



How Potassium Can Help Control High Blood Pressure

Simple Steps for a Healthier Heart





Understanding Blood Pressure

- High blood pressure, also known as hypertension
- The force of your blood pushing against the walls of your blood vessels, is consistently too high.
- The primary way that high blood pressure causes harm is by increasing the workload of the heart and blood vessels — making them work harder



Understanding Blood Pressure

- When the heart beats, it creates pressure that pushes blood through our arteries and veins – Your blood pressure is recorded and measured as two numbers:
- **Systolic blood pressure** (the first number) – indicates how much pressure your blood is exerting against your artery walls when the heart contracts.
- **Diastolic blood pressure** (the second number) – indicates how much pressure your blood is exerting against your artery walls while the heart muscle is resting between contractions.



Healthy and Unhealthy BP Ranges

Learn what is considered normal, as recommended by the American Heart Association

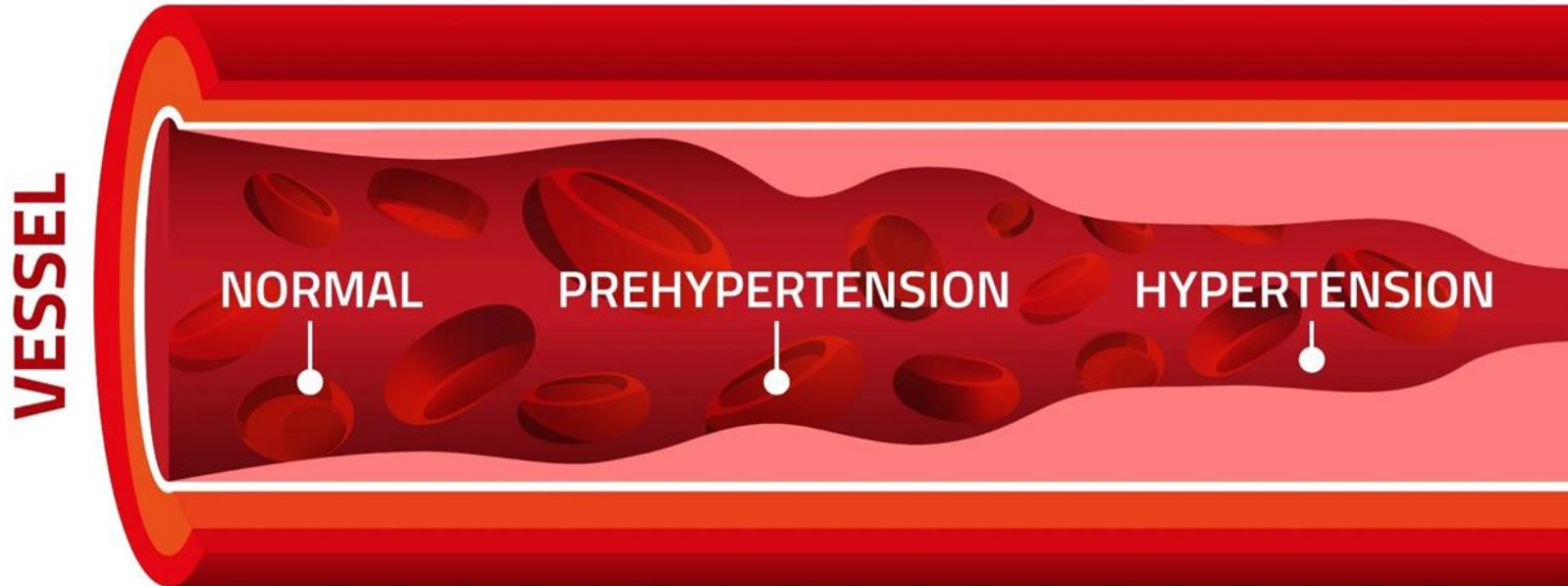
Note: A diagnosis of high blood pressure must be confirmed with a medical professional. A health care professional should also evaluate any unusually low blood pressure readings.

Stage	Systolic BP (mmHg)		Diastolic BP (mmHg)	Action
Normal and optimal	Below 130	and	Below 85	Keep up the good work and stick with heart-healthy habits
High normal	130 - 139	or	85 – 89	Make lifestyle changes to lower blood pressure
Mild hypertension	140 – 159	or	90 – 99	See a doctor or GP as soon as possible
Moderate hypertension	160 – 179	or	100 – 109	See a doctor or GP as soon as possible
Hypertensive emergency	above 180	or	above 110	Requires emergency medical attention. Go to a hospital

SYSTOLIC PRESSURE



Is measured between when the heart contracts



DIASTOLIC PRESSURE



Is measured between beats when the heart relaxes



Why Blood Pressure Matters

- High blood pressure can make your heart work too hard and lose strength.
- The high force of blood flow can damage your blood vessels, making them weak, stiff, or narrower.
- Consistently high blood pressure increases your chance of a stroke or heart attack. Can contribute to heart failure, and other serious illnesses.
- Blood flowing through your arteries at high pressure can damage the inner lining of these vessels, accelerating the buildup of cholesterol-laden plaque.



Why Blood Pressure Matters for Women

- “**Hypertension is the most common risk factor for cardiovascular disease** and women suffer disproportionately with higher rates of death and morbidity with cardiovascular disease compared to men,”
- It is often called the “Silent Killer” as there are very little signs or symptoms of high blood pressure.

Complications of Hypertension

Brain Stroke

Reduced blood supply to the brain can lead to rapid loss of brain function or stroke.

Vision Loss

Hypertensive Retinopathy
High blood pressure can damage blood vessels in the retina, resulting in loss of vision.

Blood Vessel Damage

Atherosclerosis

Hypertension is a leading cause of atherosclerosis, the artery-narrowing process that can result in heart attack and stroke.

Heart Attack

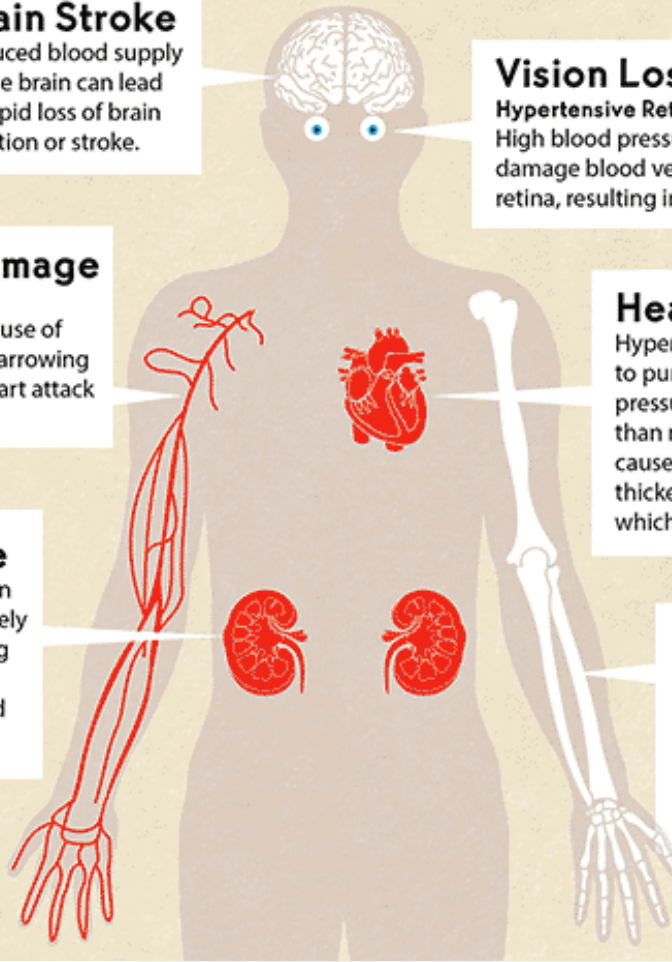
Hypertension causes the heart to pump against high blood pressure, making it work harder than necessary. Over time, this causes the heart muscle to thicken, restricting blood flow which can lead to heart failure.

Kidney Failure

Damaged blood vessels in the kidneys can't effectively filter your blood, resulting in a dangerous accumulation of fluid and waste.

Bone Loss

High blood pressure may increase the amount of calcium in your urine. That excessive elimination of calcium may lead to loss of bone density (osteoporosis).



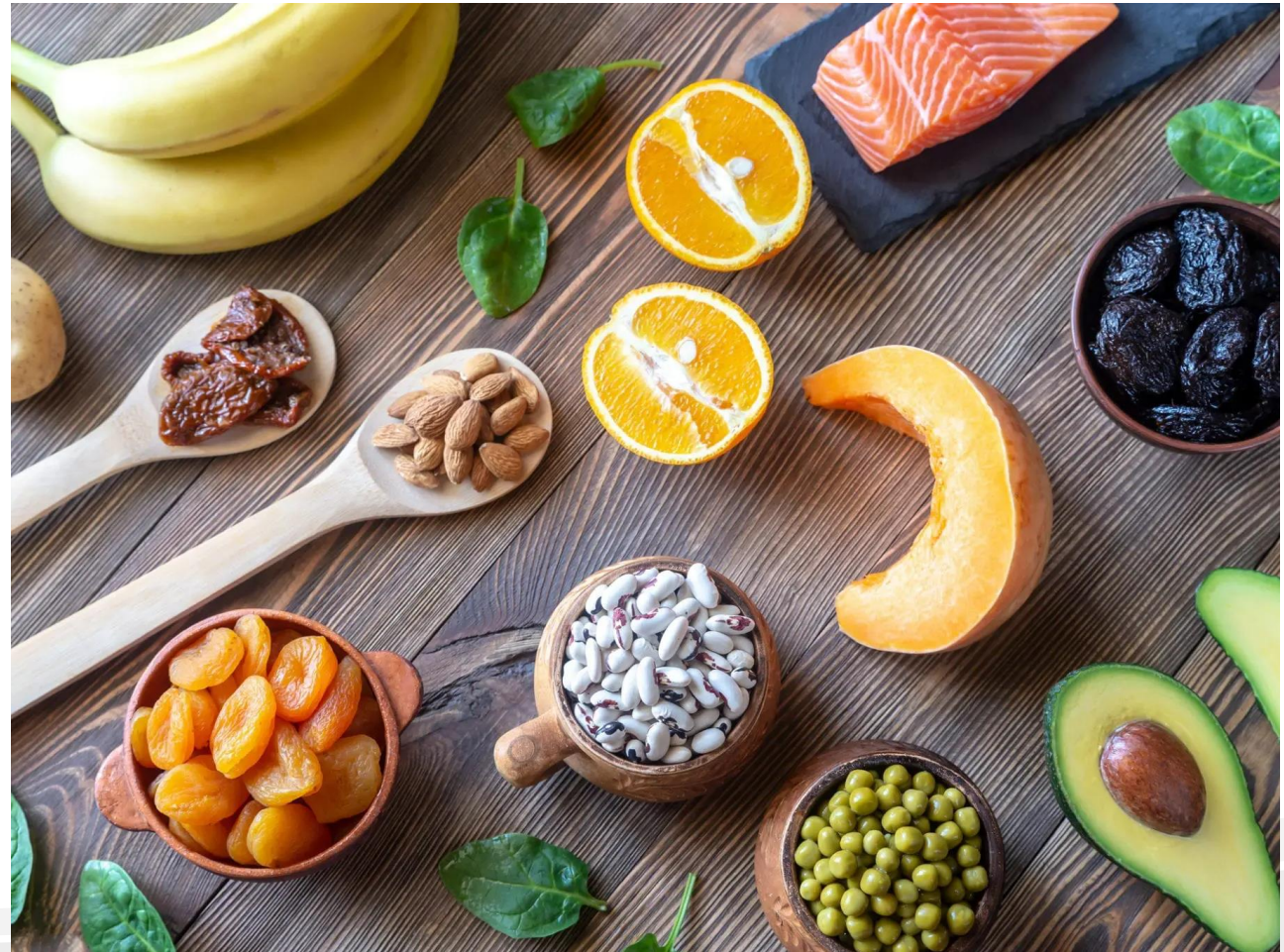


Changes That Can Prevent/Manage BP

- **Nutritious Diet**
- Limiting Sodium – Depending on the individual
- **Potassium Benefits**
- Limiting Alcohol
- Getting Active
- Smoking
- Medications
- OTC Medications
- Managing Medications
- Types of Medications
- Partnering With Your Doctor

The Power of Adding Foods: Potassium

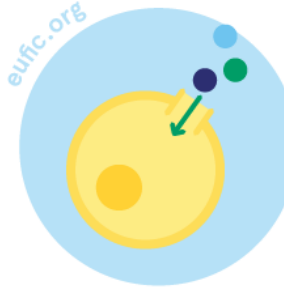
- Potassium balances sodium
- The more Potassium you eat, the more sodium you lose through urine.
- Potassium also helps to ease tension in your blood vessel walls, which helps further lower blood pressure



Other Roles of Potassium

- The Benefits of Potassium
 - Helps regulate BP
 - Essential for muscle contraction and function
 - Balances body fluids ensuring proper hydration and electrolyte equilibrium
 - Vital for nerve impulses and nerve transmission
 - Aids in Kidney Function, Bone Health, Blood Sugar Regulation

functions of potassium



helps our cells uptake
nutrients & water



helps our muscles
contract



helps our nerves carry
messages between the
brain & the body



balances our bodies'
fluids & regulates
blood pressure



helps our bodies
digest foods



Foods High in Potassium Include

- Bananas, oranges, cantaloupe, honeydew, apricots, grapefruit, and some dried fruits, such as prunes, raisins, and dates
- Juice from potassium-rich fruits, such as orange, grapefruit, and tomato
- Baked potatoes, with or without the skin
- Lentils, cooked or canned
- Tomato paste, sauce, or juice
- Squash, such as acorn, butternut, or spaghetti
- Milk, yogurt, and cheese
- Chicken breast, cooked or roasted



Taking this Information into Real Life Practice

- Case Study:
 - Mr. E consulted for high blood pressure
 - Reason for Referral: Improve his blood pressure through dietary changes
 - Medications: Lisinopril (not taking this)
 - Current Diet:
 - Breakfast: Chorizo and Eggs
 - Lunch: Convenience is important – often chooses cup of noodles or frozen meals
 - Dinner: Rice, meat, vegetables
 - Tells RDN, “I don’t know what I can eat!”



Adding Potassium Foods Breakfast

- Was eating: chorizo and eggs
- RDN suggestion: scrambled eggs with tomatoes, onions, and peppers, served with a side of black beans (foods high in potassium!)
 - Incorporate a slice of avocado, small cutie, or banana for added potassium.
 - Could also make a large batch and freeze so you can just warm-up when needed!



Adding Potassium Foods Lunch: Sandwich Makeover and Afternoon Snack

- Was eating: cup of noodles or frozen meals
- RDN suggestion: high fiber bread with lean ham, swiss cheese, mustard, and pickles
 - Maybe take leftover salad from dinner (greens and tomatoes) for added potassium
 - Remember – it's important for Mr. E to have a convenient lunch. We could suggest making the sandwich the night before or keep the ingredients at his work
- Snack ideas: banana or apple, Greek yogurt with peanut butter and chia seeds, unsalted nuts/trail mix



Adding Potassium Foods Dinner

- Was eating: rice, meat, veggies
- RDN suggestion: I LOVE that Mr. E is already incorporating vegetables into his dinner.
 - Grilled or baked chicken instead of fried
 - Rice is a great carbohydrate option for dinner – watch portion
 - Make sure Mr. E is eating a variety of veggies and not just the same one over and over again... we want all the nutrients!
 - He enjoys bell peppers, zucchini, and tomatoes (since convenience is so important, we can suggest frozen medleys of vegetables. They don't reduce nutrient value!)
 - He also loves black beans. To reduce sodium, we can rinse off black beans or opt for the low-sodium can
 - Evening Snack: discussed mixed nuts and/or dried apricots (could add into trail mix)
 - Dessert: TruFru frozen fruit with dark chocolate (chilled fruit with chocolate coating)



Additional Discussion/Recommendations

- Hydration: Encouraged water and herbal teas (low calorie)
- Physical Activity: Going to vary per person
 - Job, injuries, lifestyle
 - Able to discuss and brainstorm weekly movement to complement dietary changes
- 6 week follow up: BP improved had shown gradual but significant change
 - Ranging throughout the day: Lowest: 117/80 Highest 123/82



More Ideas/Examples

- Breakfast
 - Banana and Almond Butter Smoothie
 - Blend a banana with almond butter, Greek yogurt, and a splash of milk of choice.
 - Peanut Butter Banana Toast with Eggs
 - Whole-grain toast topped with PB and banana and a poached eggs
- Lunch
 - Sweet Potato and Chickpea Salad
 - Roasted sweet potatoes, chickpeas, spinach, cherry tomatoes, and feta cheese drizzled with olive oil.
 - Salmon and Quinoa Bowl
 - Grilled salmon on a bed of quinoa with steamed broccoli, kale, and a squeeze of lemon.
- Dinner
 - Baked Chicken with Potatoes and Asparagus
 - Oven-baked chicken breasts with seasoned potatoes and asparagus.
 - Vegetarian Stir-Fry
 - Tofu or tempeh stir-fried with a variety of colorful vegetables like bell peppers, broccoli, and carrots, served over quinoa or rice.



More Ideas/Examples

- Snacks
 - Greek Yogurt with Berries
 - A bowl of Greek yogurt topped with berries (Try frozen mixed berries strawberries, blueberries, or raspberries).
 - Trail Mix
 - A mix of potassium-rich nuts (almonds, pistachios, walnuts) and dried fruits (apricots, raisins).



Recap/Discussion

- Instead of restricting (ex: looking to restrict sodium), how can we add to an individual's options for food?
- The Benefits of Potassium
 - Helps regulate BP
 - Essential for muscle contraction and function
 - Balances body fluids ensuring proper hydration and electrolyte equilibrium (more sodium excreted in urine)
 - Vital for nerve impulses and nerve transmission
 - Aids in kidney function, bone health, blood sugar regulation



Questions?