

Blood Pressure and The Heart

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Blood Pressure

- **What is Blood Pressure?**
 - **Blood Pressure is the pressure of circulation blood on the walls of blood vessels.**
 - **Blood pressure refers to the arterial pressure in the systemic circulation**
 - **Determined by the balance between heart outputs versus total peripheral resistance**
 - **Regulated by the brain via the endocrine and nervous system**
 - **Can vary depending on the situation**



Blood Pressure

- **Systolic Reading**
 - The top number
 - When your heart beats-it contracts and pushes blood through the arteries to the rest of the body
 - The force creates pressure on the arteries.
 - A normal systolic blood pressure is 120 or below.
 - A systolic blood pressure number of 140 or higher, on repeated measurements, is considered to be hypertension, or high blood pressure.



Blood Pressure

- **Diastolic Reading**

- **The bottom number**
- **Indicates the pressure in the arteries when the heart rests between beats**
- **A normal diastolic blood pressure is 80 or less**
- **A diastolic blood pressure number of 90 or higher on repeated measurement, is considered to be hypertension**

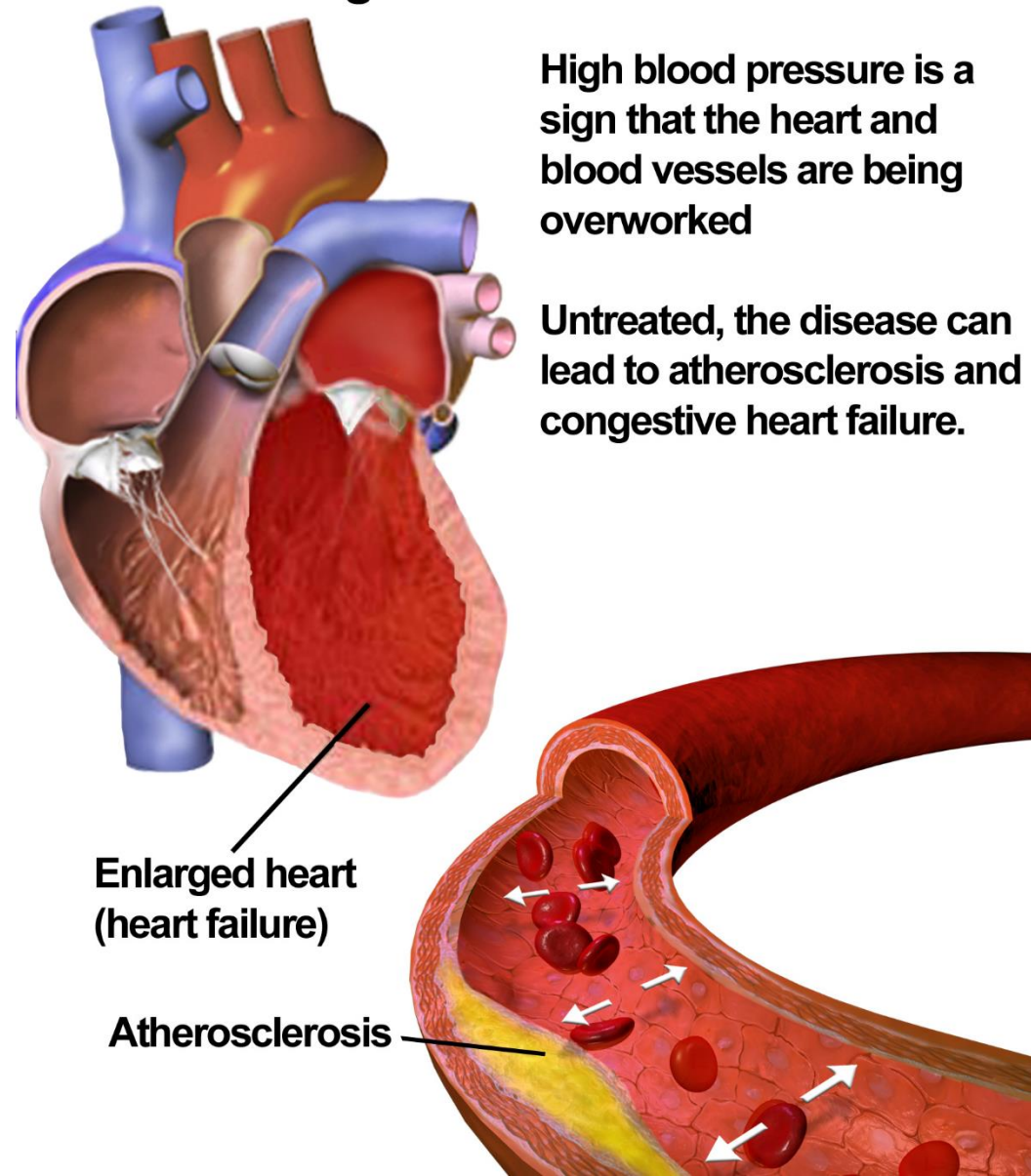


Blood Pressure

High Blood Pressure

High blood pressure is a sign that the heart and blood vessels are being overworked

Untreated, the disease can lead to atherosclerosis and congestive heart failure.



Enlarged heart
(heart failure)

Atherosclerosis

Hypertension

- **Damage to the arteries**
 - **Stiffening and hardening of the artery walls**
 - **Fat that enters the blood stream will accumulate along damaged artery walls**
 - **This can lead to blockage of the artery walls causing chest pain, heart failure, heart attack, stroke, eye damage and aneurysms**
- **Damage to the heart**
 - **Narrowing of the coronary arteries**
 - **Enlarge left side of the heart**
 - **Heart Failure**



Hypertension

- **Damage to the brain**
 - TIA
 - Stroke
 - Dementia
 - Mild cognitive impairment
- **Damage to the kidneys**
 - Kidney failure
- **Damage to the eyes**
 - Eye blood vessel damage
 - Fluid buildup around the retina
 - Nerve damage



Blood Pressure and Exercise

- **How does exercise lower the blood pressure**
 - **Regular physical activity makes the heart stronger.**
 - **A stronger heart can pump more blood with less effort.**
 - **If the heart can work less to pump, the force on the arteries decreases, lowering your blood pressure.**
 - **By becoming more active you can lower your systolic blood pressure by an average of 4 to 9 millimeters of mercury.**



Blood Pressure and Exercise

- **How much exercise is needed**
 - **Aerobic activity can be an effective way to control high blood pressure.**
 - **Flexibility and strengthening exercises such as lifting weights are also important parts of an overall fitness plan.**
 - **You don't need to spend hours in the gym every day to benefit from aerobic activity.**
 - **AHA recommends least 150 minutes of moderate aerobic activity or 75 minutes of vigorous aerobic activity a week, or a combination of moderate and vigorous activity.**
 - **Aim for at least 30 minutes of aerobic activity most days of the week.**



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

- ***Contact your primary physician if you feel your blood pressure is high and remains elevated.**

Healthy Recipe

CAULIFLOWER RICE PUDDING

PREP TIME	COOK TIME	TOTAL TIME
8 mins	8 mins	16 mins

This recipe for Cauliflower Rice Pudding is amazing! This grain free pudding is chewy, sweet, and perfectly satisfying. You can't even tell that it uses cauliflower! Fat free, sugar free, paleo, vegetarian, gluten free and PERFECT



INGREDIENTS

- 3½ cups Riced Cauliflower (I used trader joes pre-riced frozen cauliflower)
- 1 cup boxed coconut milk (almond, rice, etc will work too)
- 3 tsp cinnamon
- 2 packets stevia (or more depending on your sweet preference)
- ¼ cup Boxed egg whites

INSTRUCTIONS

1. Combine 1½ cup cauliflower with milk to a sauce pan, turn to medium heat
2. add remaining ingredients and bring to a simmer (about 4-5 minutes)
3. add remaining 1½ cup cauliflower until you get desired consistency (you may not use it all)
4. turn flame to low
5. stir constantly until thickened (about 4-5 minutes)
6. Cover and allow to continue to thicken
7. ENJOY!
8. *It's best if you refrigerate over night!