



K-STATE
Research and Extension

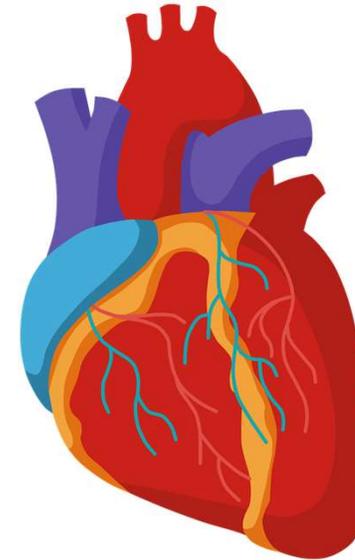


Fighting Back Against the Silent Killer

Hypertension Awareness, Prevention, and Management Strategies

What is Blood Pressure?

- When your heart beats, it pumps blood into your blood vessels (arteries and veins).
- This creates pressure against the blood vessel walls.
- This blood pressure causes oxygenated blood to flow to all parts of your body.



(AHA, [ETS Health Lesson - Control Your Blood Pressure \(empoweredtoserve.org\)](https://empoweredtoserve.org))

How is Blood Pressure Measured?

Your BP is recorded as two numbers:

Top Number = Systolic Pressure

- Indicates how much pressure your blood is exerting against your artery walls when the heart beats.
- In this example, systolic pressure is 110 millimeters of mercury (mm Hg).

Bottom Number = Diastolic Pressure

- Indicates how much pressure your blood is exerting against your artery walls while the heart is resting between beats.
- In this example, diastolic pressure is 67 millimeters of mercury (mm Hg).



(AHA, [ETS Health Lesson - Control Your Blood Pressure \(empoweredtoserve.org\)](https://www.ets.edu/health/lesson/control-your-blood-pressure))



K-STATE
Research and Extension

What is a Normal Blood Pressure Reading?

Blood Pressure Categories



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

AHA - <https://www.heart.org/en/health-topics/high-blood-pressure/understanding-blood-pressure-readings>



K-STATE
Research and Extension

When Does High Blood Pressure Become Hypertension?

- Changes throughout the day based on your activities.
- Readings consistently above normal may result in a diagnosis of hypertension.
- Only a health care team can diagnose high blood pressure and make treatment decisions.
- Guidelines used to diagnose hypertension may differ from health care professional to health care professional.



(CDC, 2021, <https://www.cdc.gov/bloodpressure/about.htm>)



K-STATE
Research and Extension

What Are the Symptoms of High Blood Pressure?

- Usually develops over time and has no warning signs or symptoms (silent killer). Many people do not know they have it.
- Measuring your blood pressure is the only way to know whether you have high blood pressure.



Symptoms of severe hypertension or hypertensive crisis can include: Flushing, blood spots in the eyes, nosebleeds, headaches and dizziness (Rishe & Holland, 2021)

(AHA, [ETS Health Lesson - Control Your Blood Pressure \(empoweredtoserve.org\)](https://empoweredtoserve.org))

Risk Factors for Developing High Blood Pressure

Non-Modifiable Risk Factors

- Family history
- Increased Age
- Male Gender
- Race
- Chronic Kidney Disease (CKD)



Understanding these risk factors can help you be more aware of how likely you are to develop high blood pressure.

(AHA, [ETS Health Lesson - Control Your Blood Pressure \(empoweredtoserve.org\)](https://empoweredtoserve.org))

Risk Factors for Developing Hypertension

Modifiable Risk Factors

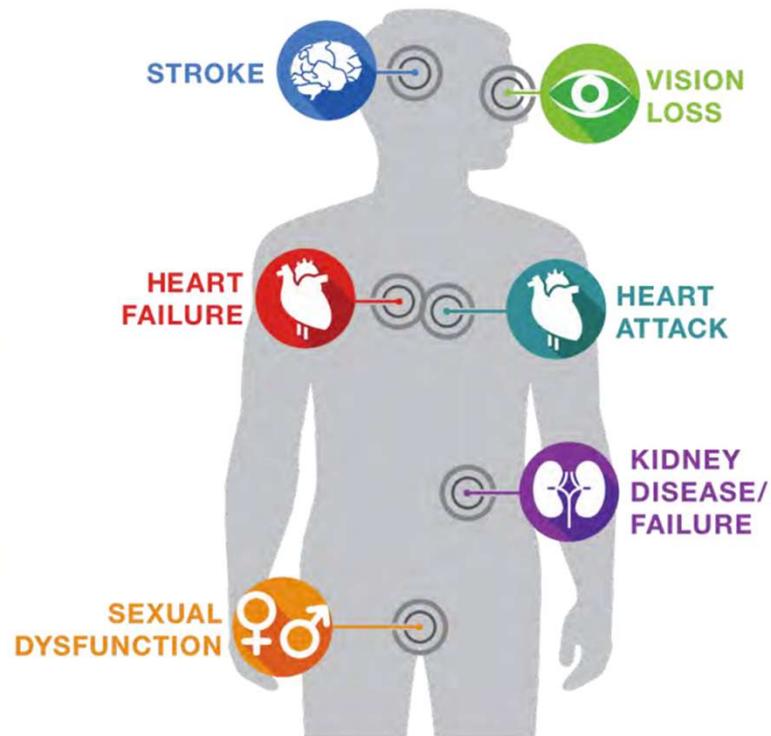
- Lack of physical activity
- Unhealthy diet, especially one high in sodium and cholesterol
- Being overweight or obese
- Drinking too much alcohol
- High cholesterol
- Diabetes
- Smoking and tobacco use
- Stress



You can change these risk factors to help prevent and manage high blood pressure.

(AHA, [ETS Health Lesson - Control Your Blood Pressure \(empoweredtoserve.org\)](https://empoweredtoserve.org))

Consequences of Hypertension



<https://www.heart.org/-/media/files/health-topics/high-blood-pressure/consequences-of-high-blood-pressure-infographic.pdf>

Did you know?

- When your blood pressure is too high for too long, it damages your blood vessels .
- When left untreated, the damage that high blood pressure does to your circulatory system is a significant contributing factor to heart attack, stroke and other health threats.
- High Blood Pressure increases the workload of your circulatory system while decreasing its efficiency.

Prevalence in Kansas Communities

- In 2021, 34.3% of adult Kansans reported being told by a health professional that they had high blood pressure (compared to 32.4% of adults nationwide).
- Most prevalent in:
 - populations who have less than a high school education.
 - Black Men.
 - Individuals over the age of 65 years.
 - Individuals who have incomes below \$25,000 per year.



(CDC, 2021 Behavioral Risk Factor Surveillance System, <https://www.americashealthrankings.org/explore/annual/measure/Hypertension/state/KS>)



Prevalence in Communities Nationwide



Over 1 in 2
African-Americans



Over 1 in 3
Asians, Pacific
Islanders



Over 1 in 3
Hispanics, Latinos



Over 1 in 4*
American Indians,
Alaska Natives

Nearly half of people with high blood pressure do not have it under control.

*AHA- Data for this population is from 2017 and may not reflect current prevalence.

(AHA, [ETS Health Lesson - Control Your Blood Pressure \(empoweredtoserve.org\)](https://empoweredtoserve.org))

Managing Blood Pressure

Making Changes that Matter:

- **Eat more nutrient-dense foods & reduce sodium intake.**
- Limit alcohol intake
- **Enjoy consistent physical activity**
- **Manage stress**
- Maintain a healthy weight
- Quit smoking
- Take your medications as prescribed
- Work together with your doctor
- **Consider self-monitoring your blood pressure.**



Even small changes will make a big difference.

(AHA, [ETS Health Lesson - Control Your Blood Pressure \(empoweredtoserve.org\)](https://www.etshealth.com/lesson/control-your-blood-pressure))

Eat More Nutrient Dense Foods

Let's focus on what you can add to your diet!

- Eat a variety of fruits & vegetables
- Whole grains – ½ of your daily intake should be high-fiber options
- Lean meats and proteins
- Eat a variety of nuts, seeds, & legumes
- Low fat dairy foods
- Focus on heart healthy fats
- Increase fluids as fiber consumption increases



(National Heart Lung and Blood Institute, 2021 <https://www.nhlbi.nih.gov/education/dash-eating-plan>)

Reduce Sodium Intake



Excess levels of sodium: How too much sodium affects your health



9 out of 10 Americans consume too much sodium.

— Where does sodium come from? —



More than **70%** comes from processed and restaurant foods



About **11%** is added while cooking or eating



More than **14%** occurs naturally

3,400 milligrams
Amount of sodium an American consumes on average in a day

1,500 milligrams
Recommended by the AHA for ideal heart health

(AHA, 2021 <https://www.heart.org/en/healthy-living/healthy-eating/eat-smart/sodium/effects-of-excess-sodium-infographic>)



Reduce Sodium Intake

Check the Package for Nutrient Claims

You can also check for nutrient claims on food and beverage packages to quickly identify those that may contain less sodium. Here's a guide to common claims and what they mean:

What It Says	What It Means
Salt/Sodium-Free	Less than 5 mg of sodium per serving
Very Low Sodium	35 mg of sodium or less per serving
Low Sodium	140 mg of sodium or less per serving
Reduced Sodium	At least 25% less sodium than the regular product
Light in Sodium or Lightly Salted	At least 50% less sodium than the regular product
No-Salt-Added or Unsalted	No salt is added during processing – but these products may not be salt/sodium-free unless stated

1 tsp salt
≈
2,300 mg
sodium



(FDA, 2022 <https://www.fda.gov/food/nutrition-education-resources-materials/sodium-your-diet>)

Reduce Sodium Intake

Nutrition Facts	
8 servings per container	
Serving size	2/3 cup (55g)
Amount per serving	
Calories	230
% Daily Value*	
Total Fat 8g	10%
Saturated Fat 1g	5%
<i>Trans Fat</i> 0g	
Cholesterol 0mg	0%
Sodium 160mg	7%
Total Carbohydrate 37g	13%
Dietary Fiber 4g	14%
Total Sugars 12g	
Includes 10g Added Sugars	20%
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 235mg	6%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Start with serving information.
This will tell you the size of a single serving and how many servings are in the package.

Check total calories.
Do the math to know how many calories you're really getting if you eat the whole package.

Limit certain nutrients.
Compare labels when possible and choose options with lower amounts of added sugars, sodium and saturated fat and no trans fat.

Get enough of beneficial nutrients.
Eat foods with nutrients your body needs, like calcium, dietary fiber, iron, potassium and Vitamin D.

Understand % Daily Value.

- The % Daily Value (DV) tells you the percentage of each nutrient in a single serving in terms of the daily recommended amount.
- To consume less of a nutrient (such as saturated fat or sodium), choose foods with a lower % DV (5% or less).
- To consume more of a nutrient (such as fiber or potassium), choose foods with a higher % DV (20% or more).

(AHA, 2021 <https://www.heart.org/en/healthy-living/healthy-eating/eat-smart/nutrition-basics/making-the-most-of-the-nutrition-facts-label>)

Enjoy Consistent Physical Activity

Benefits:

- Improve blood lipid levels (decreases the risk for heart disease & stroke)
- Weight loss & maintenance
- Improve blood pressure
- Increase confidence & mood
- Reduce depression
- Help alleviate stress
- Increase energy
- Improve sleep



(NIH, 2021 <https://www.nia.nih.gov/health/four-types-exercise-can-improve-your-health-and-physical-ability>)

Enjoy Consistent Physical Activity

Recommendation for Adults – 150 minutes per week (cardiovascular/endurance)

- Break it up into smaller amounts
- Go for a walk, walk your dog
- Brisk walking or jogging
- Yard work (mowing, raking)
- Dancing
- Swimming
- Biking
- Climbing stairs or hills
- Playing tennis or basketball



(DGA, <https://www.dietaryguidelines.gov/>)



K-STATE
Research and Extension

Enjoy Consistent Physical Activity

Recommendation for Adults – 2 times per week (strength)

- Lifting weights
- Carrying groceries
- Gripping a tennis ball
- Overhead arm curl
- Arm curls
- Wall push-ups
- Lifting your body weight
- Using a resistance band



(NIH, 2021 <https://www.nia.nih.gov/health/four-types-exercise-can-improve-your-health-and-physical-ability>)

Manage Stress

Long-term activation of your body's stress response system, may put you at risk for health issues such as:

- Digestive problems
- Anxiety/depression
- Headaches
- Sleep problems
- Weight gain
- Memory/concentration issues
- High blood pressure
- Heart disease and stroke



(AHA, 2021, <https://www.heart.org/en/healthy-living/healthy-lifestyle/stress-management/lower-stress-how-does-stress-affect-the-body>)

Manage Stress

What can you do?

- Find a friend, don't self-isolate
- Move more
- Focus on sleep hygiene
- Consider meditation
- Make an appointment to speak with a therapist



(AHA, 2021, <https://www.heart.org/en/healthy-living/healthy-lifestyle/stress-management/lower-stress-how-does-stress-affect-the-body>)

MONITOR YOUR BLOOD PRESSURE AT HOME

If you have high blood pressure, home monitoring may help your health care provider determine whether treatments are working.

Before Taking Your Blood Pressure:

- Avoid exercise, caffeine, smoking, and alcohol for at least 30 mins.
- Empty your bladder.
- Wear light or thin clothing so the cuff can get an accurate read.
- Find a quiet place to sit and relax for 5 minutes.



(AHA, [ETS Health Lesson - Control Your Blood Pressure \(empoweredtoserve.org\)](https://empoweredtoserve.org))



K-STATE
Research and Extension

MONITOR YOUR BLOOD PRESSURE AT HOME

While Taking Your Blood Pressure:

- Position feet flat on the floor and sit up straight with your back against the chair.
- Rest your BP arm on something so your arm is heart level.
- Use the same arm every time.
- Avoid looking at the numbers/monitor while taking your BP.
- Log your numbers when done.
- Share your numbers with your provider.



(AHA, [ETS Health Lesson - Control Your Blood Pressure \(empoweredtoserve.org\)](https://empoweredtoserve.org))

MONITOR YOUR BLOOD PRESSURE AT HOME



(AHA, [How To Monitor Your Blood Pressure at Home – YouTube](#))

QUESTIONS AND CONTACT INFORMATION

Stephanie Gutierrez
Extension Program Coordinator
717-353-3195
smgutier@ksu.edu

Sara Sawyer, MPH, RD, LD
Registered Dietitian/Extension Agent
316.660.0118
sarasawer@ksu.edu

