

## WELLNESS Rx SPECIAL REPORT:

# High Blood Pressure (Hypertension)



### Facts:

*High Blood Pressure (HBP) is the result of the strong pressure of blood flowing through the arteries which are too narrow, creating pressure against the artery walls. Overtime, this constant pressure causes damage to the arteries and may lead to serious health conditions such as heart disease. Ensuring the efficient flow of blood through the arteries is the key to managing blood pressure.*

- Untreated high blood pressure puts you at risk for heart disease and stroke (the first and 3rd leading causes of death in the United States) & kidney disease
- 90% of diagnosed cases have **no known reason** (essential hypertension), making it hard to treat.
- People of **all ages and backgrounds** can develop high blood pressure.
  - Women and men are about equally likely to develop it during their lifetimes.
    - Under 45, more men than women. **Over 65, more women than men.**
  - African Americans develop high blood pressure more often and at an earlier age than Caucasians.
- **Higher risk candidates** for high blood pressure include: overweight patients (obesity); stress/ anxiety prone patients; drinking too much alcohol, consuming too much salt in one's daily diet, diabetics, smokers, or a family history of the disease.
- **49.6% of US adults over age 20** have high blood pressure.
- Another 25% of Americans have **prehypertension** - blood pressure measurements that are higher than normal, but not yet in the high blood pressure range.
- Americans annually visit physicians over **40 million times to treat high blood pressure**
- In 2010, high blood pressure was estimated to **cost our country \$76.6 billion** in health care services, medications and missed days of work.
- **22.4% of Americans with high blood pressure don't know they have it.**
- High blood pressure usually has no warning signs or symptoms.
- The amount of water and salt in your body affects your blood pressure along with the levels of different body hormones. **High hydration & low salt is a perfect balance.**
- **67% of Americans diagnosed with hypertension** use medications to treat the condition.

### Understanding Blood Pressure Screenings:

- Blood pressure is written in two numbers:
  - The first number (**systolic**): the pressure in your blood vessels when your heart beats (force imparted to the blood by the contracting heart).
  - The second number (**diastolic**): the pressure in your vessels when your heart rests between beats.

The five blood pressure categories as recommended by the **American Heart Association** are:

1. Normal Blood Pressure: less than 120/80 mmHg most of the time

2. Elevated Blood Pressure or Prehypertension: (120-129)/(80) mmHg; high blood pressure is more likely to develop over time.
3. **Stages 1 Hypertension:** Systolic pressure ranges from 130-139 mmHg **or** diastolic pressure ranges from 80-89 mmHg.
4. **Stage 2 Hypertension:** Systolic pressure **consistently ranges** from **140 mmHg** & above **and** diastolic pressure **ranges above 90 mmHg**.
5. **Hypertensive Crisis:** If your blood pressure readings suddenly exceed 180/120 mmHg it is highly recommended to seek **immediate medical attention**

**In general, more attention is now given to the systolic or first number in patients over age 50**

#### *Tips to Improve Blood Pressure Measurement:*

- Avoid exercise, alcohol, caffeine, or nicotine consumption 30 min prior to measurement.
- Sit comfortably for 5 minutes and visualize a joyful and peaceful moment in your life.
- Use an **appropriate sized cuff** and do not talk.
- Position arm at heart level.
- Take the average of two readings & **take readings of both arms**
- **Record readings and establish blood pressure goals and monitor regularly.**
  - It is very normal and common for blood pressure readings to be different depending on the time of day. In general, lower readings in the morning,
  - higher readings mid-afternoon & again lower readings in the evening.
- Ensure that the blood pressure machine is properly calibrated and checked on a regular basis (especially store retail machines). Blood pressure readings taken at a physician's office with proper equipment can vary greatly from home or store-based equipment.

#### *Blood Pressure Treatment:*

- While the prime goal is to reduce blood pressure so that one has a lower risk of complications. In reality, long term success is often a combination of many factors that includes diet, exercise/weight management, stress management, adequate sleep , reducing bad habits, nutritional supplements and drug therapy. For example, high blood pressure and high cholesterol are linked closely so maintaining healthy cholesterol levels is essential to keeping blood pressure at bay or if you don't get enough rest, detoxification of toxins from the body or the production of enzymes & hormones by our organs can be compromised.
- Here's some tips for a heart-healthy diet:
  - Include **potassium** and fiber. Potassium-rich foods help your kidneys get rid of sodium through your urine
  - Limit **sodium/salt intake** to less than 1,500 mg daily & **reduce sugars**
  - Eat **calcium-rich foods** (leafy greens, beans, tofu, etc.)
  - Eat foods rich in **magnesium** (vegetables, dairy products, legumes, chicken, meat & whole grains). Magnesium is an important mineral that helps blood vessels relax to improve coronary blood flow

- **Celery and garlic** helps to clear the blood of toxins, reduce sodium levels & increase blood flow
- **Eat berries** which are full of polyphenols (natural plant compounds which are great for your heart)
- Consider eating some **dark chocolate or cocoa powder** (non-alkalized has no added sugars). Cocoa is filled with flavonoids, which are plant compounds that cause blood vessels to dilate.
- Consider adding herbal foods like cinnamon, ginger & basil
- Consider taking anti-oxidants such as Vitamin C & E

\*Here's some other tips:

- **Stay hydrated** (Daily water intake: 180 lbs. = 90 oz. or about 8 glasses of clean water daily (8 oz. glasses)
- Cut back on caffeine.
- Don't underestimate the importance of adequate rest & frequent naps
- 30+ minutes of aerobic exercise daily
- Listen to **soothing music** which relaxes your entire nervous system
- Lifestyle changes: no smoking, watch alcohol intake, manage stress, and watch weight.

- **Drug therapy:**

- **Diuretics:** goal is to increase urine flow to remove sodium from the body. Will also lose potassium so supplement
- **Beta Blockers:** goal is to dilate blood vessels to slow heart rate.
  - Metoprolol (Lopressor & Toprol XL) - #1 drug
  - Propranolol (Inderal)
  - Atenolol (Tenormin)
  - Bisoprolol (Zebeta)
  - Carvedilol (Coreg)
- **Calcium Channel Blocker:** goal is to relax cardiac and smooth muscles by blocking voltage sensitive calcium channels and dilated vessels and helps the heart pump better.
  - Amlodipine (Norvasc) - #1 drug
  - Diltiazem (Cartia XT, Cardizem, Tiazac)
  - Verapamil
  - Felodipine (Plendil)
  - Nifedipine (Adalat, Procardia)
- **Angiotensin Converting Enzyme Inhibitors:** goal is to inhibit the production of angiotensin or a peptide hormone impacting heart blood vessels to constrict, which then drives blood pressure up.
  - Lisinopril (Prinivil, Zestril) - #1 drug
  - Quinapril (Accupril)
  - Ramipril (Altace)
  - Enalapril (Vasotec)
  - Benazepril (Lotensin)
  - Captopril (Capoten)

- **Angiotensin Receptor Blockers:** goal is to block the amount of angiotensin hormone impacting heart blood vessels.
  - Olmesartan (Benicar)
  - Valsartan (Diovan)
  - Losartan (Cazaar)
  - Irbesartan (Avapro)
- **More than one drug can be added to a treatment plan because each drug classification described above has a different mechanism of action.**
- On average, a change in diet, moderate exercise program and weight reduction will reduce one's blood pressure more than any one drug (20 points or more).
- Each drug added to one's therapy will reduce their blood pressure by 5-10 points.

*Drugs that can RAISE Blood Pressure:*

- **Decongestants:** Pseudoephedrine (Sudafeds), Phenylephrine (Sudafed PE), Oxymetazoline (Afrin). If blood pressure is controlled, however, the impact to blood pressure is reduced. One safe natural decongestant is **Sinupret** from Germany which contains a formula of 5 different herbs.

Drugs can narrow blood vessels which can also increase blood pressure.

- **Caffeine:** temporarily increase blood pressure so the recommended daily intake is no more than 200 mg (~2 cups of coffee)
- Long term or daily use of **acetaminophen** (Tylenol)
- **Most antidepressants** - brain chemicals that are increased to affect one's mood can also increase blood pressure - so it is essential to have blood pressure checked regularly.
- **Birth Control Pills:** while nearly all birth control pills can increase blood pressure, patients already diagnosed with high blood pressure or pre-hypertensive are at greater risks. Consider reducing the estrogen dosage of medication or consider using a different form of birth control.
- **Immunosuppressants:** Methylprednisolone (Medrol), Cyclosporine (Neoral), Tacrolimus (Prograf)

Drugs could also increase blood pressure due to how they affect one's kidneys.

- Nonsteroidal anti-inflammatory drugs (**NSAIDs**): Ibuprofen (Advil, Motrin), Meloxicam (Mobic), Naproxen (Naprosyn), Naproxen sodium (Aleve) can cause one to retain water, creating kidney problems and increasing blood pressure.
- **Stimulants:** Methylphenidate (Ritalin, Concerta) and Amphetamines can cause one's heart to beat faster or irregularly, raising blood pressure.
- **Herbal Supplements** can directly increase blood pressure or interact with blood pressure medications.
  - Ones to watch: Bitter Orange, Ephedra (ma-huang), Ginseng, Guarana, Licorice, and St. John's Wort.
- **Legal & Illegal Drugs** can raise blood pressure by narrowing the arteries that supply blood to the heart. This then increases your heart rate and damages one's heart muscles.

- Ones to watch: Amphetamines, Anabolic steroids, Cocaine, Ecstasy, or Phencyclidine.

- **NATURAL OPTIONS TO CONSIDER:**

- **Hawthorn Berry** helps to reduce bad cholesterol (LDL) levels while also improving coronary blood flow to reduce pressure inside the blood vessels. Comes in capsules or tincture
- **Niacin (niacinamide or Vitamin B3)** is a vasodilator that holds the potential to improve blood flow and reduce bad cholesterol. Niacin often produces a flushing of the skin. It does come in a non-flushing tablet and as a time-released medication.
- **Reishi Mushroom Extract** is a safe daily supplement which helps to promote healthy blood pressure. It also has strong immune boosting, anti-viral & anti-inflammatory properties.
- Life Extension has a blended herbal product called **Arterial Protect** which helps to regulate plaque in the arteries to promote healthy arterial circulation.
- Life Extension also has a blended formula (calcium; grape seed extract; pomegranate extract & whey protein hydrolysate) called **Optimal BP Management & Triple Action Blood Pressure** (calcium; stevia extract leaf; quercetin & myricetin) for helping to maintain blood pressure within normal ranges.
- Many other companies promote their own blended formulas which often include Chinese Herbal Blends ranging from Skullcap Root to Chrysanthemum flower.
- In the end, Wellness Rx encourages its patients to keep a daily journal of blood pressure readings, any side effects that they are experiencing & most important, to track how any new intervention is helping to maintain healthy blood pressure within normal ranges