

Self Monitoring Blood Pressure

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ACC AHA 2017 Summary

BP category	Systolic BP		Diastolic BP	Treatment and follow up
Normal	<120 mmHg	And	<80 mmHg	Evaluate yearly
Elevated	120-129 mmHg	And	<80 mmHg	Implement healthy lifestyle changes; reassess in 3-6 months
Hypertension Stage 1	130-139 mmHg	Or	80-89 mmHg	Implement healthy lifestyle changes and/or BP medication depending on risk; reassess in 1 month
Hypertension Stage 2	≥ 140 mmHg	Or	≥ 90 mmHg	Implement healthy lifestyle changes and 1-2 BP medications depending on risk; reassess in 1 month

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White Coat Syndrome

Blood pressure readings taken in the office may not always accurately represent a patient's blood pressure.

White coat syndrome: A condition where a patient's blood pressure is elevated at the doctor's office but normal at their house.

It is estimated to affect 15-30% of patients with hypertension, according to the Cleveland Clinic

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Scenarios when SMBP may be appropriate

- Confirming a new diagnosis of hypertension in a patient whose blood pressure is elevated in office
- Determining the effectiveness of new blood pressure medications
- Confirming that blood pressure is uncontrolled in a patient with apparent resistant hypertension
- Confirming elevated office blood pressure in pregnant women, especially when gestational hypertension or preeclampsia are suspected

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Recommended blood pressure cuffs

The American Heart Association advises against using a wrist blood pressure cuff.

Arm blood pressure cuffs are more accurate.

Recommend to patients bringing in their home cuff to the office to calibrate.



Arm circumference (in)	Cuff size
8.7 - 10.2	Small adult
10.6 - 13.4	Adult
13.8 - 17.3	Large adult
17.7 - 20.5	Extra large adult

American Heart Association. Hypertension. 2019;73(5):e35-e66.

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Step 1: Preparation

1. Have the patient relax while sitting in a chair for >5 minutes.
2. The patient should avoid **caffeine**, **exercise**, and **smoking** for at least 30 minutes before measurement.
3. Ensure patient has emptied their bladder.
4. Remove clothing covering the location of cuff placement.



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Step 2: Proper technique

- 1. Use a BP measurement device that has been validated, and ensure that the device is calibrated periodically.
- 2. Position the middle of the cuff on the patient's upper arm
- 3. Use the correct cuff size
- 4. Use proper technique: Support the patient's arm (resting on a table), feet on floor, back supported, no talking during the reading



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Step 3: Recording measurements

Take at least 2 readings 1 minute apart each morning before medication and each evening before supper.

Obtain weekly readings 2 weeks after a treatment change and the week before a clinic visit.

Record date, time, SBP, DBP, and other notes

Blood pressure record chart

Name: _____
Address: _____

Date and time	Systolic blood pressure	Diastolic blood pressure	Comments

For heart health information 1300 36 27 87 www.heartfoundation.org.au

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	Nonpharmacological intervention	Dose	Approximate impact on SBP		Reference
			Hypertension	Normotension	
Weight loss	Weight/body fat	Best goal is ideal body weight, but aim for at least a 1-kg reduction in body weight for most adults who are overweight. Expect about 1 mm Hg for every 1-kg reduction in body weight.	-5 mm Hg	-2/3 mm Hg	(56.2-1)
Healthy diet	DASH dietary pattern	Consume a diet rich in fruits, vegetables, whole grains, and low-fat dairy products, with reduced content of saturated and total fat.	-11 mm Hg	-3 mm Hg	(56.2-6,56.2-7)
Reduced intake of dietary sodium	Dietary sodium	Optimal goal is <1500 mg/d, but aim for at least a 1000-mg/d reduction in most adults.	-5/6 mm Hg	-2/3 mm Hg	(56.2-9,56.2-10)
Enhanced intake of dietary potassium	Dietary potassium	Aim for 3500-5000 mg/d, preferably by consumption of a diet rich in potassium.	-4/5 mm Hg	-2 mm Hg	(56.2-13)
Physical activity	Aerobic	<ul style="list-style-type: none"> 90-150 min/wk 65%-75% heart rate reserve 	-5/8 mm Hg	-2/4 mm Hg	(56.2-18,56.2-22)
	Dynamic resistance	<ul style="list-style-type: none"> 90-150 min/wk 50%-80% 1 rep maximum 6 exercises, 3 sets/exercise, 10 repetitions/set 	-4 mm Hg	-2 mm Hg	(56.2-18)
	Isometric resistance	<ul style="list-style-type: none"> 4 x 2 min (hand grip), 1 min rest between exercises, 30%-40% maximum voluntary contraction, 3 sessions/wk 8-10 wk 	-5 mm Hg	-4 mm Hg	(56.2-19,56.2-31)
Moderation in alcohol intake	Alcohol consumption	In individuals who drink alcohol, reduce alcohol: to: <ul style="list-style-type: none"> Men: ≤2 drinks daily Women: ≤1 drink daily 	-4 mm Hg	-3 mm Hg	(56.2-22-56.2-24)

J Am Coll Cardiol 2018;71:e127-248.

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Medication class	Examples	Common side effects	Counseling points
Diuretics "water pill"	Hydrochlorothiazide, Triamterene, Spironolactone, Furosemide, Bumetanide	Increased urination, Dehydration, hypotension, dizziness, electrolyte abnormalities	Stay hydrated! Get labs done to check kidneys and electrolytes
ACE-Inhibitors	Lisinopril, Ramipril, benazepril, enalapril	Dry cough, increased potassium, hypotension, dizziness	Don't use in pregnancy, get labs done
ARBs	Losartan, candesartan, Olmesartan, valsartan	Increased potassium, hypotension, dizziness	Don't use in pregnancy, get labs done
Calcium Channel blockers	Dihydropyridine: Amlodipine, nifedipine Non-dihydropyridine: diltiazem, verapamil	Ankle swelling, headache, constipation, hypotension, dizziness	Watch for ankle swelling
Beta blockers	Propranolol, metoprolol, atenolol, carvedilol	Slows the heart rate, masking of hypoglycemia, hypotension, dizziness, fatigue	Don't abruptly stop taking!

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What questions do you have?

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