

What You Need To Know About High Blood Pressure - Dr. Davidicus Wong

What is blood pressure?

Blood pressure (BP) is the pressure or force of blood inside your blood vessels.

Systolic BP (the higher number) is the pressure when the heart contracts.

Diastolic BP (the number on the bottom) is the pressure when the heart relaxes and refills with blood.

What is normal blood pressure?

For adults: less than or equal to 120/80

Prehypertension: 120 to 139/80 to 89

Stage I Hypertension: 140 to 159/90 to 99

Stage 2 Hypertension: over 160/100

What are the targets for treating high blood pressure (hypertension)?

For most adults: less than or equal to **140/90**

For people with diabetes: **130/80**

For high risk patients (with cardiovascular disease, chronic kidney disease, over age 75, or 10 yr cardiac event risk over 15%): **120 (systolic)**

Please note that these are guidelines. Discuss your personal target BP with your physician.

Why does high blood pressure matter?

High pressures over time damage blood vessels and vital organs in every part of the body.

High blood pressure causes:

1. Atherosclerosis (narrowing of arteries everywhere in the body) leading to angina and leg or foot amputations.
2. Kidney failure
3. Heart attacks, heart failure, angina, aneurysms
4. Strokes, dementia, vision loss
5. Erectile dysfunction

What causes high blood pressure?

About 95% of hypertensive patients have ESSENTIAL or PRIMARY HYPERTENSION (cause unknown). It tends to be genetic and increases with age.

SECONDARY HYPERTENSION can be caused by kidney disease, pregnancy, adrenal tumours, thyroid disorders and medications (such as ibuprofen or the birth control pill).

One in five adults has high blood pressure. Your lifetime risk for developing high blood pressure is 90%.

Are you at risk for high blood pressure?

Think about your diet. Too much fat or salt?

Are you physically inactive?

Do you smoke?

Do you have more than 2 drinks a day?

Are you overweight?

Do you have a family history of high blood pressure, kidney disease, stroke or heart disease?

Are you getting older?

Adults (over 18) should check their blood pressure "at all appropriate clinical visits."

e.g. annually if you do not have a history of high blood pressure; more frequently if you do.

The Fine Points of Measuring Blood Pressure

1. **EQUIPMENT:** All devices for measuring BP should be regularly calibrated. If you rely on a home BP machine, choose an approved model (See the hypertension.ca website) and ask your doctor to check your machine's accuracy.
2. **POSITION and POSTURE:** Sitting without legs crossed, arm supported with the middle of the upper arm at the level of the heart.
3. **SOURCES OF ERROR:** wrong cuff size; not inflating high enough; deflating too fast; irregular pulse; talking, holding your breath, chewing gum, tensing your muscles; venous congestion; White Coat syndrome

Prevention and Lifestyle Management

1. **Physical Activity**
30 to 60 minutes of moderate physical activity 4 to 7 days/week
e.g. walking, cycling and swimming
2. **Weight Reduction**
if you are overweight
3. **Limiting Alcohol Intake**
Limit alcohol to 0 to 2 drinks/day
For men, under 14 drinks/week
For women, under 9 drinks/week
*Standard drink = 1 can (341 ml) of 5% beer
= 1 glass (150 ml) of 12% wine
= 1.5 oz (45 ml) of 40% spirits*

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4. **Healthy Eating**
DASH-like diet: high in fresh fruit, vegetables, fibre, non-animal protein (e.g. soy) and low-fat dairy; less than 2000 mg sodium/day
5. **Reducing Salt (sodium) Intake**
under 2000 mg/day
(1/2 tsp of salt contains about 1150 mg of sodium)
 - Limit processed foods, restaurant and take-out meals; salt and seasoning (e.g. MSG)
 - Emphasize vegetables, fruits, low fat milk products, whole grains, lean meats, fish, legumes and nuts
 - Read labels for sodium content.
6. **Managing Stress**
Cognitive Behavioural Therapy
Meditation
Yoga
“The Relaxation Response” (Dr. Herbert Benson)
Check the Mindshift app at anxietybc.ca
7. **Quit Smoking**
to reduce overall cardiovascular risk

The Four Foundations of Self-Care

1. **What you eat** (What you put into your body).
2. **What you do** (physical activity and rest).
3. **How you feel** (emotional wellbeing).
4. **How you connect** (healthy relationships).

Medications for High Blood Pressure

Your doctor may prescribe medication if your blood pressure is not controlled with healthier lifestyle measures alone.

For any drug you are prescribed, you should know

- The common side effects
- The serious side effects
- Any interactions with food or other medications you may be taking

Common Classes of BP Medications

1. **Diuretics (“water pills”)** e.g. hydrochlorothiazide, furosemide
 - Increase urination
 - May affect kidney function
 - May lower blood potassium levels

2. **Beta Blockers** e.g. propranolol, tenormin
 - Lower heart rate
 - May decrease energy
 - May depress mood
 - Can worsen asthma
3. **Calcium Channel Blockers** e.g. Adalat, Norvasc, amlodipine
 - May cause constipation
 - May cause foot or leg swelling
4. **ACE Inhibitors** e.g. ramipril, quinapril
 - May cause a dry mouth
 - May affect kidney function or raise blood potassium levels
5. **ARBs** e.g. losartan, valsartan, irbesartan
 - May affect kidney function or raise blood potassium levels

Any drug or herb may cause an allergic reaction.

Any Blood Pressure Medication may cause low blood pressure (hypotension).

Symptoms include feeling faint or lightheaded especially when rising quickly from a sitting or lying position.

Stopping a blood pressure medication without medical advice may result in a rebound increase in your blood pressure. *If you have high blood pressure, work with your doctor to find the best combination of healthy lifestyle habits and appropriate medication.*

Your Positive Potential

I believe that we each have a unique potential in life, and it is our duty to realize that potential and help others achieve theirs.

With knowledge, engagement and support, we can manage chronic health conditions and live well.

For more on achieving your positive potential for health, davidicuswong.wordpress.com