

# Food choices for healthy blood pressure



INSIDE :

Food tips to help you manage  
or prevent high blood pressure

# high blood pressure



## Small changes can make a big difference!



Simple diet and lifestyle changes can be powerful tools in helping lower high blood pressure. For some people, they may even bring their blood pressure back to normal or reduce the amount of medication they need. **This brochure will help you make simple changes to your food choices that can make a big difference!**

## What is blood pressure?

The heart's role is to pump blood throughout our body. 'Blood pressure' is the force the circulating blood creates against the walls of blood vessels. It is similar to the pressure of the water inside a garden hose when the tap is turned on. Blood pressure is measured with two numbers:

$\frac{120}{80}$

The bottom number, **diastolic pressure**, is the pressure in the arteries between beats when the heart muscle relaxes.

The top number, called **systolic pressure** is the pressure in the arteries when the heart muscle contracts.

## What is high blood pressure?

High blood pressure, also known as **hypertension**, is a medical condition that exists when the force or pressure of the blood against the blood vessel walls is too strong. Blood pressure that is consistently more than 140/90 is considered high. If you have diabetes or kidney disease, 130/80 is high.

## What causes high blood pressure?

Many factors can contribute to the development of high blood pressure:

- Genetics (or family history)
- Poor food choices
- Physical inactivity
- Smoking
- Being overweight
- Too much sodium/salt
- Too much alcohol

Often it isn't just one thing, but a combination of factors. And some, like genetics or family history, are things we can't control. The risk of high blood pressure increases as we get older—high blood pressure is most common in people over 40 years old.

Some groups are at greater risk of developing high blood pressure:

- Canadians of African and South Asian descent
- First Nations, Inuit and Métis people
- People with diabetes and kidney disease

## the silent killer:

You can have high blood pressure for years and not know it. High blood pressure is often called a "silent killer" because it has no warning signs or symptoms.

One in 5 Canadians suffer from high blood pressure and another 20% are at risk. Many do not know they have it.

# How often should blood pressure be checked?



Have your blood pressure taken by a healthcare professional at least once every two years. If you have been told you have “high-normal” blood pressure (between 130/85 and 139/89), have your blood pressure checked **at least once a year**. With proper diagnosis and treatment of high blood pressure, you can cut your risk of stroke by up to 40% and heart attack by up to 25%.

### Drugstore blood pressure cuffs:

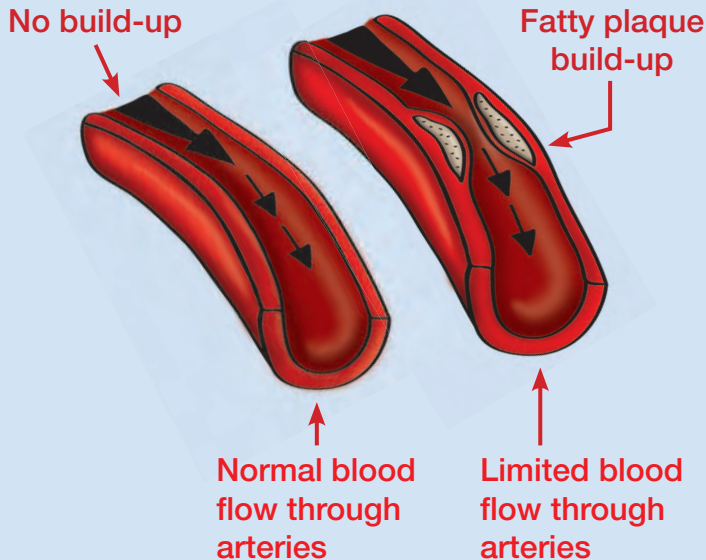
Ask the pharmacist if the machine has been “calibrated” recently (checked for accuracy).

Follow the steps on page 11 for best results.



## Why is high blood pressure a problem?

Over time high blood pressure can damage blood vessel walls, causing scarring that promotes the build-up of fatty plaque. This build-up can narrow and eventually block arteries. It also strains the heart and eventually weakens it. Very high blood pressure can cause blood vessels in the brain to burst resulting in a stroke. Individuals with high blood pressure are also at greater risk of heart disease, kidney disease and congestive heart failure.



## If you have high blood pressure:

Your doctor may prescribe medication to treat your high blood pressure. Take as directed.

Your doctor may check your blood pressure more often and give you special directions.

You may be asked to monitor your blood pressure at home.

See page 11 of this resource for information on home blood pressure monitoring.

### What do your numbers mean?

Optimal Blood pressure	$\frac{120}{80}$ or lower
High blood pressure	$\frac{140}{90}$ or higher
High blood pressure for someone with diabetes or kidney disease	$\frac{130}{80}$ or higher

### IMPORTANT:

*Always consult with a physician, nurse, dietitian or other qualified health professional before you make changes to medication or start a new program.*

**TURN THE PAGE** to learn about food choices you can make to support healthy blood pressure!

# food choices & healthy blood pressure

## Good news!

Research has identified a pattern of eating that helps reduce blood pressure.

It is called the **Dietary Approaches to Stop Hypertension or "DASH"**.

Following DASH can also help people with normal blood pressure reduce the risk of developing high blood pressure.

## What is DASH?



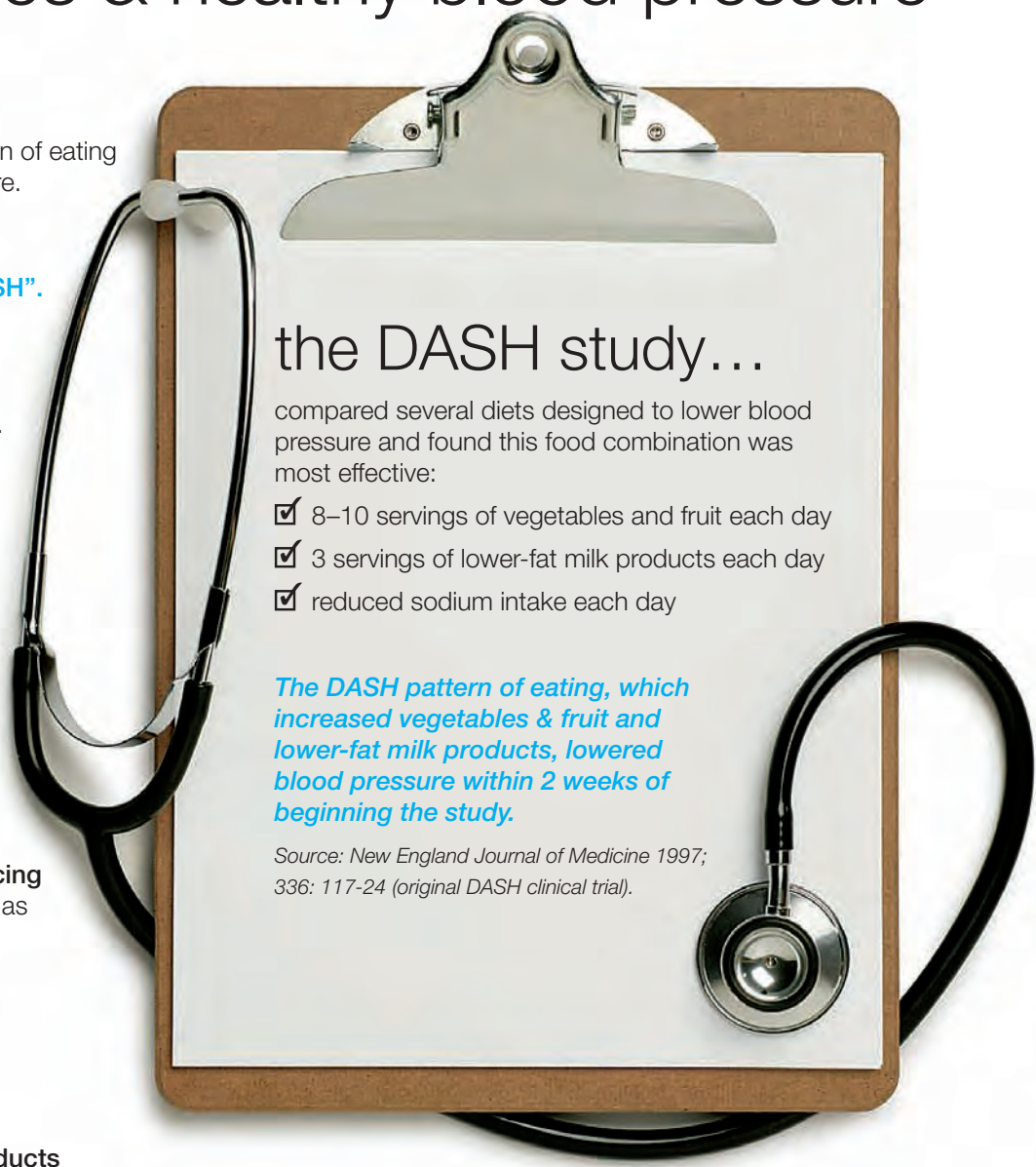
DASH emphasizes eating **vegetables, fruit and lower-fat milk products; reducing total and saturated fat** as well as **eating less sodium** every day.

## How does DASH work?

**Vegetables, fruit and milk products** are great sources of **calcium, magnesium, potassium, protein and fibre**.

These nutrients help keep blood vessels healthy and help keep the blood pressure in the arteries normal. That is why they are emphasized in DASH. It is likely that the combination of these nutrients plus other components of vegetables, fruit and milk products is what makes DASH work.

[See page 10 for more information about Eating Well with Canada's Food Guide.](#)



## the DASH study...

compared several diets designed to lower blood pressure and found this food combination was most effective:

- 8–10 servings of vegetables and fruit each day
- 3 servings of lower-fat milk products each day
- reduced sodium intake each day

*The DASH pattern of eating, which increased vegetables & fruit and lower-fat milk products, lowered blood pressure within 2 weeks of beginning the study.*

*Source: New England Journal of Medicine 1997; 336: 117-24 (original DASH clinical trial).*

**Even better news!**  
Reducing sodium intake while following DASH lowers blood pressure even more!

## Are supplements as effective as food?

No. You need to eat food to get the full benefits. Vitamin and mineral supplements are not meant to replace a healthy diet. Why? The body digests and absorbs the nutrients from food more effectively compared to those in supplement form.

## Vegetables & fruit:

eat 8–10 servings each day

This may seem like a challenge, but the good news is servings are not large, and with a little planning, they can be spread throughout the day. In addition to healthy blood pressure, research links consuming vegetables and fruit more often with reduced risk of cardiovascular disease as well as other chronic diseases. There are many ways to consume 8–10 servings of vegetables and fruit each day.

### One DASH serving of vegetables & fruit is:



A piece of fruit or a vegetable  
= the size of a tennis ball



½ cup (125 ml) fresh, frozen, canned  
vegetable, fruit or juice



¼ cup (60 ml) dried fruit



½ cup (125 ml) cooked or 1 cup (250 ml) raw  
leafy greens, e.g. spinach, lettuce

## Milk products:

eat 3 lower-fat servings each day

Although many adults do not consume enough milk products, the variety of choices makes it easier than you might think. In addition to healthy blood pressure, research links consuming a lot of these foods with bone health and reduced risk of some types of cancer. There are a lot of ways for adults to consume 3 servings of milk products each day.

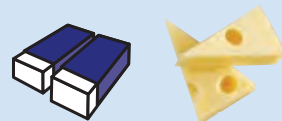
### One DASH serving of lower-fat milk products is:



1 cup (250 ml) of milk



1 cup (250 ml) of yogurt



1.5 ounces (50 g) of hard cheese  
= the size of 2 erasers



½ cup (125 ml) evaporated milk  
or ⅓ cup (75 ml) powdered milk  
= 1 cup liquid milk (250 ml)

# DASH... the tips

## Tips for eating 8–10 servings of Vegetables & fruit each day:

✓ Have a piece of fruit every morning.



✓ Snack on fresh fruit or dried fruit like apricots and raisins instead of cookies or baked goods.



✓ Cut up your favourite veggies (i.e. carrots, peppers, cauliflower), or keep bags of peapods, baby carrots etc., to have handy for meals and snacks every day.

✓ Make or choose salads with dark green lettuce (e.g. romaine) or spinach. Add lots of other veggies to your salads (go easy on the dressing!).



✓ Serve canned, frozen or fresh fruit for dessert.



✓ Remember that frozen vegetables are convenient and an excellent choice; serve them with dinner or add to soups and stews.

✓ Use low-sodium spaghetti sauce or tomato sauce to prepare casseroles and other dishes.



✓ Prepare homemade pizza with low-sodium tomato sauce and top with a variety of vegetables.



✓ Make your own chili or spaghetti sauce with lots of vegetables.

✓ Puree vegetables and add them to soups and sauces (they'll be smooth and full of veggies!).

✓ Create "creamy" vegetable soup by pureeing all or part of it before serving.

**USE THESE "TIPS" WHEN YOU PLAN YOUR OWN DASH DAY ON PAGE 8**

## Tips for eating 3 servings of lower-fat Milk products each day:



✓ Eat breakfast every day—have yogurt, cheese or milk every morning.

✓ Choose yogurt as a snack with your fresh fruit.



✓ Make yogurt dips with herbs for vegetables and use spices or fruit-flavoured yogurt for fruit.



✓ Drink milk as a beverage with meals at home and when eating out.

✓ Choose unsweetened, lower-fat lattes in place of coffee (they're more than half milk).

✓ Make soup and porridge with milk instead of water.

✓ Add cheese to salads and sandwiches.

✓ Serve pudding made with milk or yogurt for dessert.



✓ Add 1–2 Tbsp of skim milk powder to cooked cereal, casseroles, hamburger patties, soups and stews (2 Tbsp of skim milk powder equals about 1/3 cup of liquid milk).

### If you are lactose intolerant:

- Try drinking small amounts of milk (1/4–1/2 a cup) throughout the day with food.
- Choose yogurt (the bacteria breaks down lactose) or hard cheese (it contains almost no lactose).
- Drink lactose-free milk (e.g. Lactaid®) or ask your pharmacist about "lactase" tablets or drops.

**USE THESE "TIPS" WHEN YOU PLAN YOUR OWN DASH DAY ON PAGE 8**

## eat less sodium



Sodium is a component of salt (sodium chloride). It is also added to many processed foods. Table salt, sea salt and kosher salt all contain similar amounts of sodium. Sodium is added to food for flavour and as a preservative, and is present in ingredients such as monosodium glutamate (MSG), sodium nitrate, baking soda and baking powder.

Although our bodies need some sodium, most people consume 2 to 3 times the recommended amount. Canadians should consume **no more than** 2300 mg of sodium/day, which is roughly the same as 1 tsp of salt. The 'adequate' or recommended intake of sodium is 1200-1500 mg/day for most Canadians.

The sodium we eat comes from many places:

- 11% is added at the table or in cooking
- 12% occur naturally in food
- 77% comes from processed food

**Food labels can help:** Use the Nutrition Facts table to compare and choose foods with less sodium. Check the serving sizes and compare similar portions.

*% Daily Value of a nutrient: 5% or less means a food contains a little, and 15% or more means a food contains a lot of that nutrient.*

Nutrition Facts	
Valeur nutritive	
Per 1 tray (286 g) / Pour 1 plat (286 g)	
Amount	% Daily Value
Teneur	% valeur quotidienne
Calories / Calories	320
Fat / Lipides	8 g 12 %
Saturated / saturés	4 g 22 %
+ Trans / trans	0.4 g
Cholesterol / Cholestérol	30 mg
Sodium / Sodium	700 mg 29 %
Carbohydrate / Glucides	39 g 13 %
Fibre / Fibres	4 g 16 %
Sugars / Sucres	6 g
Protein / Protéines	24 g
Vitamin A / Vitamine A	8 %
Vitamin C / Vitamine C	15 %
Calcium / Calcium	25 %
Iron / Fer	25 %

## Tips to reduce sodium intake:

- ✓ Choose low-sodium, or no-salt-added versions of foods and condiments when available.
- ✓ Limit intake of pre-prepared or frozen microwaveable dinners, or choose sodium-reduced products.
- ✓ Limit intake of salty snack foods (e.g. chips, tacos, commercial popcorn).
- ✓ Use fresh poultry, fish, and lean meat, rather than cured, smoked, or processed products.
- ✓ Read labels on fresh poultry and meat as salt may be added during packaging—choose items with less sodium.
- ✓ Prepare meals at home; eat fast food less often.
- ✓ Cook rice, pasta, porridge and vegetables without adding salt.
- ✓ Use fewer packaged mixes to flavour rice and pasta.
- ✓ Rinse canned foods like tuna, legumes (e.g. kidney beans) and vegetables to remove some of the sodium.
- ✓ Use fewer canned soups/broths, and salad dressings (or look for low-sodium versions).
- ✓ Use spices, herbs, lemon, lime, vinegar, or salt-free seasoning blends to flavour foods in cooking and at the table.

## LIMIT:



- pickles, pickled vegetables, olives, and sauerkraut
- condiments like mustard, mayonnaise, ketchup, and barbecue sauce
- regular and low-sodium soy or teriyaki sauce (both contain a lot of sodium!)

**Make changes gradually; it takes time for taste buds to adjust. You will begin to enjoy the real taste of food!**

**USE THESE "TIPS" WHEN YOU PLAN YOUR OWN DASH DAY ON PAGE 8**

# My food plan for healthy blood pressure

Before you change how you eat, compare what you eat now to the DASH recommendations.

**Step 1** **Keep track.** Make several copies of this chart.  
Use them to record *everything* you eat and drink for several days.

DATE: _____		Vegetables & fruit	Milk products	Salty foods <small>(see list at bottom of page, check food labels)</small>
	What I ate & drank			
<b>EXAMPLE:</b>	Bacon & eggs, toast, orange, coffee	1		X
<b>MORNING</b>				
<b>MID-DAY</b>				
<b>EVENING</b>				
<b>My Totals:</b>				

**Step 2** **Estimate your current daily servings of vegetables & fruit and milk products.**

**Use the DASH Serving Size information** on page 5 to identify the serving size of each vegetable & fruit or milk products you ate or drank (e.g. 1 serving, ½ serving, 2 servings, etc). Information on food packages and kitchen measuring cups can help.

**Record** the serving number in the correct column beside that food. Total each column at the end of the day.

**Salty foods:** Put an **X** in the last column each time you eat foods like: salty snack foods, luncheon meats, canned soups, microwave meals, processed/cured meat, packaged flavouring for rice/pasta, frozen dinners, packaged gravy or sauce. Use information on food labels to help you.

### Step 3 Compare your food choices to the DASH recommendations.

Compare your Totals to the DASH recommended servings of Vegetables & fruit and Milk products to help you make a plan to improve.

Did you consume high sodium food most days?

YES  NO

DASH recommends each day:	I Ate:	I Still Need:
Vegetables & fruit 8–10 servings		
Milk products 3 servings		

### Step 4 Design your Food Plan.

Review the foods you ate... are there substitutions you can make? (e.g. replace a salty snack with a piece of fruit or yogurt.) Choose one food area to improve (i.e. Veg & fruit, Milk products or Salty foods). Start with only one item... trying to change everything at one time isn't likely to be successful. Make your plan very specific: include foods you will really eat. Think about where you will be and the time of day. Use the Tips on pages 6 and 7 to make gradual changes. If you start small, you are more likely to succeed.

**SAMPLE PLAN**

MY PLAN FOR INCREASING Vegetables & fruit

SERVINGS I STILL NEED 4.5

MY PLAN: I will take a handful of baby carrots  
in my lunch each day

MY PLAN to eat less sodium:  
I will eat a veggie omelette in place of  
bacon and eggs

**MY FOOD PLAN TO LOWER BLOOD PRESSURE**

MY PLAN FOR INCREASING \_\_\_\_\_

SERVINGS I STILL NEED \_\_\_\_\_

MY PLAN: I will \_\_\_\_\_

\_\_\_\_\_

MY PLAN to eat less sodium:

\_\_\_\_\_

\_\_\_\_\_

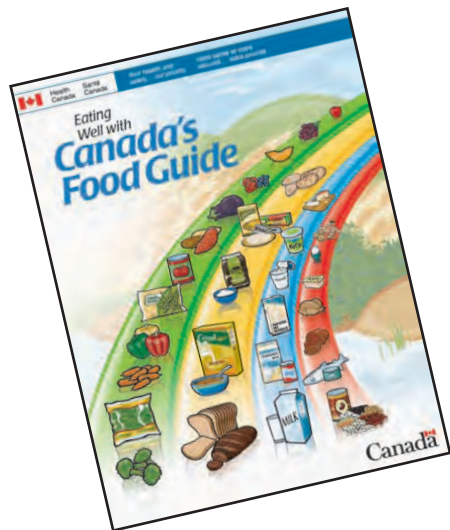
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### Step 5 Evaluate your Plan.

This step is designed to help you see if your plans are working. Make a copy of this chart for each week that you put a new plan into action. Check a box for each serving of Veg & fruit or Milk products you eat as you follow your plan each week. If you plan to eat less sodium, check a box each time you are successful (NOTE: If you need extra boxes for sodium plans, add more).

	Vegetables & fruit (8–10 servings)	Milk products (3 servings)	I ate less sodium
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Tuesday	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
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Friday	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
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Sunday	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

# You're well on your way to healthy eating with DASH!



“Vegetables & Fruit” and “Milk Products” are two of the four food groups in Canada’s Food Guide (CFG). CFG is an eating pattern that promotes good health, healthy weight and reduces many health risks.

Obtain a copy of the food guide from your local health office, the Heart & Stroke Foundation of Manitoba: 1.888.473.4636 or find it on Health Canada’s website: <http://hc-sc.gc.ca> under “Food & Nutrition”.

Read the Food Guide to learn about the recommended number of daily servings and portion sizes in the Grain Products and Meat & Alternatives food groups.

Keep track of what you eat each day. With the same process you used to score your DASH day, assess your whole day’s food intake for the four food groups and make plans to improve if needed.

**NOTE: The servings you consume from Vegetables & Fruit and Milk Products as part of DASH may be greater than Canada Food Guide recommendations.**

**In addition to healthy eating and following DASH, there are other lifestyle changes you can make to help improve your blood pressure. The more you do, the healthier your blood pressure will be!**



## **Achieve and maintain a healthy weight.**

If you are overweight, losing as little as 10 pounds (4.5 kg) will help your blood pressure. Physical activity helps with weight loss as well as lowering blood pressure. Work with your healthcare provider to develop a plan to achieve and maintain a healthy weight. Research has shown that following DASH can help you manage a healthy weight.

## **Accumulate 150 minutes of moderately-to-vigorously-intense physical activity every week.**

30 minutes of energetic activity like walking, jogging, cycling or swimming on most days of the week can reduce the risk of developing high blood pressure or help reduce high blood pressure. Start with a simple plan like a 10 minute walk each morning and evening. Physical activity will help you manage a healthy weight.

## **Limit alcohol to 1–2 standard drinks a day, or less.**

High intake of alcohol raises blood pressure. If you drink alcohol, limit yourself to 1–2 drinks per day. Women should consume no more than a total of 9 in a week and men not more than 14. If your blood pressure is high, talk to your doctor about drinking alcohol.

**Note:** “One drink” equals: one beer (355 mL of 5% beer), 5 ounces/148 mL of 12% wine or approximately 1.5 ounces/44 mL of 40% hard liquor. If you don’t drink—don’t start!

**If you smoke, get help to quit**  
Cigarettes and other tobacco products constricts blood vessels, which raises blood pressure. If you smoke, talk to your doctor about quitting.

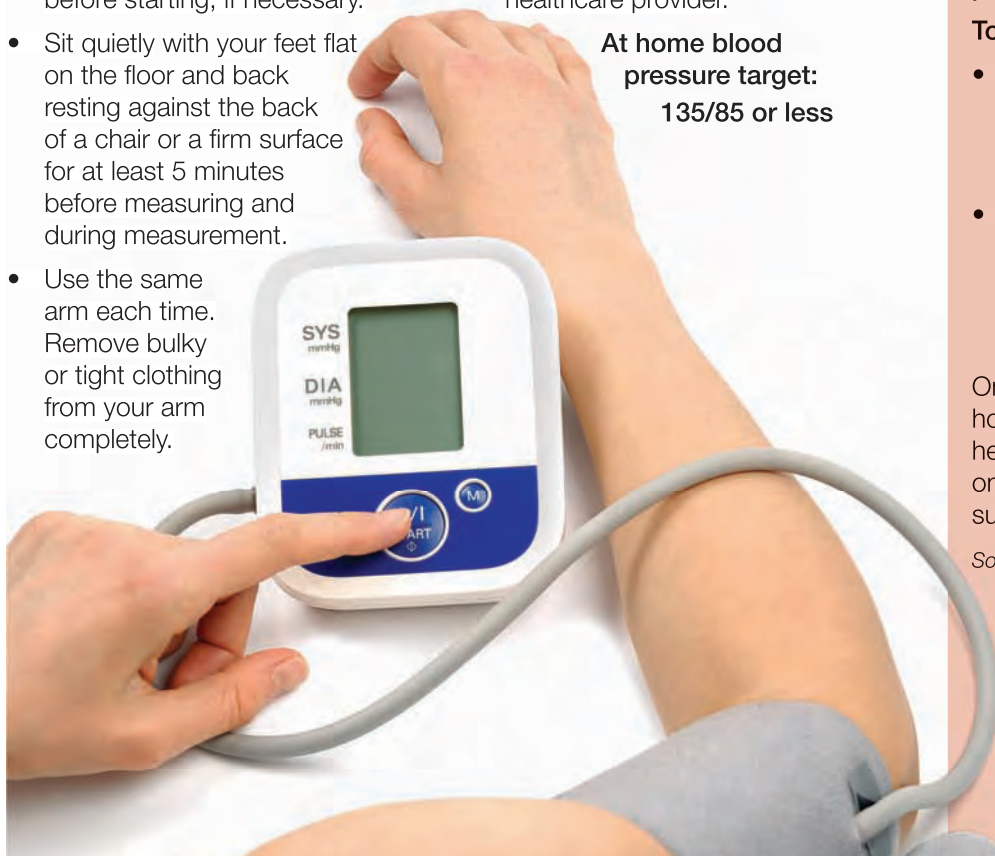
# How to measure your blood pressure at home

Your doctor may ask you to monitor your blood pressure at home. Checking your blood pressure at home can help your doctor know whether you are at risk of developing increased blood pressure, or how well your blood pressure is controlled.

Follow these steps to get the most accurate reading:

- Measure blood pressure in the morning before medication and eating, and in the evening before going to bed, bathing or taking medication.
- Take at least 2 readings and record them with time and date.
- Do not smoke and avoid caffeine beverages (coffee, tea, cola and some sports drinks) for 30 minutes beforehand.
- Do not measure your blood pressure when you are upset or in pain.
- Empty your bladder or bowels before starting, if necessary.
- Sit quietly with your feet flat on the floor and back resting against the back of a chair or a firm surface for at least 5 minutes before measuring and during measurement.
- Use the same arm each time. Remove bulky or tight clothing from your arm completely.
- Wrap the blood pressure cuff snugly around your bare upper arm (2 fingers should fit between the blood pressure cuff and your arm). The edge of the cuff must be  $\frac{1}{2}$  an inch to an inch (or 1 or 2 cm) above your elbow.
- Place your arm on a table or a firm surface. The cuff must be at the level of your heart.
- Do not talk during the test.
- Take one reading and record your blood pressure.
- Bring a record of your readings to your next appointment with your healthcare provider.

**At home blood pressure target:**  
**135/85 or less**



## Buying a home blood pressure monitor:

Devices used to measure blood pressure at home can be purchased from most pharmacies and from other stores that sell health-care equipment.

The pharmacy staff should be able to show you how to use the blood pressure monitor and help you choose the right cuff size.

This statement should appear on the box and/or in material supplied with the device: **Recommended by Hypertension Canada.**

Before you buy a home monitor, you'll need to know your correct cuff size.

**To find your cuff size:**

- Measure the circumference of your bare upper arm midway between shoulder and elbow.
- Match your measurement with measurements provided on the monitor's package or instruction manual.

Once you have purchased a home monitor, take it to your healthcare provider's office once or twice a year to make sure it gives accurate readings.

*Source: Heart & Stroke Foundation*



**HEART &™  
STROKE  
FOUNDATION  
OF MANITOBA**

[www.heartandstroke.mb.ca](http://www.heartandstroke.mb.ca)

