure, heart attack, kidney disease, stroke, and several other chronic conditions.

The costs from health care services, medications, and missed days of work due to high blood pressure, costs the country $48.6 billion each year. In the United States, an estimated 86 million adults (about 1 in 3) have high blood pressure and for nearly half of those people blood pressure is uncontrolled. This population of people with uncontrolled blood pressure represent a prime group of patients for whom clinicians could recommend further clinical interventions, including SMBP to help manage their blood pressure.

Figure 1. Adapted from Centers for Disease Control and Prevention. Self-Measured Blood Pressure Monitoring: Action Steps for Clinicians. Atlanta, GA: Centers for Disease Control and Prevention, US Dept. of Health and Human Services; 2014.
Self-Monitoring Blood Pressure

Definition and Clinical Indicators

Self-Monitoring Blood Pressure (SMBP) is a blood pressure measurement performed by the patient outside of a clinical setting at the home or elsewhere. The patient uses an approved blood pressure measurement device to obtain self-measured blood pressure readings. This clinical-based intervention is an alternative approach to monitoring blood pressure in a traditional office setting that could improve blood pressure control, making it more convenient and accessible for patients. SMBP also helps clinicians improve the accuracy of a hypertension diagnosis in their patients, as it gives the clinician the opportunity to assess whether the patient’s anti-hypertensive treatment regimen is effectively managing their blood pressure. If clinicians identify the uncontrolled readings, they can respond quickly to modify treatment. Additionally, it is recommended that physicians confirm a potential diagnosis of hypertension through the utilization of out-of-office blood pressure measurements. Research estimates that up to 35 percent of people experience a phenomenon known as White-Coat Hypertension in their doctor’s office, which is characterized by elevated blood pressure readings that are higher than when compared to readings taken outside of the doctor’s office, due to anxiety experienced in a medical environment. SMBP is known to be effective in certain patient priority groups, including those at risk for or diagnosed with White-Coat Hypertension, the elderly, people with chronic conditions such as diabetes or chronic kidney disease, and pregnant women. Patients who engage in SMBP have the opportunity to take an active role in their care and learn ways to manage their blood pressure.

Studies show that SMBP:

- Improves blood pressure control when patient care is personalized in conjunction with clinical interventions.
- Patient data is used for subsequent office visits to accurately determine if their blood pressure is self-managed.
- Increase accuracy rates for providers diagnosing hypertension.
- Increases patient engagement; patients engaged in care are more likely to adhere to their prescribed treatment regimen.
- Improves provider patient interaction, there is immediate action to address elevated blood pressure readings.
- Encourage providers to follow treatment protocols to help patients adhere to treatment manage blood pressure to bring BP within normal levels.
Engagement of Clinical Care Team to Support SMBP

Integrating a SMBP in clinical practice delivers measurable outcomes with positive benefits for patients and providers. Clinicians are essential to the extensive implementation of SMBP. Direct clinician involvement and support is critical for empowering patients, educating them on correct measurement techniques, monitoring home readings, and providing timely follow-up care for medication titrations and lifestyle modifications. Effective communication with patients and a system for managing and evaluating their self-measured blood pressure plays an integral part of the success of a SMBP.

This guide provides a comprehensive plan and resources for clinicians who want to support SMBP in their clinical practice and prioritize hypertension control. Figure 1 documents evidence-based strategies adopted from Million Hearts Action Guide illustrates how to implement a comprehensive SMBP initiative.

Strategies are organized into three action step categories:
- Care teams support SMBP
- Integrate clinical support systems
- Empower patients to use SMBP

By adopting these strategy types into clinical practice, clinicians can implement a seamless SMBP program part of a routine clinical support intervention for patients with hypertension.

Figure 2. Strategic Steps to Implementing a Comprehensive SMBP Program
Clinicians should identify and train clinical care staff for the specific roles and responsibilities of training and educating patients on SMBP. At least one medical assistant or community health worker per designated clinician on duty and one alternate trainer in the office to assist as needed is recommended. Development of a standardized training and assessment on measuring blood pressure accurately is also critical. Implementing competency level assessments will help demonstrate that staff can effectively facilitate SMBP skills to teach patients how to perform accurate blood pressure measurements at home.

Attached in Appendix A is the competency form checklist. Assessment protocol:

- Screen competencies at least twice a year.
- Complete form with name of employee and the trainer.
- Conduct a step-by-step assessment and determine if the employee follows the procedures correctly.
- Trainers place a check mark in either column labeled “Meets competency” or “Needs more training.”
- Document the “Method of validation” by:
  - If the trainer performs the procedure and the employee then models the procedure, write “RD” for the return demonstration in a simulated patient setting.
  - If the trainer is observing the employee demonstrate the procedure while providing direct patient care, write “PC” for direct patient care observation.
- The employee and trainer should sign and date the competency form.
- Place the competency form in the employee’s training file.

** Modifications to the clinical competency evaluation form are encouraged to fit local practice or health center.**
Integration of Community Health Workers in SMBP

A community health worker (CHW) is a trusted member of the community or has an unusually close understanding of the community served. CHW’s are trained to serve as frontline public health workers to bridge the gap between communities and the health care system.

They establish a trusting relationship with community members to advocate on behalf of the people and communities served. As community liaisons, they are uniquely positioned to facilitate change to improve access to services, quality of care, and deliver culturally appropriate health education and services. CHWs help strengthen clinical and community linkages aimed to build individual and community capacity by increasing health literacy and self-sufficiency through various activities such as outreach, community education, informal counseling, social support, and advocacy.10

The community health worker model was designed to conduct community-based interventions and activities that promote optimal health, manage risk factors and prevent cardiovascular disease, and reduce health disparities. The peer-on-peer approach is found to be effective in improving health outcomes, as well as to promote and eliminate barriers to managing chronic disease. CHWs engage in a team-based care model where they work with patients and clinical care staff to help improve blood pressure outcomes.

CHWs may implement one or more of the following models of care for hypertension control:

- Delivery of intervention by trained CHWs
- Regular one-on-one counseling and tracking of SMBP readings
- Patient-clinician communication via a “feedback loop” by working with clinicians to support a customized treatment plan based on patients’ reported readings
- Patient navigator by directing individuals to additional clinical support services or community resources
- Patient engagement, enrollment, and training participants in SMBP
- Screening and health education for risk factors and promoting health behavior change
**Elements of a SMBP Program in Patient Care**

Clinical support is key to the success of a SMBP intervention for patient care. SMBP interventions have successfully lowered blood pressure in patients with elevated blood pressures. Delivery of the intervention is monitored by trained clinical staff such as Nurse Practitioners, Health Educators, Medical Assistants, and Physician Assistants. Regular patient communication to monitor SMBP readings is vital to helping patients learn how to consistently control their blood pressure. Integration of a patient “feedback loop” is essential in which provider support and advice are customized according to the patient’s needs and reported readings providers must develop is essential. Additionally, there is a need to develop a secure feedback loop that aligns with the Health Insurance Portability and Accountability Act (HIPAA) regulations. Health care providers can then incorporate patient data into the clinic’s Electronic Health Record (EHR) system will allow the tracking of regular communication of SMBP readings and ensure timely treatment advice and modifications made between patients and clinicians.

Develop secure portals with the ability to:
- Transmit patient SMBP readings to clinicians
- Request medication refills
- Create follow-up appointments
- Use secure messaging to contact clinical care team members
- Provide visit summaries with instructions for patients after they leave the clinic

### Health Information Technology (HIT) Provider Resources

<table>
<thead>
<tr>
<th>Provider Resource</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>NextGen. Patient Portal</td>
<td><a href="https://www.nextmd.com/ud2/Login/Login.aspx">https://www.nextmd.com/ud2/Login/Login.aspx</a></td>
</tr>
<tr>
<td>Microsoft HealthVault</td>
<td><a href="http://bit.ly/1sL0wBo">http://bit.ly/1sL0wBo</a></td>
</tr>
<tr>
<td>HealthIT.gov.Patient Portal Increases Communication Between Patients and Providers</td>
<td><a href="http://go.usa.gov/1fhR">http://go.usa.gov/1fhR</a></td>
</tr>
<tr>
<td>U.S. Department of Health and Human Services Summary of the HIPAA Privacy Rule</td>
<td><a href="http://go.usa.gov/fbhd">http://go.usa.gov/fbhd</a></td>
</tr>
</tbody>
</table>
Figure 3. Illustrates the clinical support feedback loop between patients and clinicians in SMBP

SMBP Readings
Lifestyle behaviors (e.g. smoking, diet, inactivity)
Treatment (medication adherence, barriers, side effects)

Adjustments to medication type and dose to achieve goal blood pressure
Additonal clinical support for community resources and referrals to support patient controlling blood pressure

Acknowledge variables that affect blood pressure control
Suggest lifestyle modifications
Action steps to adhere to treatment
Patient Selection Criteria and Enrollment Process

For patients who exhibit consistently elevated blood pressure readings in the office and/or are at-risk for diagnosis of hypertension, self-monitoring blood pressure (SMBP) can be beneficial in recognizing white coat hypertension or true hypertension. Patients encounter white coat hypertension when their blood pressure is persistently elevated in the doctor’s office but blood pressure readings outside of the clinical setting are within normal range. Some patients can experience masked hypertension. Masked hypertension occurs when office blood pressures are normal, but out-of-office readings are elevated. This type of hypertension is considered dangerous, as the patient’s high blood pressure remains undetected and left untreated.

To detect masked hypertension in a patient or confirm diagnosis in a patient who exhibits elevated blood pressure readings in the office, it is best to have records of multiple readings over time. Clinicians compare readings due to the significant variability of the patient’s blood pressure readings over time. Implementation of a SMBP at home is widely accepted, and there is one protocol commonly used in guidelines.

Accurate diagnosis is based on the following criteria:

- Patient engages in self-measured blood pressure using a validated automated upper arm device and takes two readings (one minute apart) once in the morning and once in the evening over the course of at least four days.
- Clinicians take a cumulative average of all the measured systolic and diastolic blood pressures into a single average systolic and single average diastolic blood pressure.
- If the patient’s average systolic blood pressure (SBP) >135 mm Hg or diastolic blood pressure (DBP) >85 mm Hg then the patient meets the criteria for having hypertension.
- To confirm diagnosis of white coat hypertension or masked hypertension, the clinician can prescribe a 24-hour ambulatory blood pressure monitoring (ABPM) after implementing the SMBP method.
Patient Interaction – Communication

Clinicians are encouraged to discuss with patients the importance of effectively managing high blood pressure. Patients enrolled in SMBP learn to understand the link between measuring BP and controlling BP. The program empowers patients to take an active interest to appropriately control their BP instead of overmanaging based on a single reading. Patients are advised to adhere to strategies intended to manage hypertension, such as lifestyle and dietary modifications and medication.

At enrollment patients are informed of the methods preferred to communicate at-home readings back to clinical staff for interpretation and monitoring. Provide patients with a protocol to follow in the event of a concerning blood pressure reading, in the case the office is closed or not available to respond immediately. Blood pressure readings can be communicated back to the clinical care team in a multitude of ways:

- Instruct patient to report measurements by phone to the assigned clinical staff member.
- Instruct patient to fax or scan the blood pressure log to the office using a secure fax number.
- Instruct patient to log the measurements online through the physician office’s secure patient portal.
- Instruct the patient to log the measurement through a secure online tool, such as the American Heart Association’s Heart360 tool (heart360.org) or smartphone application.
- If the blood pressure devices include a memory storage feature, instruct the patient to bring the device to the office for clinical staff to review or download.
- Instruct the patient to schedule a follow-visit with physician upon completion of the home monitoring period is completed.

Patient Tracking – Documentation

Clinicians are advised to calculate the average blood pressure measurements performed by the patient using the complete log of readings reported to the office. The measurements should be averaged into a single reading that will be used to determine a diagnosis and/or guide treatment regimen. Once the clinician reviews the patient’s blood pressure reading log, document the average result in their medical records.

In receipt of patient data consider:

- If the patient submits the data with an average calculated, verify the method used to get the average.
  - Clinicians or clinical care staff should always verify manual calculations retrieved from the patient.
- Assess electronic medical record application to determine capability to automatically calculate the average measurement.
  - The capability of an electronic medical record system will vary. Check to determine automatic capabilities or if manual calculation is required.
Patient Management

SMBP is a useful tool for patients; it could help reduce hypertension among vulnerable populations for several reasons.

► Enables clinicians to improve disease management and better diagnose patients who exhibit elevated blood pressure measurements.
► Provides a history of blood pressure measurements over time; patients have a limited number of office visits.
► Improves treatment regimen and medication adherence given the evaluation of multiple measurements over time lead to accurate diagnosis of hypertension.
► Provides clinicians with a comprehensive overview of how well the patient is adapting to lifestyle changes such as diet and exercise.
► Clinicians gain insight on how well the medicines are working to control the patient’s high blood pressure outside of the office.
Selection Criteria for Home Blood Pressure Monitor

Home blood pressure monitors and cuffs used for SMBP range from manual (auscultatory) devices to partially or fully automated (oscillometric) devices. The use of automated devices is easy to use, requiring less skill to operate in comparison to the manual devices. Automated devices are widely available, and likely reduce error in home blood pressure measurements. Automated device types range from upper arm, wrist, and finger monitors, of which upper arm devices are recommended by the American Heart Association (AHA).

Choosing a blood pressure monitor

Patients purchasing their own blood pressure monitor for home should expect to pay in the range of $50 to $100 for the recommended upper arm blood pressure monitor. Patients are advised to use the upper arm blood pressure monitor for accuracy of measurement. The use of wrist cuffs is acceptable as an alternative for patients with a large arm circumference or who have difficulties using upper arm cuffs. The blood pressure reading from the wrist cuff is less accurate and may be inconsistent with the more accurate upper arm cuff measurement.

Prior to implementation of the SMBP, patients are encouraged to bring their blood pressure monitoring device in for comparison with in-office readings administered by clinical care staff. Clinicians can use this time to answer questions and educate patients about proper techniques used to blood pressure devices.

Selecting the best blood pressure device, consider a blood pressure monitor certified by one of these organizations:
- Association for the Advancement of Medical Instrumentation
- British Hypertension Society
- European Society of Hypertension

Learn more about certified monitors visit http://tinyurl.com/mxuvn7v
### Recommended Characteristics of Home Blood Pressure Monitor

<table>
<thead>
<tr>
<th>Recommended</th>
<th>Not Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automated</td>
<td>Manual</td>
</tr>
<tr>
<td>Upper arm cuff (if patient’s arm circumference is too large – wrist device with adequate technique is acceptable)</td>
<td>Wrist Cuff*</td>
</tr>
<tr>
<td>Properly sized cuff</td>
<td>Too-large or too-small cuff</td>
</tr>
<tr>
<td>Memory storage capacity (at least 30 BP readings)</td>
<td>No memory storage</td>
</tr>
<tr>
<td>Printing capacity</td>
<td>No printer</td>
</tr>
<tr>
<td>Ability to upload BP readings to computer or other electronic device</td>
<td>No ability to upload</td>
</tr>
<tr>
<td>Accuracy checked by clinician after purchase</td>
<td>Patient uses monitor without consulting clinician</td>
</tr>
</tbody>
</table>

### Recommended cuff sizes for accurate measurement of blood pressure

<table>
<thead>
<tr>
<th>Arm Circumference</th>
<th>Cuff Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>22 to 26 cm</td>
<td>12x22 cm (small adult)</td>
</tr>
<tr>
<td>27 to 34 cm</td>
<td>16x30 cm (adult)</td>
</tr>
<tr>
<td>35 to 44 cm</td>
<td>16x36 cm (large adult)</td>
</tr>
<tr>
<td>45-52 cm</td>
<td>16x42 cm (extra-large adult)</td>
</tr>
<tr>
<td>&gt; 52 cm/20.5in</td>
<td>Wrist cuff</td>
</tr>
</tbody>
</table>

*Most devices have variable size cuffs that will fit majority of arms from the small adult to large adult range. Review devices specifications for the range of arm circumference covered to reduce error in blood pressure measurement, by use of an improperly sized cuff.*
Step-by-Step Implementation Guide

Self-Monitoring Blood Pressure Techniques

Steps to Obtaining an Accurate Blood Pressure

Patients are trained to follow certain steps to help obtain an accurate blood pressure measurement. The clinical care staff will give patient participants instructions on how frequently to take blood pressure readings. Patients are advised to adhere to the advice of their doctor. Typically, patients will perform two blood pressure measurements in the morning and two more in the evening for a duration of one to two weeks. Plan to have patients track readings and review their results with their clinician, clinical care staff, or community health worker. The clinician will decide the method of communication between them and the patient and may elect to communicate over phone, during an office visit, or using the patient portal on a computer accessible to the patient.

To measure blood pressure accurately, it is important that the patient follows certain steps to ensure the most accurate reading. Have patients follow these guidelines to help make sure that blood pressure is measured correctly every time. Sometimes, patients share monitors with multiple users in the home; advise patients to follow the manufacturer’s instructions for switching the user.

Steps to prepare to measure blood pressure:

- Have patient measure their blood pressure prior to taking their medication in the morning and evening.
- Avoid exercise, caffeine, alcohol consumption, and decongestants 30 minutes before blood pressure measurement.
- Do not smoke cigarettes within in 30 minutes of measuring blood pressure.
- Use the bathroom if needed.
- Rest in a comfortable sitting position for five minutes, do not cross legs or ankles. Both feet should be flat on the floor.
- Sit in a chair with both feet flat on the floor and back supported against the chair.
- Refrain from talking, reading, or watching television while blood pressure is taken.

Correct posture for measuring blood pressure:

- Rest in a comfortable sitting position for five minutes.
- Do not cross legs or ankles.
- Position both feet flat on the floor.
- Rest with back supported against the chair.
- Rest arm supported on a table or another flat surface positioned at heart level. Arm should stay stretched out and relaxed. The patient should remain still while blood pressure is taken.
- When patient is ready to take blood pressure, ask the patient to press the button to start the device. The cuff will inflate and slowly deflate by itself.
After the machine has stopped measuring blood pressure:

- The machine will display the patient’s blood pressure reading. The two numbers on the display represent the systolic blood pressure (top number) and diastolic blood pressure (bottom number). Record the date, time, and result of the blood pressure reading if the machine does not have internal storing capabilities.
- The device should be stored in a safe and dry place.
- Patients are advised to follow the guidelines instituted by the provider or clinical care team provided for reporting blood pressure readings. Instruct them to track readings on a written log or blood pressure machine for review at their next doctor’s office visit.

For additional information on accurately taking blood pressure, see Appendix D “How to Measure Blood Pressure Accurately at Home” handout.

**Blood Pressure Measurement Protocol**

To help clinicians manage patients with uncontrolled blood pressure, the use of SMBP readings can help assess the effects of antihypertensive treatment, medication changes, and lifestyle modifications. Clinicians should routinely monitor blood pressure measurement technique protocols and conduct retrain when needed, or trainings at regular intervals. Additionally, clinicians should monitor care team staff competency in several aspects of accurate measurement technique. According to the international guidelines, optimal protocol for obtaining an accurate history of a patient’s blood pressure should include:

- Instructing the patient to take two or three measurements, each one minute apart, in the morning and again in the evening.
- Suggesting that the patient monitor their blood pressure for seven days; minimum of three days.
- Clinician should calculate average measurements based on patients recording log.
## Blood Pressure Variability

<table>
<thead>
<tr>
<th>Factor</th>
<th>Systolic (mmHg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cuff too small</td>
<td>10-40 ↑</td>
</tr>
<tr>
<td>Cuff over clothing</td>
<td>10-40 ↑ or ↓</td>
</tr>
<tr>
<td>Back/feet unsupported</td>
<td>5-15 ↑</td>
</tr>
<tr>
<td>Legs crossed</td>
<td>5-8 ↑</td>
</tr>
<tr>
<td>Arm tense</td>
<td>15 ↑</td>
</tr>
<tr>
<td>Not resting 3 to 5 minutes</td>
<td>10-20 ↑</td>
</tr>
<tr>
<td>Patient talking</td>
<td>10-15 ↑</td>
</tr>
<tr>
<td>Full bladder</td>
<td>10-15 ↑</td>
</tr>
<tr>
<td>Arm below or above heart level</td>
<td>10 ↑ or ↓ For every 1 cm above or below heart level, blood pressure varies by 0.8 mmHg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Factor</th>
<th>Diastolic (mmHg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arm extended and unsupported</td>
<td>Diastolic ↑ 10%</td>
</tr>
</tbody>
</table>
Conclusion

The SMBP program step-by-step guide provides a comprehensive plan outlined with strategies clinicians can integrate to support implementation for a successful SMBP program. These strategies can help clinicians empower patients to be actively engaged in the management of their blood pressure outside of the clinical setting. Clinical care team support can play an integral role in educating patients on hypertension, proper techniques to measure blood pressure accurately, and coordination of a feedback loop between clinicians and patients. The development of a SMBP program can become a regular part of clinical support in the office. Routine patient SMBP interventions are among the ways clinicians can improve outcomes and make hypertension control a priority.
References


5. CMS. Q10 Fact Sheet. http://go.use.gov/fbHC


Health Care Provider Resources

Steps to Obtaining an Accurate Blood Pressure

Taking Blood Pressure Manually

What the Readings Mean

High Blood Pressure Algorithm
• http://www.heart.org/idc/groups/heart-public/@wcm/@mwa/documents/downloadable/ucm_481453.pdf
Steps to Obtaining an Accurate Blood Pressure

- Choose the right size cuff
- Seat your patient so their back is supported
- Make sure the patient’s feet are resting on a flat surface
- The patient’s legs should be uncrossed
- The patient should not be speaking while obtaining the pressure
- Make sure your patient’s left arm is raised to heart level and supported
- Expose the patient’s bare arm
- Inflate the cuff to 160 mm Hg of pressure (only proceed higher if the patient is known to have high blood pressure)
- Place the diaphragm over the brachial artery and clear of obstruction

### American Heart Association Recommended Blood Pressure Stages

<table>
<thead>
<tr>
<th>Blood Pressure Category</th>
<th>Systolic (mm Hg)</th>
<th>Diastolic (mm Hg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Less than 120</td>
<td>Less than 80</td>
</tr>
<tr>
<td>Prehypertension</td>
<td>120-139</td>
<td>80-89</td>
</tr>
<tr>
<td>High</td>
<td>140 or greater</td>
<td>90 or greater</td>
</tr>
<tr>
<td>Stage 1</td>
<td>140-159</td>
<td>90-99</td>
</tr>
<tr>
<td>Stage 2</td>
<td>160 or higher</td>
<td>100 or higher</td>
</tr>
</tbody>
</table>
Blood Pressure Tracker - Instructions

American Heart Association recommends blood pressure levels

<table>
<thead>
<tr>
<th>Systolic (mm Hg)</th>
<th>Diastolic (mm Hg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>140-159</td>
<td>Less than 90</td>
</tr>
<tr>
<td>120-139</td>
<td>Less than 80</td>
</tr>
<tr>
<td>Normal</td>
<td></td>
</tr>
<tr>
<td>Prehypertension</td>
<td></td>
</tr>
<tr>
<td>Stage 1</td>
<td></td>
</tr>
<tr>
<td>Stage 2</td>
<td></td>
</tr>
<tr>
<td>Stage 3</td>
<td></td>
</tr>
</tbody>
</table>

Blood pressure goal:

- High blood pressure makes your heart work harder than normal.
- Stage 1: 140-159 mm Hg systolic or 90-99 mm Hg diastolic.
- Stage 2: 160 or higher.

Each time you measure, take two or three readings.

- Blood pressure higher than 180/110 mm Hg is an emergency.
- Blood pressure higher than 160/100 mm Hg is in Stage 2.
- Blood pressure higher than 140/90 mm Hg is in Stage 1.
- Blood pressure higher than 120/80 mm Hg is in Stage 0.

Instructions:

- Look at all your risk factors and give you a blood pressure goal.
- Tell your doctor what category you fall into.
- Calculate your average blood pressure.
- Record all the results.
- Remember all the readings.
- Each time you measure.

- You have diabetic or kidney disease.
- You have or had heart disease.
- You have stroke or transient ischemic attack (TIA).
- You have sleep apnea.
- You are pregnant.
- You have thyroid disease.
- You have cancer.
- You have age and African American.
- You have age and Asian/Pacific Islander.
- You have age and Native American.
- You have age and have a family history of heart disease.
- You have age and have a family history of stroke.
- You have age and have a family history of cancer.
- You have age and have a family history of diabetes.
- You have age and have a family history of kidney disease.
- You have age and have a family history of TIA.
- You have age and have a family history of stroke.
- You have age and have a family history of sleep apnea.
- You have age and have a family history of bed.
- You have age and have a family history of heart attack.
- You have age and have a family history of heart disease.
- You have age and have a family history of stroke.
- You have age and have a family history of cancer.
- You have age and have a family history of diabetes.
- You have age and have a family history of kidney disease.
- You have age and have a family history of TIA.
- You have age and have a family history of stroke.
- You have age and have a family history of sleep apnea.
- You have age and have a family history of bed.
- You have age and have a family history of heart attack.
- You have age and have a family history of heart disease.
- You have age and have a family history of stroke.
- You have age and have a family history of cancer.
- You have age and have a family history of diabetes.
- You have age and have a family history of kidney disease.
- You have age and have a family history of TIA.
- You have age and have a family history of stroke.
- You have age and have a family history of sleep apnea.
- You have age and have a family history of bed.
- You have age and have a family history of heart attack.
- You have age and have a family history of heart disease.
- You have age and have a family history of stroke.
- You have age and have a family history of cancer.
- You have age and have a family history of diabetes.
- You have age and have a family history of kidney disease.
- You have age and have a family history of TIA.
- You have age and have a family history of stroke.
- You have age and have a family history of sleep apnea.
- You have age and have a family history of bed.
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.
- Sit 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

<table>
<thead>
<tr>
<th>DATE/TIME</th>
<th>READING 1</th>
<th>READING 2</th>
<th>READING 3</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1/08 8:00pm</td>
<td>132/85 mm Hg, 81 Beats Per Min.</td>
<td>130/80 mm Hg, 70 Beats Per Min.</td>
<td>126/80 mm Hg, 72 Beats Per Min.</td>
<td>at pharmacy</td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td></td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td></td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td></td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td></td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td></td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td></td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td></td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td></td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td></td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td></td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td></td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td></td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td></td>
</tr>
</tbody>
</table>

Blood pressure higher than 180/110 is an emergency. Call 9-1-1 immediately. If 9-1-1 is not available to you, have someone drive you to the nearest emergency facility immediately.
BLOOD PRESSURE TRACKER - WALLET CARD

**INSTRUCTIONS:**

- Take your pressure at the same time each day, such as morning or evening, or as your healthcare professional recommends.
- Sit 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.
- Cut this card out, fold it and keep in your wallet for use when you are traveling or away from home.

---

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Reading 1</th>
<th>Reading 2</th>
<th>Reading 3</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Blood pressure higher than 180/110 is an emergency. Call 9-1-1 immediately. If 9-1-1 is not available to you, have someone drive you to the nearest emergency facility immediately.
Taking Blood Pressure Manually

1. **Check the condition of the device and the cuff size to ensure the reading is accurate.** A small hole or crack in any part of the device e.g., rubber tubing, bulb, valves, and cuff can lead to inaccurate results. A cuff that is too small or too big may produce an incorrect high blood pressure reading.

2. **It’s important the patient feels comfortable and relaxed.** Reassure the patient that there are no risks or complications associated with this screening.

3. **Have the patient relax and sit with their arm slightly bent on the same level as their heart and resting comfortably on a table or other flat surface.**

4. **Place the inflatable blood pressure cuff securely on the upper arm (approximately one inch above the bend of the elbow).** Make sure the cuff is touching the skin. You may have to ask your patient roll up their sleeve, or remove their arm from the sleeve.

5. **Close the pressure valve on the rubber inflating bulb, and pump the bulb rapidly to inflate the cuff.** The cuff should be inflated so that the dial reads about 30 mm Hg higher than your patient’s at-rest systolic pressure. (TIP: If at-rest pressure is unknown, inflate the cuff to 210 mm Hg or until the pulse at the wrist disappears).

6. **If using a stethoscope, place the earpieces in your ears and the bell of the stethoscope over the artery, just below the cuff.** If the cuff has a built-in stethoscope bell, be sure to position the cuff so the bell is over the artery. The accuracy of a blood pressure recording depends on the correct positioning of the stethoscope over the artery, and making sure the stethoscope bell does not rub on the cuff or the patient’s clothing.

7. **Now slowly release the pressure by twisting or pressing open the pressure valve, located on the bulb.** Some blood pressure devices can automatically control the rate at which the pressure falls, but generally the patient’s pressure should decrease about 2 to 3 mm Hg per second. Listen through the stethoscope and note on the dial when you first start to hear a pulsing or tapping sound—this is the systolic blood pressure. If you have trouble hearing the start of the pulse, you can find the patient’s systolic blood pressure by asking your patient to tell you when they can start to feel the pulse in their wrist and noting the level on the dial.

8. **Continue letting the air out slowly.** The pulsing or tapping sounds will become dulled and finally disappear. Note on the dial when the sounds completely stop—this is the diastolic blood pressure. Finally, release the remaining air to relieve all pressure on your patient’s arm.

9. **Suggest the patient write down their numbers along with the date and time.** They can use the Team Up. Pressure Down. journal to keep track. Remind the patient to take their blood pressure regularly to ensure their medications are working appropriately.
What the Readings Mean

Use this chart to help interpret blood pressure readings and provide recommendations to your patient. Remember, more than one reading is needed to accurately measure blood pressure and offer the greatest benefits.

<table>
<thead>
<tr>
<th>STAGE 2 HYPERTENSION</th>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systolic blood pressure</td>
<td>Diastolic blood pressure</td>
</tr>
<tr>
<td>&gt; (or equal to) 160 mmHg</td>
<td>&gt; (or equal to) 100 mmHg</td>
</tr>
<tr>
<td><strong>OR</strong></td>
<td><strong>OR</strong></td>
</tr>
</tbody>
</table>

Patient has hypertension and should seek medical care as soon as possible. If patient is not currently under the care of a physician, refer him/her to a primary care provider, and offer to make the call for them. If patient is currently taking hypertension medication(s), determine if he/she is adherent to the prescribed drug regimen. If adherent, make therapeutic suggestions to the patient and his/her provider to improve control. If not, determine existing adherence barriers and suggest ways for the patient to improve their compliance.

<table>
<thead>
<tr>
<th>STAGE 1 HYPERTENSION</th>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systolic blood pressure</td>
<td>Diastolic blood pressure</td>
</tr>
<tr>
<td>140-159 mmHg</td>
<td>90-99 mmHg</td>
</tr>
</tbody>
</table>

Patient has hypertension and should seek medical care. If patient is not currently under the care of a physician, refer him/her to a primary care provider. If patient is currently taking hypertension medication(s), determine if he/she is adherent to the prescribed drug regimen. If adherent, make therapeutic suggestions to the patient and his/her provider to improve control. If not, determine existing adherence barriers and suggest ways for the patient to improve compliance.

<table>
<thead>
<tr>
<th>PREHYPERTENSION</th>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systolic blood pressure</td>
<td>Diastolic blood pressure</td>
</tr>
<tr>
<td>120-139 mmHg</td>
<td>80-89 mmHg</td>
</tr>
</tbody>
</table>

Patient has an increased risk of future hypertension. Suggest that the patient make lifestyle modifications and regularly monitor blood pressure.

<table>
<thead>
<tr>
<th>NORMAL</th>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systolic blood pressure</td>
<td>Diastolic blood pressure</td>
</tr>
<tr>
<td>&lt; 120 mmHg</td>
<td>&lt; 80 mmHg</td>
</tr>
</tbody>
</table>

Encourage healthy behaviors and lifestyle modifications to keep blood pressure in normal range.

The blood pressure (BP) goal for an individual is set by utilizing a combination of factors including scientific evidence, clinical judgment, and patient tolerance. For most people, the goal is <140 and <90; however, lower targets may be appropriate for some populations such as African-Americans, the elderly, or patients with LV hypertrophy, systolic or diastolic LV dysfunction, diabetes mellitus or chronic kidney disease. Lifestyle modifications (LM) should be initiated in all patients with hypertension (HTN) and they should be assessed for target organ damage and existing cardiovascular disease. Self-monitoring is encouraged for most patients throughout their care, and requesting and reviewing readings from home and community settings can help the provider assist the patient in achieving and maintaining good control. For patients with hypertension in combination with certain clinical conditions, specific medications should be considered first-line treatments.

Suggested Medications for Treatment of Hypertension in Presence of Certain Medical Conditions

- Coronary artery disease/Post MI: BB, ACEI
- Systolic heart failure: ACEI or ARB, BB, ALDO ANTAG, thiazide
- Diastolic heart failure: ACEI or ARB, BB, thiazide
- Diabetes: ACEI or ARB, thiazide, BB, CCB
- Kidney disease: ACEI or ARB
- Stroke or TIA: thiazide, ACEI

© 2013 The Authors. Hypertension is published on behalf of the American Heart Association, Inc., by Wolters Kluwer; the Journal of the American College of Cardiology is published on behalf of the American College of Cardiology Foundation by Elsevier Inc. This is an open access article under the terms of the Creative Commons Attribution Non-Commercial-NoDerivs License, which permits use, distribution, and reproduction in any medium, provided that the contribution is properly cited, the use is non-commercial, and no adaptations or modifications are made.

2. Jaffe MG, Lee GA, Young JD, Sidney S, Go AS. Improved Blood Pressure Control Associated with a Large-Scale Hypertension Program. JAMA. 2013;310(7);699-705.
**Modification Recommendations**

**Approximate SBP Reduction (Range)**

- Reduce weight
  - Maintain normal body weight (body mass index 18.5–24.9 kg/m²)
  - 5–20 mm Hg

- Adopt DASH* eating plan
  - 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
  - Consume no more than 2,400 mg of sodium/day
  - Further reduction of sodium intake to 1,500 mg/day is desirable, since it is associated with even greater reduction in BP
  - Reduce sodium intake by at least 1,000 mg/day since that will lower BP, even if the desired daily sodium intake is 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 (e.g., 24 oz beer, 10 oz wine, or 3 oz 80-proof whiskey) per day in most men
  - 2 drinks per day in most women
  - 1 drink per day in women and lighter weight persons
  - 2–4 mm Hg

---

**Additional Recommendations**

- Consider referral to HTN specialist
  - Recheck and review readings in 2–4 weeks

- Systolic >160 or diastolic >100 (Stage 2 hypertension)
  - Two drugs preferred:
    - Lifestyle modifications and
    - Thiazide and ACE, ARB, or CCB
  - If currently on BP med(s), titrate and/or add drug from different class
  - Continue office visits as clinically appropriate

- Encourage self-monitoring and adherence to meds
- Advise patient to alert office if he/she notes BP elevation or side effects
- Continue office visits as clinically appropriate

---

**Abbreviations:**

- ACEI, angiotensin-converting-enzyme inhibitor
- ALDO ANTAG, aldosterone antagonist
- ARB, angiotensin II receptor blocker
- BB, ß-blocker
- BP, blood pressure
- CCB, calcium channel blocker
- HTN, hypertension
- MI, myocardial infarction
- SBP, systolic blood pressure
- TIA, transient ischemic attack

---

<table>
<thead>
<tr>
<th>BP at Goal?</th>
<th>Recheck and review readings in 2–4 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>Recheck and review readings in 3 months</td>
</tr>
</tbody>
</table>

*DASH, dietary approaches to stop hypertension

**Algorithm:**

- If systolic 140–159 or diastolic 90–99 (Stage 1 hypertension)
  - Lifestyle modifications as a trial
  - Consider adding thiazide

- Recheck and review readings in 3 months

- If systolic >160 or diastolic >100 (Stage 2 hypertension)
  - Two drugs preferred:
    - Lifestyle modifications and
    - Thiazide and ACE, ARB, or CCB

- If currently on BP med(s), titrate and/or add drug from different class

- Continue office visits as clinically appropriate

- Consider referral to HTN specialist
  - Recheck and review readings in 2–4 weeks

---

**Guideline:**

- Systolic <130 or diastolic <80
  - Do not consider ACE and CCB

- Systolic 140–159 or diastolic 90–99
  - Do not consider ACE and CCB

- Two drugs preferred:
  - Lifestyle modifications and
  - Thiazide and ACE, ARB, or CCB

- Systolic >160 or diastolic >100
  - Consider referral to HTN specialist
  - Recheck and review readings in 2–4 weeks

- Systolic 140–159 or diastolic 90–99
  - Consider lifestyle modifications as a trial
  - Recheck and review readings in 3 months
Patient Resource Materials

What You Need to Know about High Blood Pressure

Supporting Your Loved One with High Blood Pressure (English/Spanish)
• https://millionhearts.hhs.gov/files/TipSheet_LovedOne_General.pdf
• https://millionhearts.hhs.gov/files/TipSheet_LovedOne_Spanish.pdf

I Will Take My Meds Commitment Card

A Journal to Help You Manage High Blood Pressure
What You Need to Know

High Blood Pressure

You have the power to lower your blood pressure and live a healthy, full life. High blood pressure, also called hypertension, raises your risk for heart disease, stroke, kidney disease, and damage to your eyes. This worksheet will give you tips on how to eat less salt, check your blood pressure at home, and learn about your medicines.

Know your blood pressure numbers

What do these numbers mean?

157 / 98

Systolic (upper):
This is the amount of pressure it takes for the heart to squeeze blood to the body.

Diastolic (lower):
This is the amount of pressure when the heart is relaxed and filling with blood.

Normal blood pressure
Less than 120 and less than 80

Prehypertension
120-139 and 80-89

High blood pressure
140 or higher or 90 or higher

Write your recent numbers here: _____ / _____

Eat less salt

Eating less salt can help lower your blood pressure. Salt is also called sodium on food labels. Try to eat no more than 1500mg of sodium a day. 1 teaspoon of salt has 2300mg of sodium. Don’t add salt to food while cooking or eating.

How to read a food label:

1. Look at the serving size and servings per container. This can has 2 servings.
2. Look at the mg of sodium. In this can, a 1 cup serving has 400mg of sodium. This whole can has 800mg of sodium.

Check off the things you will do:

☐ Eat more fresh fruits and vegetables.
☐ Cook with fresh herbs and spices or use vinegars and lemon juice for flavor.
☐ Rinse canned foods like vegetables, beans, and tuna with water to remove salty liquid.
☐ For salads, choose oil and vinegar. When eating out, ask for dressing on the side.
☐ When shopping, choose reduced sodium, low sodium, light sodium, or sodium free foods.

Foods to avoid:

- Fast food like pizza, tacos, burritos, cheeseburgers, fries, and fried chicken
- Ham, bacon, corned beef, hot dogs, sausage, salt pork, packaged meats, and cheese
- Salty foods in cans and jars like pickles, sauces, dips, salad dressings, soups, and broths
- Packaged foods like salty snacks and chips, mixes for sauces, rice and noodle meals
- Frozen meals and foods that contain soy sauce or are marinated, smoked, or cooked in broth

Nutrition Facts

Serving Size 1 cup (246g)
Serving Per Container 2

Amount Per Serving
Calories 90
Total Fat 2g
Saturated Fat 0.5g
Cholesterol 25mg
Sodium 400mg
Total Carbohydrate 11g
Dietary Fiber 1g

Supported by educational grants from Forest Laboratories, Inc. and Novartis Pharmaceuticals Corporation

Product ID 00002001210

Copyright © 2011 Preventive Cardiovascular Nurses Association
Check your blood pressure at home

Checking your blood pressure at home will help you and your doctor or nurse see if your numbers are normal or high. Ask your doctor or nurse to help you find a home blood pressure monitor. Don’t use finger or wrist monitors. The first time you take your blood pressure at home, do it on both arms. After that, use the arm that had the highest numbers.

How to check your blood pressure:

1. Use a cuff that fits your arm (example: adult, large, or extra large). Ask your doctor or nurse what size to use.
2. Rest for 5 minutes before you take your blood pressure.
3. If you drink alcohol, smoke, or exercise, wait for 30 minutes before you take your blood pressure.
4. Sit with your back against a chair and both feet on the floor. Rest your arm on a table at heart level. Don’t cross your legs.
5. Take your blood pressure 2 times a day at the same time for 7 days. Save your numbers on the machine or write them down. Show these numbers to your doctor or nurse.

View product ratings of blood pressure monitors at www.pcna.net/patients

Learn about your medicines

Most people with high blood pressure need 2 or 3 medicines to lower blood pressure.

Your doctor or nurse may need to change your medicines to find what works best for you. This is normal.

☑ Check off the things you will do:

☐ Ask your doctor or nurse if there is a best time to take your medicines, like before or after a meal, in the morning, or at night.
☐ Always use a pill box, even if you only take 1 medicine each day.
☐ Ask your family or friends to remind you to take your medicines.
☐ Write down your medicines and always carry this list with you. Show it to your doctor or nurse at each visit.
☐ At the pharmacy, ask for bottles with large print and tops that are easy to open.
☐ If you feel bad after taking a medicine, talk with your doctor or nurse right away.
☐ Don’t stop taking your medicines until you talk with your doctor or nurse.

The Million Hearts™ word and logo marks, and the Be One in a Million Hearts™ slogan and logo marks and associated trade dress are owned by the U.S. Department of Health and Human Services (DHHS). Participation by the Preventive Cardiovascular Nurses Association does not imply endorsement by DHHS.

Supported by educational grants from Forest Laboratories, Inc. and Novartis Pharmaceuticals Corporation

Copyright © 2011 Preventive Cardiovascular Nurses Association
Supporting Your Loved One with High Blood Pressure

Set a reminder to get your loved one’s blood pressure checked—at home, at the doctor’s office, or at a pharmacy. Track results in a journal or diary that your loved one can take to health care visits.

Having the support of a friend or family member sometimes is the deciding factor for an individual struggling to manage and control high blood pressure successfully. You can make a difference.

Of the 75 million American adults who have high blood pressure, only about half (54%) of these people have their blood pressure under control. If this sounds like someone you know and love, team up with him or her to make blood pressure control your goal, too.

Here are tips on how you can help:

Start the conversation

Find out what your loved one is already doing to control their high blood pressure and what you can do to support them immediately. Ask questions like the following:

▸ What is hardest for you about controlling your high blood pressure?
▸ What is easiest?
▸ Have you set specific goals with your health care team?
▸ What can I do to help you? This might include going with you to health care visits; helping you monitor your blood pressure; reminding you to take your medications; and working together to cook low sodium meals.

Provide emotional support

▸ Be positive. Help your loved one remember that this is a marathon, not a sprint, and that control is possible.
▸ If you are concerned about your loved one, ask him or her questions.
▸ Don’t forget to take care of yourself. As a family member or friend taking care of a loved one with high blood pressure, you may experience periods of stress, anxiety, depression, and frustration. Remember, taking care of your own emotional health and physical needs helps you take care of your loved one.

Make control your goal.

millionhearts.hhs.gov
Make control your goal

Take action to help your loved one make healthy lifestyle changes for better blood pressure control. For example, you can do the following:

- Help your loved one set up a routine to take medications regularly.
  - If your loved one’s insurance provides mail order delivery, set it up and request a 90-day supply of medications.
  - If this service is not available, pick a convenient pharmacy to get all of the medications. Request that refills occur at the same time each month so your loved one can pick them all up at once.
  - Start a reminder system. Use a pillbox for every pill, every day. Or find and use a smartphone app.

- Set a reminder to get your loved one’s blood pressure checked—at home, at the doctor’s office, or at a pharmacy. Track results in a journal or diary that your loved one can take to health care visits.

- Help your loved one eat better.
  - Go grocery shopping together. Focus on more fresh fruit, vegetables, and whole grains and fewer prepared foods that have high sodium, cholesterol, saturated fat, and trans fat.
  - Help cook healthy, tasty meals at home more often. Bring home-cooked meals to your loved one.

- If your loved one smokes, help him or her quit.
  - Help your loved one identify reasons to quit.
  - Learn about and improve upon your loved one’s previous attempts to quit.
  - Suggest a quitline like 1-800-QUIT-NOW.

- Be more active with your loved one.
  - Schedule easy exercises into your daily or weekly get-togethers—even just a walk around the block is enough to get the ball rolling.
  - Keep track of your daily and weekly physical activity by using a log or diary.
  - Increase the time and intensity of your physical activity gradually as you progress.

Be positive. Help your loved one remember that this is a marathon, not a sprint, and that control is possible.
Cómo apoyar a un ser querido con Presión arterial alta

Contar con el apoyo de un amigo o familiar es a veces el factor decisivo para alguien que lucha por manejar y controlar su presión arterial alta. Usted puede ayudar.

De los 67 millones de adultos con presión arterial alta en los Estados Unidos, 16 millones saben que tienen esta afección y están recibiendo tratamiento, pero siguen teniendo la presión alta. Si esto le recuerda a algún ser querido o a alguien que usted conoce, póngase de su lado y haga que el control de la presión arterial también sea su meta.

A continuación hay algunos consejos sobre cómo puede ayudar:

Inicie la conversación

Averigüe qué está haciendo su ser querido para controlar la presión arterial alta y qué puede hacer usted para apoyarlo inmediatamente. Haga preguntas como las siguientes:

► ¿Qué es lo que te resulta más difícil para controlar la presión arterial alta?
► ¿Qué es lo más fácil?
► ¿Has establecido metas específicas con tu equipo de salud?
► ¿En qué te puedo ayudar? (Esto puede incluir acompañarte a las citas médicas, ayudarte a tomar la presión arterial, recordarte que te tomes los medicamentos, cocinar juntos comidas con bajo contenido de sodio).

Dé apoyo emocional

► Sea positivo; ayude a su ser querido a recordar que esto es una maratón, no una carrera, y que es posible controlar la presión arterial alta.
► Si está preocupado por su ser querido, hágale preguntas.
► Recuerde que usted también tiene que cuidarse. Al cuidar a un familiar o a un amigo con presión arterial alta, usted puede pasar por periodos de estrés, ansiedad, depresión y frustración. Recuerde que prestar atención a su propia salud emocional y atender sus propias necesidades físicas lo ayudan a cuidar a su ser querido.

Haga que el control sea su meta
**Haga que el control sea su meta**

Tome medidas para ayudar a su ser querido a hacer cambios saludables en su estilo de vida para controlar mejor la presión arterial. Por ejemplo, usted puede:

- **Ayudar a su ser querido a establecer una rutina para que se tome sus medicamentos con regularidad.**
- Si el seguro médico de su ser querido ofrece entrega a domicilio, programe el envío y pida que le manden medicamentos para 90 días.
- Si este servicio no está disponible, escoja una farmacia que quede cerca para conseguir todos los medicamentos. Pida que le entreguen los surtidos en la misma fecha, cada mes, para que se puedan recoger todos al mismo tiempo.
- **Establezca un sistema recordatorio: use un pastillero para cada pastilla, todos los días, o busque y use una aplicación (app) para el teléfono inteligente.**
- **Hacerse un recordatorio para que a su ser querido le tomen la presión arterial en su casa, en el consultorio del médico o en una farmacia. Anote los resultados en un diario o cuaderno que su ser querido pueda llevar a las citas médicas.**
- **Ayudar a su ser querido a alimentarse mejor.**
  - Vayan al juntos al supermercado. Compren más frutas frescas, verduras y cereales integrales, y menos comidas preparadas que tienen altos niveles de sodio, colesterol, grasas saturadas y grasas trans.
  - Ayude a cocinar en casa comidas sanas y sabrosas con más frecuencia. Llévele a su ser querido comidas hechas en casa.
- **Ayudar a su ser querido a dejar de fumar.**
  - Ayúdelo a encontrar razones para dejar de fumar.
  - Infórmese sobre los intentos que ha hecho su ser querido para dejar de fumar y trate de hacer cosas que puedan funcionar mejor.
  - Recomiéndele que llame a una línea telefónica de ayuda para dejar de fumar como 1-855-DÉJELO-YA. Seleccione la opción 2 para hablar con un representante en español.
- **Ser más activo con su ser querido.**
  - Programe hacer ejercicios fáciles cuando se vean diariamente o cada semana. Incluso salir a caminar alrededor de la cuadra es suficiente para empezar.
  - Lleve un registro diario y semanal de la actividad física en un cuaderno o diario.
  - Aumente gradualmente la duración e intensidad de la actividad física a medida que vayan avanzando.

**Million Hearts® (Un millón de corazones)** es un programa nacional que tiene como objetivo prevenir 1 millón de ataques cardíacos y accidentes cerebrovasculares para el año 2017. El programa es liderado por los Centros para el Control y la Prevención de Enfermedades y los Centros de Servicios de Medicare y Medicaid, dos agencias que pertenecen al Departamento de Salud y Servicios Humanos. La expresión Million Hearts® (Un millón de corazones), los logotipos y las imágenes asociadas son propiedad del Departamento de Salud y Servicios Humanos (HHS) de los Estados Unidos. El uso de los mismos no implica el respaldo del HHS.

**Encuentre y descargue materiales adicionales** para ayudar a su ser querido a controlar la presión arterial alta en el sitio web [Million Hearts® en español](espanol.millionhearts.hhs.gov).
QUESTIONs

to ask my doctor/pharmacist

1. What’s my medicine called and what does it do?
2. How and when should I take it? And for how long?
3. What if I miss a dose?
4. Are there any side effects?
5. Is it safe to take it with other medicine or vitamins?
6. Can I stop taking it if I feel better?

• List medicines here.
• Keep it up to date.
• Carry it with you.
• Share with your doctor/pharmacist.
• Always take your medicine as directed.

For helpful tips and resources, visit ScriptYourFuture.org today.

Million Hearts™ Team Up. Pressure Down. word and logo marks are owned by the U.S. Department of Health and Human Services (HHS). Participation does not imply endorsement by HHS.
<table>
<thead>
<tr>
<th>MEDICINE</th>
<th>WHY I TAKE IT</th>
<th>START DATE</th>
<th>REFILL DATE</th>
<th>HOW MUCH DO I TAKE?</th>
<th>WHEN DO I TAKE IT?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naproxen</td>
<td>Arthritis</td>
<td>6/1/11</td>
<td>7/1/11</td>
<td>1 tablet, 250 mg</td>
<td>twice a day</td>
</tr>
</tbody>
</table>
A JOURNAL TO HELP YOU
MANAGE HIGH BLOOD PRESSURE
Blood pressure can be controlled. Make it a team effort.

High blood pressure, also called hypertension, raises your risk of heart disease, stroke, and other serious conditions. So it’s very important to take the medication your doctor has prescribed. Those are the first steps to getting your high blood pressure under control.

You also need the support of family, friends, and health care professionals, such as your pharmacist. Your pharmacist can help answer questions about high blood pressure, your medications, and offer tips to help you maintain a healthy blood pressure.

With the help of this journal, you’ll learn how you can manage and control your high blood pressure. You will also learn what questions to ask your pharmacist or doctor if you are worried about your condition or medication. And, you’ll get tips on healthy habits that can help save your life. Use this journal on a daily basis to help you reach your blood pressure and health goals.

So team up with your pharmacist, doctor, and loved ones to get—and keep—your high blood pressure down.
What is high blood pressure? Is it really that bad?

If you have high blood pressure, you’re not alone. About 67 million U.S. adults have high blood pressure. Nearly half do not have it under control. High blood pressure, a common cause of heart attack and stroke, contributes to nearly 1,000 deaths a day.

“Blood pressure” measures the force of your blood pushing against the walls of your arteries. Your blood pressure naturally goes up and down throughout the day. If it remains high for a long time, you could have high blood pressure.

High blood pressure is unsafe because it makes your heart work harder to pump blood. This can cause damage to the arteries and makes you more likely to experience a heart attack or stroke.
What causes high blood pressure?

The causes of high blood pressure vary from person to person. Risk factors, such as smoking, alcohol, and certain medical conditions, can raise your blood pressure. For some people, certain medical conditions and medications can cause high blood pressure.

Risk factors you cannot control include:

- Family history
- Gender: Fewer adult women have high blood pressure than adult men.
- Age: Blood pressure tends to rise as people get older.
- Race/ethnicity: High blood pressure is more common among African Americans than Caucasians or Hispanic-American adults.
- Gender: Fewer adult women have high blood pressure than adult men.
- Family history: You are more likely to have high blood pressure if someone in your family has it.

Risk factors you can control include:

- Being over a healthy body weight
- Eating too much salt
- Drinking too much alcohol
- Not being physically active
- Smoking
- Too little potassium
- Diabetes
- Stress

For some people, certain medical conditions can cause high blood pressure. For others, habits such as smoking or drinking too much alcohol or adding too much salt to your diet can raise your blood pressure.

The causes of high blood pressure vary from person to person. Risk factors such as certain medical conditions can cause high blood pressure.

Risk factors you can control include:

- Being over a healthy body weight
- Eating too much salt
- Not being physically active
- Smoking
- Too little potassium
- Diabetes
- Stress
What are the signs of high blood pressure?

High blood pressure is also called the “silent killer,” because many people have it for years and don’t know it. Often, high blood pressure has no warning signs. By the time it is noticed, it may have already caused serious damage to the heart, blood vessels, and more.

The good news is, when discovered early, high blood pressure can be treated and controlled.

Lifestyle changes can help lower and maintain a healthy blood pressure. Staying on a healthy diet, being physically active, keeping a healthy weight, and not smoking can help you stop or delay problems related to high blood pressure. Keep in mind, the more risk factors you have, the more likely you are to get high blood pressure.
How is high blood pressure measured?

When you get your blood pressure taken by a professional, it’s helpful to know what is being measured. You should also know what it means for your health and how you can track your blood pressure regularly.

Blood pressure is when the heart fills up with blood and then relaxes between beats and fills again with blood, this is diastolic pressure. Blood pressure numbers are written with the systolic number above or before the diastolic number, such as 140/90 mmHg. It is usually measured in millimeters of mercury (mmHg).
Work with your pharmacist or doctor to learn what your numbers mean for your health. Depending on your starting level of systolic blood pressure you can, lower your risk of heart attack or stroke by bringing that number down by at least 5mmHg.

To help you picture how blood pressure works, think of water running through a garden hose.

The hose is your blood vessels, and the water running through it is your blood. Just as you need plenty of water to grow your garden, your cells need enough blood to circulate in your body to carry oxygen and other things the body needs to stay alive. If you were to turn on the water to your garden hose, you would see it flow freely from one end to the other.

Now, if you were to narrow the flow of water by squeezing or stepping on the hose, the water pressure would build up. The faucet has to “work harder” to get the water through the hose to your garden. This causes extra stress on the faucet, which could cause it to leak or break and not work correctly. Similarly, if you have high blood pressure, it is like squeezing the garden hose. This makes your heart work harder to pump blood and your blood pressure rises. The extra work your heart has to do can cause stress on your heart and lead to a heart attack or stroke.
Who takes my blood pressure?

Taking your blood pressure is easy and painless. Your doctor or nurse will take it each time you visit—and maybe more than once. It is also important for you to regularly monitor your blood pressure. Many pharmacies have blood pressure machines where you can test yourself. You can also buy an easy-to-use blood pressure monitor from your local drug store.

To get the best picture of your blood pressure, measure it twice a day for at least a week. Take it once in the morning before you take any medications and again in the evening.

It's important to take the readings at the same time each day, because your blood pressure changes during the day. Don't drink coffee or smoke cigarettes for at least 30 minutes before the test. Doing either can cause a brief rise in blood pressure.

For tips and resources, visit http://millionhearts.hhs.gov.

Here are some steps you can take to make sure your blood pressure reading is correct:

1. Sit quietly for five minutes before the test. Movement can cause a brief rise in blood pressure.
2. Do not drink coffee or smoke cigarettes for at least 30 minutes before the test. Doing either can cause a brief rise in blood pressure.
3. Be sure to go to the bathroom before the test. A full bladder can affect your blood pressure reading.
4. Sit quietly for five minutes before the test. Movement can cause a brief rise in blood pressure.

Who takes my blood pressure?
Save your numbers on the machine, write them down in the chart on the next page, or record them on the wallet card available at http://millionhearts.hhs.gov. Include the time of day and how and where the reading was taken. Take these numbers along the next time you visit your pharmacist or doctor to help him/her determine if your medications are working well.

**TIP:** Make copies of this page before you write down your first reading, so you’ll have clean copies for future use.

<table>
<thead>
<tr>
<th>DATE/TIME</th>
<th>LOCATION</th>
<th>BLOOD PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE:</td>
<td>TIME:</td>
<td></td>
</tr>
<tr>
<td>DATE:</td>
<td>TIME:</td>
<td></td>
</tr>
<tr>
<td>DATE:</td>
<td>TIME:</td>
<td></td>
</tr>
<tr>
<td>DATE:</td>
<td>TIME:</td>
<td></td>
</tr>
<tr>
<td>DATE:</td>
<td>TIME:</td>
<td></td>
</tr>
<tr>
<td>DATE:</td>
<td>TIME:</td>
<td></td>
</tr>
<tr>
<td>DATE:</td>
<td>TIME:</td>
<td></td>
</tr>
<tr>
<td>DATE:</td>
<td>TIME:</td>
<td></td>
</tr>
<tr>
<td>DATE:</td>
<td>TIME:</td>
<td></td>
</tr>
<tr>
<td>DATE:</td>
<td>TIME:</td>
<td></td>
</tr>
</tbody>
</table>

Tip: make copies of this page before you write down your first reading, so you’ll have clean copies for future use.
How is high blood pressure controlled?

For some people, making healthy changes in their lives can help lower blood pressure. For others, medication may be needed as well. If your doctor gives you one or more medications as part of a treatment plan, be sure to take them as directed. Awareness and treatment for others, medication may help lower blood pressure. Healthy changes in their lives for some people, making
Some blood pressure medications work to remove fluid and sodium (salt) from the body. Too much sodium in your diet can cause your body to hold in fluid, which can raise blood pressure.

You can reduce your sodium levels by eating less canned and processed foods, ordering healthy meals when you eat out, and seasoning your food with herbs and spices instead of salt.

Other medications slow your heartbeat and relax blood vessels to improve blood flow. Your doctor will prescribe the type of medication that is best for you.

It is unlikely that you will have serious side effects from blood pressure medications. If you do have side effects that are troubling or don’t go away, be sure to talk to your pharmacist or doctor right away before you stop taking your medications as prescribed. They may change the dose or give you a different medication that will work better for you.
Your pharmacist can help you manage your high blood pressure.

Did you know that your pharmacist can answer your general high blood pressure questions, and even help you take your blood pressure? Your pharmacist is not only trained to fill your prescriptions, but can help you better understand your condition and the medications you are taking.

If you are starting medication for the first time or if your treatment has changed, talk to your pharmacist. Here are some questions you may want to ask:

- What is the name of my medication? Is that the brand name or generic name?
- What is the dosage of the medication? Are there any special instructions? How will it react in my body?
- Can this medication be taken with other prescription and nonprescription medications?
- Should this medication be taken with or without food? Are there any foods or drinks to stay away from when taking this medication?
▼ What should I do if I take too much or miss a dose of this medication?

▼ What side effects should I watch for? If I contact you about possible side effects will you share that information with my doctor or do I need to contact my doctor separately?

▼ Should I make sure to stay away from certain activities while taking this medication?

▼ What time of day should I take my medication?

▼ Are there any other things (such as blood pressure cuffs, pain medication, or vitamins) that may help me manage my blood pressure?

▼ What can I do if I lose or run out of medication?

▼ Where can I find out more about this drug(s) or my condition (on the Internet or in health and medical articles)?

▼ Where on my pill bottle can I find the above information?
Notes from my talk with my pharmacist:

Questions for my pharmacist on my next visit:

It's hard to remember to get your medications. Place when you go to refill your medications. Write important information about your prescription and your pharmacy in one place. It will help you keep all the important information. List information from the label of your pill bottle(s).
Taking your medications as directed.

There are many reasons why you may not take your medications as prescribed, but remember it is very important to follow your doctor’s directions. Ask your pharmacist to remind you what your doctor told you about your prescription. Not taking your medicines as prescribed can have a serious impact on your overall health. If you are concerned about bad reactions or side effects, the high cost, or are overwhelmed by the number of medicines you have to take, talk with your pharmacist. He/she can discuss them with your doctor and together they might suggest:

- Other prescription medications or over-the-counter treatments that may have fewer side effects.
Ways to simplify your daily medication routine to cut down on the number of times a day and/or medications you take.

Generic medications available at a lower cost, or recommend a prescription assistance program to help you afford your medication.

What if I miss a day of taking my medications?

In general, missing one day isn’t serious. Ask your pharmacist what to do if that happens. Of course, it’s best to take your medication(s) regularly and establish routines like brushing every day and connecting them with your teeth.

Put “sticky notes” on the refrigerator.

Take them at the same time(s).

Keep your medications somewhere that you will see them—on the nightstand or next to your toothbrush.

Set up a buddy system with a friend or family member who also takes medications daily.

Take turns calling each other as a reminder.

If you have a computer or cell phone, set a reminder or sign up for a free service that will remind you when refill is due.

Send you a daily reminder email.

Ask your pharmacist if they have an automatic refill service or if they can call and remind you when refills are due.

If you are going on a trip, count out the number of pills you’ll need to make sure you have enough.

If you are going on a trip, count out the number of pills in case you need to tell someone about the medications you’re taking.

Make sure you take the original labeled containers of pills you’ll need to make sure you have enough.

When refills are due, refill service or if they can call and remind you when refill is due.

Keep your medications somewhere that you will see them—on the nightstand or next to your toothbrush.

Take them at the same time(s).

Put “sticky notes” on the refrigerator.

Take them at the same time(s).

Keep your medications somewhere that you will see them—on the nightstand or next to your toothbrush.
Are there natural ways to control blood pressure?

Medication is not and should not be the only way of managing high blood pressure. Lifestyle changes play a big part in controlling blood pressure—especially when combined with medication. Team up with your loved one and engage in healthy activities to reduce blood pressure. Here’s what you can do:

- **Enjoy a healthy diet.** Include plenty of fruits, vegetables, whole grains, low-fat dairy, fish, lean meats and poultry. Also make sure to get plenty of potassium. Bananas, orange juice, raisins, and baked potatoes are rich in potassium.

- **Eat a low-sodium diet.** Sodium (salt) raises blood pressure by keeping fluid in the body. Look carefully at the labels of processed foods (canned soups and frozen dinners), which are often very high in sodium. If you are 51 or older, limit sodium to 1,500 milligrams a day or less.

- **Keep your weight down.** Losing even five pounds can lower blood pressure.

- **Get moving.** Being active helps control weight and contributes to better circulation. Take quick-paced walks around the neighborhood or mall to be sure you’re getting at least 2 hours and 30 minutes of exercise each week.

- **Limit alcohol.** No more than one drink a day for women and two drinks a day for men.

- **Don’t smoke.** If you do, consider quitting.

- **Manage stress.** Learn muscle relaxation and deep-breathing skills, and get plenty of sleep.

Remember to “team up, pressure down.”

Through medication, healthy life changes, and working closely with your health care team, you can get—and keep—your blood pressure under control. That’s a message to take to heart.
Glossary

Here are some commonly used terms that relate to high blood pressure and/or your medication.

**Atherosclerosis:** The hardening and narrowing of the blood vessels when the arteries become thickened with plaque.

**Cardiovascular disease:** Refers to conditions that involve narrowed or blocked blood vessels. It can result in a heart attack, chest pain, or stroke.

**Blood pressure monitor:** A device used to measure blood pressure. It consists of an arm cuff, dial, pump, and valve.

**Diastolic blood pressure:** The pressure of the blood vessels when the heart is relaxed between beats. It is the "bottom number" in a blood pressure reading. For example, if your blood pressure is 140/90, the diastolic measurement is 90.

**Systolic blood pressure:** The pressure of the blood vessels when the heart beats or squeezes blood into the vessels. It is the "top number" in a blood pressure reading. For example, if your blood pressure is 140/90, the systolic measurement is 140.

**Heart attack:** Damage to the heart muscle from lack of blood flow for a long time.

**Heart disease:** The broad term that refers to several different types of heart conditions.

**Hypertension:** High blood pressure. Several different types of heart conditions.

**Stroke:** Damage to brain tissue from a cutoff of blood supply in the brain. The lack of blood can be caused by clots that block blood flow or by bleeding in the brain from a burst blood vessel. This can block arteries and limit blood flow.

**Blood pressure measurement:** The pressure of blood in the blood vessels when the heart beats or squeezes blood into the vessels. It consists of an arm cuff, dial, pump, and valve.

**Heart disease:** The broad term that refers to several different types of heart conditions.

**Hypertension:** High blood pressure. Several different types of heart conditions.

**Stroke:** Damage to brain tissue from a cutoff of blood supply in the brain. The lack of blood can be caused by clots that block blood flow or by bleeding in the brain from a burst blood vessel. This can block arteries and limit blood flow.
Team up with a spouse or loved one to help bring your blood pressure down.

You’re working with your doctor and pharmacist to take care of your blood pressure. But there is a key third member to your health care team: your spouse or other loved one. This person can help you with the day to day support needed to help you manage your condition, medications, and lifestyle changes.

So take out this page from your journal and have an honest talk with your team member. You can discuss the kind of support you can give each other.

Learn more how you can help at http://millionhearts.hhs.gov

Million Hearts™  @MillionHeartsUS
Team up to help keep your loved one's blood pressure down.

Your loved one needs your support to help manage his/her high blood pressure (also called hypertension). If left uncontrolled, it can lead to more serious issues including a potentially fatal heart attack or stroke. Here are some ways you can be part of the team:

▼ Help your loved one remember to take his/her high blood pressure medications as directed by the doctor. Work with him/her to set up a schedule or routine. This will help ensure medications are taken as prescribed and doses are not missed.

▼ If needed, help keep track of doctors’ visits and prescription refill dates.

▼ Help your loved one regularly check his/her blood pressure. There are blood pressure machines in the pharmacy or grocery store that are free to customers. There are also at-home monitors for purchase that allow your loved one to keep track of their numbers between visits to the doctor or pharmacist. Help your loved one take readings at the same time each day, such as morning and evening. Encourage him/her to track the readings in the journal and speak with the pharmacist or doctor if his/her blood pressure is high. The pharmacist or doctor can recommend or make changes to his/her treatment.

▼ Help your loved one with important lifestyle habits such as maintaining a healthy weight. This will help lower blood pressure and reduce risk for other health problems. Get ideas for how to encourage your loved one to engage in healthy activities in upcoming sections.

▼ Remember that as a spouse and/or loved one, you’re a key team member and source of support. Use the space below to write down any notes from your discussion with the pharmacist, or any questions you might have for them during your next visit to the pharmacy:

---

Team up with the pharmacist.

The pharmacist is also an important member of your loved one’s health care team. Talk with the pharmacist—he/she is there to help. Here are some tips on getting started:

▼ Meet the pharmacist. Go with your loved one to the pharmacy when a prescription is ready. Ask to speak to the pharmacist and let him/her know how you are part of your loved one’s health care team.

▼ Bring a list of medications. Write down a list or bring all past and current medications your loved one takes. This includes prescriptions, over-the-counter medications, and vitamins used on a normal basis. Share this list with the pharmacist. Talk with the pharmacist about any possible side effects and to make sure the medications are safe to take with each other.

▼ Ask questions. The pharmacist is an expert on medications and how they work. Refer to page 21 of your loved one’s journal for some questions to ask.

---

Million Hearts™

Team Up, Pressure Down.

Don’t forget, you, your loved one, the doctor, and the pharmacist are all on the same team. The team that will help get—and keep—your loved one’s blood pressure down.

Learn more how you can help at http://millionhearts.hhs.gov

Facebook
Million Hearts™

Twitter
@MillionHeartsUS
Appendix A: Clinical Competency

**Clinical competency:**
Patient self-measured blood pressure (SMBP) at home

Employee’s name (print): ________________________________________________________

Trainer’s name (print):  __________________________________________________________

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Meets competency (Check if “Yes”)</th>
<th>Needs more training (Check if “Yes”)</th>
<th>Method of validation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explain the purpose of SMBP to the patient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tell the patient to use the bathroom if they need to prior to measuring their blood pressure (BP)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tell the patient to rest sitting in a chair for several minutes prior to measuring their blood pressure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ensure the patient’s device has the correct cuff size</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(You may need to guide the patient to purchase a different size cuff from the manufacturer)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Show the patient how to position the cuff correctly on the arm against bare skin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(NOTE: Refer to the manufacturer’s user manual for instruction on placement of the tubing)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teach the patient proper positioning:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Seated in a chair with back supported</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Legs should be uncrossed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Feet flat on the ground or supported by a foot stool</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Arm supported with the BP cuff in place and positioned so that the BP cuff is at the level of the patient’s heart</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct the patient not to talk, use the phone, text, email or watch television during the procedure. (Also explain that no one else should be talking during blood pressure measurement.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instruct the patient to take two readings one minute apart, once in the morning and once in the evening</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Show the patient how to turn on the device and press the start button</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If an error reading occurs, direct the patient to start over</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When the cuff completes the deflating process and a reading is displayed, explain to the patient which numbers represent the systolic and diastolic blood pressure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Show the patient how to document their blood pressure on the flow sheet or wallet card</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If the device has memory capability, show the patient how to retrieve the readings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide the patient with instructions on what to do if readings show an abnormal blood pressure measurement</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments: ____________________________________________________________________________________

Employee’s signature: _______________________________ Date: ______________

Trainer’s signature: _________________________________ Date: _______________
Appendix B: Monthly Blood Pressure Log

**Monthly Blood Pressure Log**

Month ______________  Patient Name __________________________  Date of Birth ______________

*Please remember to take your blood pressure at the same time every day or as directed by your health care provider.*

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Systolic</th>
<th>High/Normal</th>
<th>Diastolic</th>
<th>High/Normal</th>
<th>Pulse</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>2nd</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>3rd</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>4th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>5th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>6th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>7th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>8th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>9th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>10th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>11th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>12th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>13th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>14th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>15th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>16th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>17th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>18th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>19th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>20th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>21st</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>22nd</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>23rd</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>24th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>25th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>26th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>27th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>28th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>29th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>30th</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
<tr>
<td>31st</td>
<td></td>
<td>High/Normal</td>
<td></td>
<td></td>
<td>High/Normal</td>
<td></td>
</tr>
</tbody>
</table>
Appendix C: Enrollment Form

Self-Monitoring Blood Pressure Enrollment Form

<table>
<thead>
<tr>
<th>Enrollee Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Patient</td>
</tr>
<tr>
<td>Date of Birth</td>
</tr>
<tr>
<td>Daytime Contact Number</td>
</tr>
<tr>
<td>Patient Email Address</td>
</tr>
<tr>
<td>Referring Provider</td>
</tr>
<tr>
<td>Clinic</td>
</tr>
<tr>
<td>Patient Medical Record Number</td>
</tr>
</tbody>
</table>

Self-Monitoring Blood Pressure Program Enrollment Agreement

1. ______________ (clinic name) will supply ______________ (monitor name) blood pressure monitor to each enrolled patient at no financial cost.
2. Patient will be trained on the proper way to obtain a blood pressure at the time of enrollment.
3. Patient agrees to record daily measurement in the AHA Check. Change. Control.® online portal tracker, unless unable, then they will maintain a written blood pressure log supplied by ______________ (clinic name).
4. Patient agrees to contact their provider immediately in the event of an issue with the blood pressure monitor. The health center will evaluate the issue and determine if a replacement monitor should be issued.
5. If after the enrollment, the patient determines they do not wish to participate, they agree to return the monitor to the health center.
6. Patient demonstrating control and compliance with this agreement will be awarded the blood pressure monitor to continue self-monitoring.

Patient Signature __________________________________________ Date ______________

For Office Use Only
BP Monitor # Issued ______________ Date Issued ______________ Agreement Scanned Date ______________
Appendix D: How to Measure Blood Pressure Accurately at Home

How to measure BLOOD PRESSURE accurately at home

PREPARE

Do not smoke, exercise, have caffeine, eat a large meal, or take a decongestant within 30 minutes before you measure your blood pressure.

If you take blood pressure medication, perform blood pressure measurement before you take your medication.

If you need to, use the bathroom before taking your blood pressure.

Find a quiet space where you can rest for five minutes and be comfortable without distraction.

POSITION

Place cuff on bare arm, just above the elbow mid-arm.

Position arm on a table at heart level.

Sit with your legs uncrossed and feet flat on the floor.

Sit in a chair, with back supported against the chair.

MEASURE

Take two blood pressure measurements, at least one minute apart.

Stay in a relaxed position between measurements.

Avoid distractions during measurements, do not talk, watch TV, use phone, computer and other devices.

Record your blood pressure reading when finished.

www.SNHD.info

www.gethealthy.clarkcounty.org