

How to Protect Your Heart

By Dr. Kristen Plunkett

High Blood Pressure

Hypertension is a major risk factor of the top two causes of death: stroke and heart attacks.

- Identify if you have hypertension
 - Want your blood pressure to be below 120/80
 - Hypertension is diagnosed after 3 readings over 140/90 by your doctor, or an extremely high reading with symptoms listed below.
 - Check your blood pressure at pharmacies (sit for 5 minutes before taking)
 - Purchase your own blood pressure unit and record readings daily (recommend OMRON brand)
 - See your primary health care provider
 - Symptoms: often asymptomatic. May have symptoms of flushing, sweating, blurred vision, headache, dizziness, and nosebleeds.
 - Symptoms of hypertensive emergency (requires emergency room visit): restlessness, confusion, tiredness, blurred vision, headache, nausea and vomiting, neurologic deficits, seizures, chest pain, trouble breathing.
- Identify the cause of hypertension
 - Diet, stress, atherosclerosis, medications (birth control pills, estrogen, steroids, thyroid hormone, decongestants, amphetamines, licorice), pre-existing health conditions (kidney disease, hyperthyroidism, Cushing's syndrome, etc), being overweight, caffeine, nicotine, alcohol, lack of exercise etc.
- Complications of hypertension
 - Increases the workload of the heart leading to heart enlargement
 - Accelerates the development of atherosclerosis (plaque on your artery walls) which increases blood pressure further
 - Increases the risk of heart attacks and strokes
 - Increases your chance of developing an aneurysm with is a ballooning of your blood vessel walls in a weakened vessel making it more likely to rupture leading to a hemorrhagic stroke
 - Leads to kidney damage and failure
 - Vascular changes in the eye leading to vision difficulties
- Identify Lifestyle changes you can make to decrease your blood pressure
 - Dietary changes
 - Exercise
 - Stress management

- Medications: Discontinuation of blood pressure medications should be monitored by your doctor. Do not stop taking beta blockers abruptly for they can cause a rebound hypertensive crisis.

High Cholesterol

Cholesterol lowering drugs are one of the top pharmaceuticals prescribed in the United States.

- Identify if you have high cholesterol
 - Requires a blood test by your doctor.
 - Total cholesterol: measure of all types of cholesterol. Want it lower than 200.
 - LDL (low density lipoproteins): “Bad” cholesterol leads to atherosclerotic plaque formation on your artery walls. Want it less than 130.
 - HDL (high density lipoproteins): “Good” cholesterol. Carries cholesterol from peripheral circulation back to the liver to be excreted. Want it over 55.
 - Triglycerides are a measure of fat in the blood, transports fat to other tissues. Want them less than 125.
 - Calculate cardiovascular risk
 - Total cholesterol/HDL want a ratio of 3 or less
 - HDL/LDL want a ratio of 0.5 or higher
 - Should be tested yearly. Once diagnosed may need to be tested every 3 months to monitor success of treatment.
- Risk factors for developing high cholesterol
 - High saturated and transfat diet (fast foods), high carbohydrate diet increases triglycerides, lack of antioxidants in diet (fruit and vegetables), family history, obesity, lack of exercise
- Complications of high cholesterol “hyperlipidemia”
 - Atherosclerotic plaque formation on your arteries, thickens blood making harder to pump around (hypertension) and causing the heart to enlarge to pump harder, more difficulty getting it through the smaller capillaries leading to decreased oxygenation and nutrients being delivered to tissues. Tissues build up toxins, unable to eliminate waste products back into the blood stream
 - Coronary artery occlusion leading to heart attack or stroke
- Identify lifestyle changes to decrease cholesterol
 - Dietary changes
 - Exercise
 - Stress management

Lifestyle Changes to Increase the Health of Your Heart

Through Diet, Exercise, Avoiding common triggers you can decrease your cholesterol and high blood pressure.

- Healthy Heart Diet
 - Avoid margarine, fried, overcooked meats, heated oils, refined sugars, alcohol, carbonated beverages, caffeine, minimize simple carbohydrates
 - Eat quality proteins such as fish, organic eggs, free range chicken, grass fed beef, nuts, seeds
 - Eat a high fiber diet with plenty of green leafy vegetables, whole grains, fresh fruit (buy organic whenever possible).
 - Identify and avoid any food allergens (eating a food you are sensitive to can increase your blood pressure by 10 points)
 - A diet high in garlic and onions decreases your blood viscosity and decreases your lipid levels
 - A diet high in tumeric and cayenne decreases inflammation helping the blood get to the tissues needing oxygen and nutrients, as well as decreasing pain.
 - A diet high in berries strengthens the vascular lining, helping to prevent aneurysms.
 - Mediterranean Diet is great for heart health: high in fish, whole grains, fruit and vegetables, and olive oil
 - Eat a diet high in nutrients that are healthy for the heart
 - Potassium: sunflower seeds, almonds, nuts, seeds, wheat germ, raisins, dates, figs, orange juice, banana, soy, legumes, avocado, apricots, cantaloupe, papaya (may need to monitor amount of potassium in foods if you are on a potassium sparing diuretic *spironolactone, triamterene amiloride, hydrochlorothiazide*)
 - Magnesium (helps with vasodilation): soybeans, buckwheat, tofu, almonds, cashews, legumes
 - Arginine (causes vasodilation): turkey, chicken, lamb, pork, tuna, salmon, shrimp, almonds, wheat germ, cashews, oats
 - Essential Fatty Acids (EFAs can decrease blood pressure by 10 points, strengthen vascular walls, improve lipid levels, and decrease inflammation): fish, flax seed, borage oil, walnuts, pumpkin seeds
 - If you are on statin drugs or red rice yeast, make sure to supplement with CoQ10. CoQ10 is essential for cell energy and it can also decrease blood pressure by 10% by decreasing the blood flow resistance through the vessels. Statin drugs decrease your CoQ10 levels.
- Exercise
 - Improves blood flow to the tissues decreasing damage due to decreased blood flow of atherosclerosis.

- Atherosclerotic vessels make it harder for them to dilate, regular exercise can restore the plasticity of your vessels.
- The heart is a muscle, like all muscles the more you use them the better they function.
- Want to get your heart rate between 60-80% of max
 - $220 - \text{age} \times 0.60 + \text{resting heart rate} = 60\% \text{ of max}$
 - $220 - \text{age} \times 0.80 + \text{resting heart rate} = 80\% \text{ of max}$
 - If you have not exercised in a while start slow and gradually build up. If you have any pre-existing health conditions contact your doctor before beginning and exercise regimen.
- Find an exercise that you enjoy doing.
- Stress Management
 - Stress increases blood pressure, causes a sympathetic nervous system dominant state. You want to increase the parasympathetic nervous system by practicing stress management.
 - The stress response is an important reaction: if you see danger it gives you what you need to fight or flight. It is not good to have a constant high level of stress.
 - The parasympathetic nervous system is important to rest and digest.
 - Tools
 - Deep Breathing. Take 12 deep slow breaths deep into your abdomen. Can decrease your blood pressure by 10 points.
 - Yoga: teaches breathing techniques and stretches
 - Tai Chi
 - Find a hobby you enjoy and do it more often
 - Gardening
 - Sewing/stitching
 - Fishing

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DISCLAIMER: The information contained in these pages should not be used as a basis for treatment which can only be provided by a qualified medical practitioner. You should consult a medical provider or the appropriate health professional for specific personal advice if you have concerns about your health or general well-being.