
HYPERTENSION INFORMATION SHEET

What is hypertension?

High or elevated blood pressure, also known as hypertension, is a common health problem worldwide. The risk of developing hypertension increases as we age. Hypertension is a significant risk factor for cardiovascular disease, a condition that over time can lead to heart attacks, strokes, congestive heart failure and chronic kidney disease.

Blood pressure is expressed as the systolic pressure (top number) over the diastolic pressure (bottom number). The systolic pressure is the pressure against the artery walls when your heart is pumping blood out. The diastolic pressure is the blood pressure when your heart muscle is relaxed and filling up with blood in between beats.

A normal blood pressure is less than 120/80. In cases of blood pressure measurements that are consistently above this range, we recommend implementing lifestyle and diet choices that have been shown to improve blood pressure. Blood pressure that is consistently at or above 140/90 is considered high and further interventions may be indicated.

Blood pressure readings are sometimes higher during medical visits than they are at other times, a phenomenon known as “white coat hypertension.” Your health care provider may recommend rechecking your blood pressure at home to further clarify your actual blood pressure levels.

Who develops hypertension?

Hypertension is common worldwide. According to the Centers for Disease Control and Prevention, about 75 million **American** adults (32%) have **high blood pressure**—that’s 1 in every 3 adults.

Risk factors for developing high blood pressure include:

- family history of high blood pressure
- obesity or overweight
- diabetes
- excessive alcohol use
- African-American descent
- use of oral contraceptives or “the pill” in some women
- certain over-the-counter drugs, such as decongestants.

What are the symptoms?

There are usually no signs or symptoms, which is why high blood pressure is sometimes known as the “silent killer.” In cases of very high blood pressure, individuals can sometimes experience headaches, lightheadedness or fatigue.

How is high blood pressure diagnosed?

- Medical office visits are needed initially for your clinician to evaluate your blood pressure and make treatment recommendations.
- Subsequent monitoring of blood pressure readings can be made during routine follow-up clinic visits or by using a home blood pressure machine whose accuracy has been confirmed by comparing to a concurrent blood pressure reading made during a clinic visit.

Do I have to take medicine if I have high blood pressure?

In the vast majority of cases, the initial treatment of elevated blood pressure involves lifestyle modifications, which center around diet, exercise, stress management, moderating alcohol use and not smoking.

Making these healthy lifestyle choices can help prevent hypertension from developing and prevent the long-term complications of chronic elevated blood pressure. If you have already been diagnosed with hypertension, these steps will help manage the condition. In cases where the blood pressure remains elevated despite lifestyle modifications, your medical provider may recommend starting a medication to treat hypertension. Less commonly, your provider may recommend starting a medication along with initiating lifestyle modifications.

Types of medications include:

- Diuretics (water pills). These are often the first choice. They help the body get rid of excess water and salt.
- Beta-Blockers cause the heart to beat more slowly and relax blood vessels.
- ACE Inhibitors, Calcium Channel Blockers, Angiotensin Receptor Blockers, and Alpha Blockers are medications that relax blood vessels to lower blood pressure.

Remember: Medication only works if you take it correctly.

How can I prevent high blood pressure, or if I have been diagnosed with high blood pressure, what other steps can I take to manage it?

If you smoke, stop. If you don't smoke, don't start: Smoking damages and constricts your blood vessels and is, by itself, a risk factor for stroke and heart disease.

If you drink alcoholic beverages, do so in moderation: Men: limit to ≤ 2 drinks per day; women: limit to ≤ 1 drink per day. Note: one drink equals $\frac{1}{2}$ oz or 15 ml ethanol (e.g., 12 oz. beer, 5oz. wine, 1.5 oz. 80-proof whiskey).

Reduce salt (sodium) intake: Try to take in less than 2.4 grams sodium or 6 grams sodium chloride per day. Some tips: Do not add salt to food at the table; reduce or eliminate use of salt in cooking; use herbs, spices and salt-free seasonings instead; cut back on frozen dinners, pizza, packaged mixes, canned soups and salad dressing with high sodium; read package labels for amount of salt (sodium) in foods.

Consider the DASH (Dietary Approaches to Stop Hypertension) diet: A diet high in fruits, vegetables and low fat dairy products has been shown to help lower blood pressure.

Lose weight: *If overweight*, losing weight often can decrease blood pressure.

Be more physically active: Exercise is a good way to control weight and manage stress. Thirty to forty-five minutes of brisk walking most days of the week can lower your blood pressure.

Manage your stress: Chronic stress can contribute to high blood pressure. Having a balanced schedule of academic classes, extracurricular activities—and—plenty of down time to relax alone or with friends is critical to your personal well being and success as a student. Make a Health and Wellness appointment with a professional health educator to learn effective stress management strategies (call 510-642-2000).

How can I work with my clinician?

Follow up with your clinician regularly until your hypertension is under control. Once it is under control, check in with your clinician every 6-12 months. Contact your clinician sooner if you develop new symptoms or have other concerns.

Suggested websites:

CDC information: <https://www.cdc.gov/bloodpressure/index.htm>

American Heart Association: <https://www.heart.org/en/healthy-living> and <https://www.heart.org/en/health-topics/high-blood-pressure>

DASH diet: <http://www.dashdiet.org>

Check our **Website:** uhs.berkeley.edu to learn more about this and other medical concerns.

For **Appointments:** etang.berkeley.edu or call 510-642-2000 For **Advice:** call 510-643-7197

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Best Proven Nonpharmacologic Interventions for Prevention and Treatment of Hypertension*

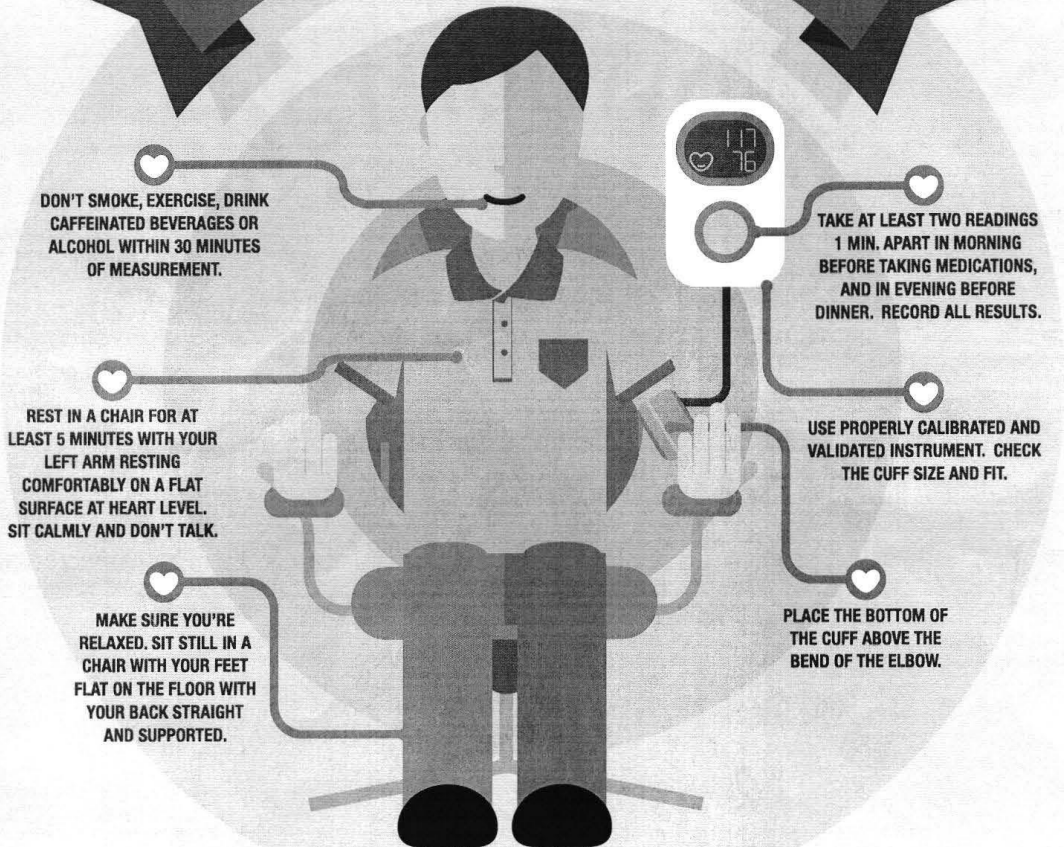
	Nonpharmacologic Intervention	Dose	Approximate Impact on SBP	
			Hypertension	Normotension
Weight loss	Weight/body fat	Ideal body weight is best goal but at least 1 kg reduction in body weight for most adults who are overweight. Expect about 1 mm Hg for every 1 kg reduction in body weight.	-5 mm Hg	-2/3 mm Hg
Healthy diet	DASH dietary pattern	Diet rich in fruits, vegetables, whole grains, and low-fat dairy products with reduced content of saturated and trans fat	-11 mm Hg	-3 mm Hg
Reduced intake of dietary sodium	Dietary sodium	<1,500 mg/d is optimal goal but at least 1,000 mg/d reduction in most adults	-5/6 mm Hg	-2/3 mm Hg
Enhanced intake of dietary potassium	Dietary potassium	3,500–5,000 mg/d, preferably by consumption of a diet rich in potassium	-4/5 mm Hg	-2 mm Hg
Physical activity	Aerobic	<ul style="list-style-type: none"> • 120–150 min/wk • 65%–75% heart rate reserve 	-5/8 mm Hg	-2/4 mm Hg
	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
	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
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

* Type, dose, and expected impact on BP in adults with a normal BP and with hypertension.

† In the United States, one "standard" drink contains roughly 14 grams of pure alcohol, which is typically found in 12 ounces of regular beer (usually about 5% alcohol), 5 ounces of wine (usually about 12% alcohol) and 1.5 ounces of distilled spirits (usually about 40% alcohol).

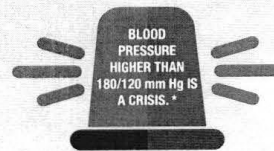
Table 15

BLOOD PRESSURE MEASUREMENT INSTRUCTIONS



American Heart Association recommended blood pressure levels

BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120-129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130-139	or	80-89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120



*Wait a few minutes and take blood pressure again. If it's still high, contact your doctor immediately.

LEARN MORE AT
HEART.ORG/HBP

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Check our **Website**: uhs.berkeley.edu to learn more about this and other medical concerns.

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