



BP Basics

.....
WHAT YOU NEED TO KNOW TO MANAGE
YOUR BLOOD PRESSURE



IT DOESN'T HAVE TO HAPPEN TO YOU.

“ My father had high blood pressure. But since he didn't have symptoms, he didn't take his medicines regularly. He also wasn't too good at making the lifestyle changes his doctor recommended. My father ended up having a stroke — when he was only 53 — one week after his grandson was born. His doctor said his stroke could probably have been prevented if he had controlled his blood pressure.

Because high blood pressure runs in my family, I've learned that I may be at increased risk too. But there are ways I can reduce my risk. For starters, I'm following a healthy diet, being more active every day, and managing my stress. So far it's working: my blood pressure was 114/72 the last time I measured it.

I want to be around for my kids and grandkids — so I plan to continue to take care of myself, track my blood pressure, and stay in touch with my doctor. ”

— KEITH,
family history of high blood pressure

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WHY DOES BLOOD PRESSURE MATTER?

If it's too high, **your blood pressure might be damaging your health right now** — and setting the stage for serious problems later on. Compared to people with controlled blood pressure, people with uncontrolled blood pressure are:

- **3** times more likely to develop **heart disease**
- **6** times more likely to develop **heart failure**
- **7** times more likely to have a **stroke**

Luckily, **there's a lot you can do** to control your blood pressure — and lower your risk of serious problems. National guidelines say you should “start early and treat aggressively” with lifestyle changes and the appropriate use of medicines.

This booklet explains how you can work with your healthcare team to reduce your risk. **It's up to you.**



For more information about controlling your blood pressure, talk to your doctor and find more Intermountain resources online at: intermountainhealthcare.org/BP.

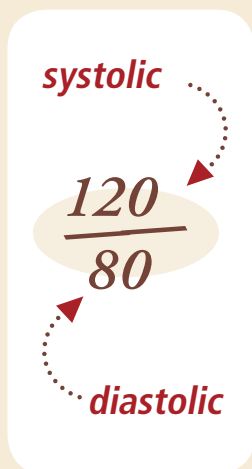
Understanding Blood Pressure



THE SILENT STALKER

More than 1 in 3 people with high blood pressure don't even know they have it. That's why this potentially life-threatening disease is sometimes referred to as the "silent stalker"—or even the "**silent killer.**"

A blood pressure measurement is expressed as two numbers: **systolic** "over" **diastolic**. Normal blood pressure is less than 120 "over" 80 (120/80).



What is high blood pressure, and why is it bad?

Blood pressure is the force of blood pressing against the walls of your arteries — much like the pressure of water in a garden hose.



You need *some* blood pressure to move blood through the arteries to where it's needed in the body. However, too much pressure can have the following effects over time:

- Damages and hardens the arteries.
- Weakens the artery walls, making them more likely to break or burst.
- Promotes fatty plaque buildup — called **atherosclerosis** — which narrows the arteries and restricts blood flow.
- Increases the amount of work the heart has to do. This can eventually enlarge and weaken the heart muscle.

These changes affect the heart and all of the arteries in the body. They also reduce oxygen delivery to other organs — such as the brain, the kidneys, and the eyes. This can cause heart disease, stroke, kidney disease, blindness, and other health problems.

How is blood pressure measured?

Blood pressure is measured with a simple instrument that has a complicated name: a **sphygmomanometer**. This instrument usually has an inflatable arm cuff attached to a machine or gauge that displays the pressure in millimeters of mercury (mmHg).

A blood pressure measurement is expressed as two numbers: systolic "over" diastolic.

- **Systolic blood pressure** — the top number — is the pressure in your arteries when the heart contracts, or beats, pushing blood through the arteries.
- **Diastolic blood pressure** — the bottom number — is the pressure remaining in your arteries when the heart relaxes between beats.

Both of these numbers are important measures of the stress on your artery walls. **If either number is too high you could have high blood pressure.**

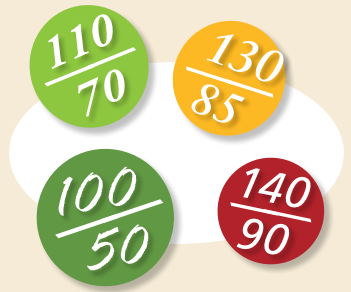
How is high blood pressure diagnosed?

Before diagnosing high blood pressure, your healthcare providers will check — and recheck — your blood pressure. They'll also ask questions about your personal and family health history, check your weight, and possibly do some lab tests. Part of the reason for these tests is to find out if another condition is causing your high blood pressure — or if your high blood pressure is leading to other problems (such as heart disease or kidney disease).

Your doctor may also ask you to take and record your own blood pressure at home. This strategy can help establish your normal blood pressure pattern. [See pages 20 and 21](#) of this booklet for more information on self-checking your blood pressure.

What do my numbers mean?

Category	Systolic		Diastolic	
Normal blood pressure	less than 120	and	less than 80	<i>Good news!</i> Keep up a healthy lifestyle. Have it rechecked at least every 2 years.
Elevated blood pressure	120–129	and	less than 80	Your BP is a problem. Make lifestyle changes now to control it. Have your BP rechecked at least once a year.
Stage 1 high blood pressure	130–139	or	80–89	You have high blood pressure. In addition to making healthy lifestyle changes, you'll probably need to take one or more medicines to manage your BP.
Stage 2 high blood pressure	140 or higher	or	90 or higher	



KNOW YOUR NUMBERS!

Blood pressure can be unhealthy even if it stays only slightly above normal. And the higher it rises, the greater the health risk. Know your numbers! Have your blood pressure measured regularly. It's easy and painless.

HOW LOW IS TOO LOW?

Some people have a naturally low blood pressure without any problems. But for some people, a drop in blood pressure can bring symptoms. If your blood pressure goes below about **100 / 50**—and you have any symptoms like dizziness or vision changes—talk with your healthcare provider. You may need an adjustment to your treatment plan.

WHEN TO CALL FOR HELP

Get medical help right away if:

- Your blood pressure is **180/110** or above
- You have chest pain, shortness of breath, or severe headache

What causes high blood pressure?

For most cases of high blood pressure, the specific cause is hard to pinpoint. However, many factors have been proven to increase your risk for developing high blood pressure. Some of these risk factors are not under your control — but many are! Knowing all your risk factors is the first step in reducing your risk. Use the checklists below to identify YOUR risk factors.

Risk factors you CAN'T change

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- Family history.** High blood pressure tends to run in families.
- Age.** In general, the older you get, the greater your chance of having high blood pressure. The most common age for men to develop high blood pressure is between the ages of 35 and 50 — and for women, after menopause.
- Race — especially African American descent.** African Americans have a higher risk for developing high blood pressure than any other ethnic group. Not only is high blood pressure more common in this group, but it happens at an earlier age and is often more severe.



Risk factors you CAN change

.....

- Inactivity.** People who aren't regularly active have a 20% to 50% increased risk of developing high blood pressure.
- Being overweight.** Excess weight puts a lot of extra stress on your heart and arteries. It not only raises your blood pressure, but makes you more prone to other diseases as well.
- Poor diet.** Many different elements of your diet can affect your blood pressure — including eating too much salt, drinking too much alcohol, and having a poor diet in general.
- Smoking.** Each time you smoke a cigarette, it causes an immediate and significant rise in your blood pressure. Over time, smoking can severely damage your blood vessels.
- Stress.** One of the ways your body responds to stress is by raising your blood pressure to handle the situation causing your stress. Unmanaged and ongoing stress can keep your blood pressure high.
- Birth control pills.** High blood pressure is 2 to 3 times more common in women taking birth control pills, especially in women who are overweight. If you're taking birth control pills — or are considering doing so — talk with your doctor about the risks and benefits.



Managing Blood Pressure with Lifestyle Changes

If you've been told you have elevated blood pressure or high blood pressure, don't be discouraged. You and your healthcare providers can work together to control it. It usually requires some lifestyle changes, and often requires one or more medicines. To help you remember and follow the important elements of blood pressure management, healthcare providers at Intermountain Healthcare use the term **MAWDS-BP**.

M

Take your **MEDICINE**

A

Get enough **ACTIVITY**
each day

W

Maintain a healthy
WEIGHT

D

Follow a healthy
DIET

S

Stop **SMOKING** and
manage **STRESS**



TAKE CONTROL!

Many patients with high blood pressure have not yet managed to control their blood pressure. That's because they don't make enough lifestyle changes, don't take medicine — or don't take enough medicine — to achieve control.

You can take control of your blood pressure by faithfully following the lifestyle changes outlined in **MAWDS-BP**.



MEDICINE

REDUCE MEDICINE-RELATED PROBLEMS

Keep an updated list of your all medicines in your wallet. Your pharmacist can give you a card to keep track.



Bring the list to all your medical visits. This will help anyone providing you care to know how to treat you.

Take your medicine

Along with lifestyle changes, many people will need to take **one or more medicines** to keep their blood pressure under control. If you've been prescribed medicine for your blood pressure, learn the name of each medicine, what it's for, and how to take it. Then do it! Use the table on the following page to learn more about what each type of medicine does.

Tips for managing your medicines

- **Make sure you understand exactly how to take your medicines**, including when to take them, how much to take, whether to take them with food, and what to do if you miss a dose.
- **Make your medicines part of your daily routine** — for instance, take them when you brush your teeth or do some other regular activity.
- **Make sure your healthcare providers know what other medicines you're taking.** Talk with your healthcare providers before you take any over-the-counter (OTC) medicines or supplements. Some OTC substances can affect how your prescription medicines work.
- **Plan ahead for refills** so you don't run out of medicines. If you can, order more medicines when you're down to a 2-week supply.
- **Don't stop taking your medicines just because your blood pressure is okay.** It probably means your medicine is working! Always talk to your doctor or pharmacist before making ANY changes to your medicine routine.

Medicine MYTHS and FACTS

1

MYTH

"Blood pressure medicines cost too much."

FACT

Studies have shown that some of the least expensive blood pressure medicines are just as effective in controlling your blood pressure as most of the newer, brand-name drugs. If you're worried about cost, talk to your doctor. There may be a less expensive drug or a generic form you can use instead.

2

MYTH

"Blood pressure medicines have too many side effects."

FACT

Fewer than 1 in 10 people experience annoying side effects from blood pressure medicines — and changing the medicine or dose can usually reduce or eliminate these effects.

If you have bothersome side effects, be sure to tell your doctor or pharmacist. You may need a different medicine.

3

MYTH

"I've reached my blood pressure goal. I don't need my medicines anymore."

FACT

Blood pressure medicines help lower blood pressure to a safe level, but usually only as long as you take them. If you stop taking your medicines, your blood pressure can go back to where it was before treatment. Continued treatment and follow-up is important. You may be able to stop your medicine in some cases, but you need to work closely with your healthcare team to do so.

Common categories of blood pressure medicines

It's important to know the names of all your medicines and how they work. The table below lists the most common categories of blood pressure medicine. Your doctor will prescribe the best medicines for your unique health situation. You may be on more than one medicine, or a combination drug that combines medicines from 2 different categories.

Category	How these medicines lower blood pressure	Examples
<input type="checkbox"/> Angiotensin converting enzyme (ACE) inhibitors	ACE inhibitors prevent formation of a protein (called angiotensin II) that causes blood vessels to become narrow. This helps the blood vessels open wider, which in turn lowers blood pressure. ACE inhibitors may cause a cough. If they do, contact your healthcare provider.	captopril (Capoten), enalapril (Vasotec), fosinopril (Monopril), lisinopril (Prinivil, Zestril), quinapril (Accupril), ramipril (Altace)
<input type="checkbox"/> Angiotensin receptor blockers (ARBs)	Like ACE inhibitors, ARBs also act on angiotensin II. Instead of preventing its formation, though, they block its effects. Therefore, blood vessels can open wider, helping to lower the blood pressure.	candesartan (Atacand), irbesartan (Avapro), losartan (Cozaar), valsartan (Diovan)
<input type="checkbox"/> Calcium channel blockers	Calcium channel blockers keep calcium from entering the muscle cells of your heart and blood vessels. Therefore, the blood vessels open wider, and pressure goes down.	amlodipine (Norvasc)
<input type="checkbox"/> Diuretics ("water pills")	Most diuretics lower blood pressure by helping the kidneys reduce the amount of sodium and water in the body. Some diuretics may cause your body to lose potassium and you may need to take potassium supplements. Some also help the blood vessels dilate (open wider) to lower blood pressure. Your doctor may prescribe more than one diuretic at a time.	hydrochlorothiazide (HCTZ), chlorthalidone, bumetanide (Bumex), furosemide (Lasix), metolazone (Zaroxolyn), torsemide (Demadex)
<input type="checkbox"/> Beta blockers	Beta blockers reduce nerve impulses to your heart and blood vessels. This lowers the heart rate and decreases the force of the heartbeat.	carvedilol (Coreg), metoprolol (Toprol)
<input type="checkbox"/> Aldosterone receptor antagonists	Aldosterone receptor antagonists trigger the kidneys to get rid of unneeded water and sodium through urine. This lowers the volume of blood that the heart must pump, which lowers blood pressure.	spironolactone (Aldactone), eplerenone (Inspra)
<input type="checkbox"/> Alpha blockers	Alpha blockers reduce nerve impulses to blood vessels, allowing blood to flow more easily.	doxazosin (Cardura), prazosin (Minipress), terazosin (Hytrin)
<input type="checkbox"/> Direct renin inhibitors	Direct renin inhibitors work by decreasing certain natural chemicals that tighten the blood vessels. This relaxes the blood vessels and helps to lower the blood pressure.	aliskiren (Tekturna)
<input type="checkbox"/> Combination drugs	Combination drugs can bring the benefits of 2 or more of the above medicines — sometimes in one pill. For example, you may be prescribed a drug that contains a diuretic and an ACE inhibitor.	
<input type="checkbox"/> Other		

ACTIVITY



Stay active each day

Everyone needs regular physical activity to stay healthy. Being physically active is one of the most important things you can do to prevent or control high blood pressure. According to the American Heart Association, people who are active have up to a 50% decreased risk of developing high blood pressure. They also find it easier to maintain a healthy weight and reduce their risk of heart disease in other ways.

Activity questions and answers

Q. *How much is enough?*

A. Start with this idea: **no physical activity is bad, some is good, and more is better.** Aim to build up to 150 minutes or more of moderate-level physical activity per week — or **30 minutes on most days of the week.** To reap even greater health benefits — or to lose weight — aim for 60 minutes a day. You can break this up into shorter sessions of as little as 10 minutes at a time. This may help if you have a busy schedule. You can build up gradually by adding more minutes per session or more sessions per day.

Q. *What does moderate-level intensity mean?*

A. What is moderate for one person may be easy or hard for another. In general, moderate-level exercise looks like this:

- You're breathing a little harder, but you're not out of breath.
- You can carry on a conversation, but you might not be able to sing a song.
- You might be perspiring lightly, but you aren't dripping with sweat.
- Your muscles may feel a little tired, but they're not burning from pain.
- You feel invigorated, but you're not exhausted.

As your fitness level improves, the level of work that is “moderate” for you will change. For example, walking at a 2 miles per hour might feel moderate to you now — but as you get stronger, it will begin to feel easier. You might have to gradually increase your pace to 3 or 4 miles per hour to maintain a moderate level of exertion.



WARM UP, COOL DOWN

To prevent injury, it's important to ease into and out of each exercise session gradually. This means warming up and cooling down at a lower intensity. Regular, gentle stretching after you exercise is also important to help you maintain or improve your flexibility and range of motion.

Q. What kinds of activities are best?

A. Focus on **aerobic** activities first. Aerobic activities train your heart, lungs, and muscles to use oxygen for energy. They use your larger muscle groups and are usually continuous, rhythmic, and invigorating. Examples are brisk walking, jogging, cycling, swimming, dancing, or playing sports.

Not all of your daily activity needs to come from formal aerobic exercise sessions. Daily activities such as gardening, climbing stairs, raking leaves, shoveling snow, washing windows — even housework — can bring important health benefits too.

Q. Do I need to see a doctor first?

A. Most people don't need to see a doctor before they start a moderate-level physical activity program. However, you should see a doctor first if any of the following are true:

- You have heart trouble or have had a heart attack.
- You're over age 50 and are not used to moderate-level physical activity.
- You have a family history of heart disease at an early age.
- You have any other serious health problem, including obesity.

Q. How can I stay motivated?

A. The key to staying motivated is to **choose activities you enjoy** and can keep doing for a long time. Do what works for you. Here are some ideas:

- **Make it fun.** Do you prefer playing on a team or working out alone? Bursts of speed or long, steady efforts? Going solo or being guided through the moves? Choose the activities that you really like.
- **Exercise with a buddy.** A supportive friend can help you stay on track.
- **Enjoy how it makes you feel.** Think progress, not perfection. Take note of how good you feel when you've been active.
- **Set goals and reward yourself for keeping them.** Set realistic goals — both short-term and long-term — for how often and how much you'll exercise. Give yourself a heart-healthy treat for reaching them.
- **Keep track and be accountable.** Consider using a pedometer to count your daily steps. Use a paper tracker (such as the ones shown on [page 22](#)), a smart phone app, or a computer program to record your activity.

IT'S ALSO IMPORTANT TO SIT LESS

New evidence shows that too much time sitting is bad for your health — even if you're getting the recommended amount of physical activity. Follow these guidelines to protect yourself:

- **Limit your total time sitting**, including time at work or school. A good goal is less than 6 hours per day, but start where you are and work down from there.
- If you have to sit a lot, try to **stand up and move around** for a few minutes every 20 to 30 minutes.
- **Limit screen time** (TV, video games, Internet), not including work or school. A good goal is less than 2 hours per day. Watching screens for hours and hours shortens your life.



WEIGHT



STICK TO YOUR PRINCIPLES

Whether you need to lose weight — or maintain your current weight — the principles are the same:

- Live a consistently active lifestyle
- Make healthy food choices
- Limit portion sizes

The information on activity ([pages 10 and 11](#)) and diet ([pages 14 and 15](#)) can help you learn and follow these principles.

Maintain a healthy weight

Research has shown that being overweight not only increases your risk of developing high blood pressure and heart disease, but also increases your risk of premature death and disability. The good news is that **losing even a small amount of weight** can significantly reduce your risk.

Achieving safe and permanent weight loss

Reaching and maintaining a healthy weight comes from making permanent changes to your everyday habits. The habits listed below have been proven to help the weight come off and stay off.

- **Plan to lose weight slowly** — about 1 to 2 pounds per week.
- **Make changes to your diet *and* your activity level.** The only way to keep the weight off is to do both.
- **Keep a food and activity journal.** Writing down what you eat and how you exercise will help you understand what's working. [See page 22](#) for where to get Intermountain's Habit Trackers.
- **Increase your exercise to about 60 minutes on most days** — or about 250 to 300 minutes per week. The people who lose weight and keep it off are the ones who keep up a high dose of exercise.
- **Don't give up if you get off track.** Everybody slips up — it's part of life. Stay focused on why you want to lose weight, and start over as many times as you need to.

Don't go it alone

As you start on a weight-loss program, consult with your high blood pressure team. They can help you determine a target weight range, figure out how many calories you should have each day, and teach you ways to adjust your diet and exercise program to reach your goals. They can also help you with ideas to stay motivated. Also, it helps to find a supportive friend or family member. A little encouragement can go a long way in helping you stay on track.



How do I know if I'm overweight?

There are two common measures used by healthcare providers to help determine if you're at an unhealthy weight: the body mass index (BMI) and waist circumference.

1 Body mass index (BMI)

BMI is a formula that compares your weight to your height. Studies have shown that BMI is an effective predictor of obesity and health problems. All adults with a BMI of 25 or more are considered at risk for premature death and disability. This risk increases as BMI increases. See the chart below to see which risk category your weight puts you in.

2 Waist circumference

Studies have shown that carrying too much fat around your stomach can also increase your risk for disease. Use a tape measure to measure around your natural waistline (just above your hipbones).

- For women, more than 35 inches is too high.
- For men, more than 40 inches is too high.



To use the BMI table, find your height in the left-hand column, and then move across to your weight. The number at the top of the column is the BMI for your height and weight. The label across the top shows the category you're in (normal, overweight, or obese). Keep in mind that BMI should not be the only tool used to assess risk. For example, people with high muscle density (such as athletes) may be perfectly healthy at a higher BMI.

BODY MASS INDEX (BMI) TABLE

	Normal						Overweight					Obese									
BMI	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
Height	Body Weight (pounds)																				
4'10"	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	167	172	177	181	186
4'11"	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173	178	183	188	193
5'	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	179	184	189	194	199
5'1"	100	106	111	116	122	127	132	137	143	148	153	158	164	169	174	180	185	190	195	201	206
5'2"	104	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	191	196	202	207	213
5'3"	107	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	197	203	208	214	220
5'4"	110	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	204	209	215	221	227
5'5"	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210	216	222	228	234
5'6"	118	124	130	136	142	148	155	161	167	173	179	186	192	198	204	210	216	223	229	235	241
5'7"	121	127	134	140	146	153	159	166	172	178	185	191	198	204	211	217	223	230	236	242	249
5'8"	125	131	138	144	151	158	164	171	177	184	190	197	203	210	216	223	230	236	243	249	256
5'9"	128	135	142	149	155	162	169	176	182	189	196	203	209	216	223	230	236	243	250	257	263
5'10"	132	139	146	153	160	167	174	181	188	195	202	209	216	222	229	236	243	250	257	264	271
5'11"	136	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	250	257	265	272	279
6'	140	147	154	162	169	177	184	191	199	206	213	221	228	235	242	250	258	265	272	279	287
6'1"	144	151	159	166	174	182	189	197	204	212	219	227	235	242	250	257	265	272	280	288	295
6'2"	148	155	163	171	179	186	194	202	210	218	225	233	241	249	256	264	272	280	287	295	303
6'3"	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	279	287	295	303	311
6'4"	156	164	172	180	189	197	205	213	221	230	238	246	254	263	271	279	287	295	304	312	320

DIET



Eat a healthy diet

What you eat and drink can have a big effect on your blood pressure. And it's not just about salt. A generally healthy diet can help lower your blood pressure. Follow the tips on these pages.

Food fundamentals

- **Choose foods wisely.** Eat **MORE** foods that are high in nutrients, such as those listed in building blocks 1 through 5 below. Eat **FEWER** foods that have a lot of added fat, sugar, and salt, such as those in block 6.
- **Enjoy what you eat — just eat less of it.** Be aware of how much you're eating, and limit your portion sizes.
- **Eat mindfully.** Pay attention to *why* you're eating (are you really hungry?). And pay attention to *what* you're eating. Eat slowly and enjoy every bite.

Build a better diet with the 6 basic nutritional building blocks below and on the next page:

1

EAT LOTS OF FRUITS AND VEGETABLES

Fruits and vegetables are a great source of fiber, are rich in vitamins and minerals, and contain substances called antioxidants and flavonoids, which improve heart health. A good daily goal is 3 to 4 servings of fruits (about 2 cups total) and 3 to 5 servings of vegetables (about 2 to 3 cups total).



2

EAT MORE WHOLE GRAINS

Grains and starches are a main part of diets all over the world. However, you need to learn to make healthy choices within this group. Choose whole grains and unprocessed starches. These contain dietary fiber, vitamins, and minerals. Examples are whole wheat, brown rice, oats, barley, cornmeal, and sweet potatoes. Limit or avoid refined starches such as white bread, white pasta, and white rice. Especially avoid desserts and sweets — they're usually made with refined starches, and are also high in sugar.



3

CHOOSE HEART-HEALTHY PROTEINS

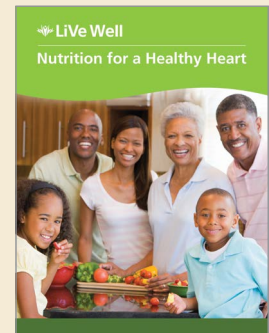
Protein is an important element in a healthy diet. Unfortunately, many sources of protein — such as red meat and pork — are often high in saturated fat and cholesterol. But that doesn't mean you can't eat them. Just limit how much and how often, and learn to choose the leanest cuts. Also make other heart-healthy animal or plant proteins a regular part of your diet. Examples of healthy animal proteins are fish and shellfish, poultry, and egg whites. Healthy plant proteins include beans, soy products, nuts, and seeds.



The DASH diet

DASH stands for “**D**ietary **A**pproaches to **S**top **H**ypertension.” It’s an eating plan promoted by the National Institutes of Health. It has been proven to lower high blood pressure, especially when combined with salt restriction. The principles are similar to the 6 building blocks described below. Information on the DASH eating plan is available on the NIH website at the following address: nhlbi.nih.gov/health/public/heart/hbp/dash. Intermountain also has a patient fact sheet available on blood pressure and the DASH diet. Access it — and other resources to help you manage your blood pressure — online at intermountainhealthcare.org/BP.

For more details on the 6 building blocks for heart-healthy nutrition, ask for the Intermountain booklet ***Nutrition for a Healthy Heart***. Or, access it online at intermountainhealthcare.org/BP.



4

CHOOSE UNSATURATED FATS AND OILS

Everyone needs some fat in their diet. Fats provide essential nutrients and add flavor and texture to meals. Eating the right types of fats is the trick. Look for foods that are higher in unsaturated fats (monounsaturated or polyunsaturated) and lower in saturated fat or hydrogenated fat (called trans fat). Good choices are olive oil or olives, canola oil, vegetable oils, and nuts. Try to keep your total fat intake to less than 25 % to 35 % of your total daily calories.



5

SELECT LOW-FAT DAIRY PRODUCTS AND DAIRY ALTERNATIVES

Dairy products are a good source of calcium, protein, vitamin A, and vitamin D. However, they tend to be high in fat and cholesterol. Sticking to low-fat dairy products or dairy alternatives will give you the same nutritional benefits without the drawbacks. Stick with products that are 1% fat or less, and aim for 3 servings every day. Try soy milk or powdered milk as a substitute for milk. Watch out for non-dairy whipped cream and coffee creamers, which contain a lot of saturated fat.



6

LIMIT SODIUM (SALT), SUGAR, AND ALCOHOL

Limiting **sodium (salt)** intake is important if you have high blood pressure. Sodium is a mineral found in most foods, especially processed foods. Our bodies need sodium to function, but most Americans consume almost 3 to 4 times the amount they need.

Most **sweets** have a lot of flavor — and a lot of calories — but little nutritional value. Keep sweets to a minimum.

A little bit of **alcohol** may not hurt, but keep your intake moderate. Women should have no more than 1 drink a day, and men should have no more than 1 or 2 drinks a day.



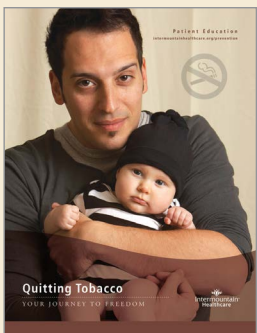


SMOKING AND STRESS



Ask your healthcare provider for a copy of Intermountain's ***Quitting Tobacco: Your journey to freedom*** — or, access it online at intermountainhealthcare.org/BP.

This booklet presents a step-by-step approach to quitting. It also lists more Intermountain, state, and national resources to help you.



Stop smoking and manage stress

Quitting smoking and learning to manage stress are two more ways you can lower your blood pressure. You'll also improve your overall health — and feel better too!

Kicking the tobacco habit

Smoking is bad for your heart and arteries. Among other things, it damages the tissues of the artery walls and narrows blood vessels. These things can speed the buildup of fatty plaque in your arteries and increase your blood pressure. Smokers have at least twice the risk of heart attack and stroke as non-smokers. The good news is that if you quit smoking now, you'll see immediate and significant health benefits — even if you've smoked for many years.

If you smoke, talk to your healthcare providers. They can help you plan a way to quit, and can suggest programs and methods to help you cope with the stress of quitting. They may also advise medicines to help reduce your craving for cigarettes and ease your withdrawal symptoms.

Resources for helping you quit

TOBACCO CESSATION PROGRAMS

Utah Tobacco Quit Line

www.tobaccofreeutah.org/quitline.html

English: 1-800-QUIT-NOW
(1-800-784-8669)

Español: 1-877-629-1585

The Utah Tobacco Quit Line is a free, phone-based service available to all Utah residents.

Quit for Life Program

www.quitnow.net

English: 1-866-QUIT-4-LIFE
(1-866-784-8454)

Español: 1-877-629-1585

The Quit for Life program is a confidential, phone-based tobacco cessation program.

Text2Quit

www.text2quit.com

This program sends personalized messages to coach you every step of the way.

ONLINE PROGRAMS

www.ffsonline.org

Get advice and support in a program from the American Lung Association.

www.becomeanex.org

Relearn life without tobacco.

NATIONAL ORGANIZATIONS

American Lung Association (ALA)

1-800-548-8252 (Lung HelpLine)

www.lungusa.org/stop-smoking

American Cancer Society (ACS)

1-800-227-2345

www.cancer.org

American Heart Association (AHA)

1-800-242-8721

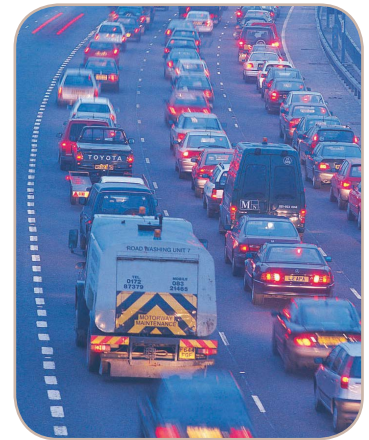
www.heart.org

Taking action against stress

Everybody has stress in their life. Some stress can even be good for you. It can energize you and make you more productive. However, when stress becomes long-lasting (chronic), it can have negative effects on your health — including high blood pressure.

Stress is the body's emotional and physical response to a change. One way your body responds to stress is by shifting energy from your immune system and digestive system to your heart — increasing your heart rate and blood pressure. This is fine for short periods of time, but if these changes are frequent or long lasting, as in chronic stress, they can take a toll on your body.

You can learn to manage stress. Managing stress is about taking charge of your thoughts, your daily habits, and the way you manage problems. The ideas below can help you build yourself a stress management “tool kit” to help reduce and manage stress in your life.



Stress Management Tool Kit

Build healthy everyday habits



- Move more.** Being physically active is one of the best ways to reduce stress. Physical activity actually makes chemical changes in your body that help you feel better.
- Eat well.** Eating regular, healthy meals will give your body the fuel it needs to manage stress.
- Sleep well.** Go to bed at a regular time each night and aim for 7 to 8 hours of sleep. If you can't sleep, get help.
- Take time for yourself.** Set aside time to think and relax. Make time for activities that are important to you, such as your spirituality or a personal hobby.

Learn skills to manage stress



- Learn to limit your commitments** so you can be sure you're doing what's most important to you. Learn to say “no.”
- Work to resolve conflicts at home or work.** Talk through conflicts instead of letting them fester. If you're in a heated situation, learn to pause before you react.
- Learn and use relaxation techniques** such as deep breathing or meditation.
- Learn to focus on the positive.** Spend some time every day thinking about what's going right in your life.
- Move from worry to action.** Taking action to solve a problem can relieve anxiety and give you a sense of control. For example, if you're stressed about money, get help learning how to manage money better.

Get to know your stress



- Learn what causes your stress.** It may be certain situations, commitments, or even certain people. It may be long-lasting issues such as money problems or traumatic past events.
- Learn to recognize your personal signs of stress.** Do you want to yell at someone? Do you get depressed and want to shut yourself in the back room?
- Be aware of how you currently cope with stress.** What do you do well? What new skills could you learn? You can ask others to give you feedback.

Tap into your support system



- Try to spend more time around people who comfort and support you.** Try to avoid being around people who don't handle stress well or who cause you stress.
- Learn from others.** Observe people in your life who handle stress well. Think about whether any of their good habits would work for you.
- Know when to ask for help.** You don't have to try to handle everything on your own. Ask your friends and family to support you.
- Ask for a referral to a mental health professional if your stress is high and has lasted a long time, your stress is interfering with your life, or you don't know where to start.**

Managing High Blood Pressure with Your Healthcare Team



The goal of your healthcare team is to help you achieve the best blood pressure control, with the fewest side effects, for the lowest cost.

ARE YOU TAKING YOUR MEDICINES EXACTLY AS DIRECTED?

Your doctor and pharmacist need to know if you're taking your medicines as directed. This is the only way they can know if the medicines are working — and what to do next.

- If you are **not** taking your medicines as directed for any reason, they'll try to understand why. (Are you concerned about cost? Having side effects? Having trouble remembering?) Then they'll help you make a plan to overcome the problem.
- If you **are** taking your medicines, but they're not helping enough, they'll make changes to your prescription.

Get to know your team

While you're working on your lifestyle changes, your healthcare team will work with you on your medicines. They will work together to prescribe medicines, adjust dosages, check your blood pressure, and teach you to track your own blood pressure. Your team may include:

- **Primary care provider.** Your primary care provider may be a doctor, physician assistant, or advanced-practice nurse.
- **Clinical pharmacist.** Your primary care provider may work with a clinical pharmacist who is trained to recommend changes to your blood pressure medicines. You may meet separately with this pharmacist.
- **Medical assistant or health advocate.** While you're working to bring your blood pressure into control, you'll need frequent blood pressure checks in the medical office. These team members are trained to take your blood pressure accurately. An office visit to the medical assistant or health advocate is faster, does not require any co-payment, and may not even require an appointment. Check with your clinic for details.
- **Other healthcare providers** such as a registered nurse, care manager, or registered dietitian, as your healthcare team recommends.

Take medicines as directed

Finding the blood pressure medicines that will work best for you may take time. What works best for you depends on a number of factors, and some of these factors will continue to change. Keep in mind that:

- **Your prescription may change several times at first.** Your healthcare providers will make small adjustments to fine tune your treatment.
- **You may need to take more than one medicine at a time.** Sometimes more than one medicine can be combined in a single pill.
- **You should not have serious side effects.** If you do, tell your team so they can see if a different medicine will work for you.
- **Your healthcare providers need accurate information** on how regularly you're taking your medicines. That's the only way they can know if the medicine is helping. See the sidebar at left for details.

Follow up often

Following up regularly with your healthcare team is a key part of your treatment.

While you're working to reach your blood pressure goal your healthcare team may want to follow up with you as often as every two weeks. These appointments will take different forms — and all of them are important to bringing your blood pressure into control.

- You may go in to see your primary care provider or pharmacist.
- You may receive a phone call from your pharmacist or medical assistant to ask about your medicines and your home blood pressure readings.
- You may be asked to drop in the medical office so a medical assistant or health advocate can take your blood pressure.

If you're checking your blood pressure at home, be sure to have your **BP Tracker** or other record with you every time. (See pages 20 to 21 for information checking your blood pressure at home.)

FOLLOW UP!

Continue to follow up regularly

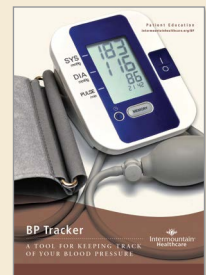
Once your blood pressure is in control, follow up with your healthcare provider and get your blood pressure checked every 6 to 12 months.

Even if you have normal blood pressure, regular follow-up is important.

- If you have **normal** blood pressure—less than 120 “over” 80 (120/80)—you should have your blood pressure checked again **at least every 2 years**.
- If you have **elevated** blood pressure — 120 to 129 “over” less than 80 (120–129/80) — you should have your blood pressure checked **every 6 to 12 months**.

KEEP TRACK OF YOUR BLOOD PRESSURE MEASUREMENTS

Your healthcare team will offer you a **BP Tracker**. Use this (or another tracker) to record your blood pressure measurements. Be sure to bring it to all your appointments.



The **BP Tracker** is available online at intermountainhealthcare.org/BP. You can print out pages as you need them.

Tracking Your Progress

For most people with high blood pressure, **checking your BP at home** is an important part of the treatment plan. Here's how it can help:

- It helps your healthcare providers — and you — see how well lifestyle changes or medicines are controlling your blood pressure. This can help fine-tune your treatment plan.
- It helps doctors evaluate whether you might have “white-coat” high blood pressure, which means your blood pressure tends to be high only at the doctor’s office.
- It helps keep you focused on staying healthy — and motivates you to continue taking care of yourself.



How often to check

How often you measure and record your blood pressure is up to you and your doctor. When you're first diagnosed with high blood pressure, or after changes to your medicines, you may be asked to take your blood pressure daily — maybe even twice a day (morning and evening). Once your blood pressure becomes more stable, you need to continue to check it at least once a week.

How to choose a monitor

There are many types of blood pressure monitors on the market. You can purchase a blood pressure monitor in a drugstore, supermarket pharmacy, or other large store. Here are some tips for choosing a blood pressure monitor:

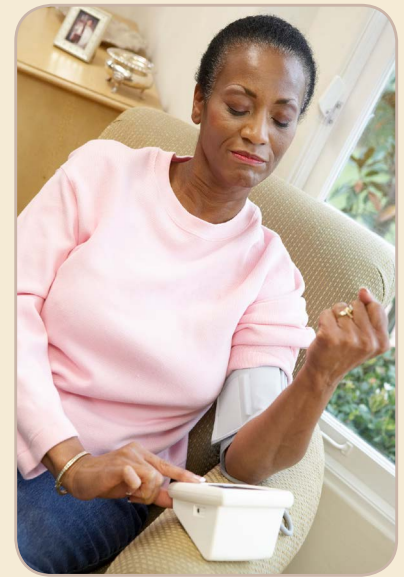
- **If possible, choose a monitor that inflates automatically.** A good automatic arm monitor costs about \$50 to \$100. If you have a monitor with a “squeeze ball,” have someone else squeeze the ball to inflate the cuff.
- **Choose a monitor that also shows your heart rate.** Some blood pressure medicines affect your heart rate (heartbeats per minute), so your doctor may ask you to keep track of it. A normal heart rate is 60 to 100.
- **Choose a monitor with a cuff that wraps around the upper arm.** Avoid wrist cuffs. Arm monitors are more accurate.
- **Be sure the arm cuff is the right size for your arm.** Most cuffs fit upper arms that are 9 to 13 inches around. If your upper arm is more than 13 inches, buy a monitor with a large cuff. You may have to pay extra or order the large cuff separately, but it's worth it. Using the right size cuff will help ensure a correct measurement.



How to check accurately

It's vital that your blood pressure measurement is accurate. You don't want your blood pressure treatment to be based on incorrect measurements. Here are some tips to ensure you get the most accurate readings possible:

- **Compare your blood pressure machine to the one used in your healthcare provider's office.** Have your healthcare provider check your monitor about every six months. If you drop the monitor, or readings change abruptly, have it checked right away.
- **Make sure the blood pressure cuff is the correct size** for your arm, and that it's positioned correctly with no wrinkles in the cuff. Remove clothing that interferes with cuff placement. Also avoid tight or restrictive clothing (like rolling up a sleeve to expose the arm).
- **Don't take your blood pressure within a half hour of eating a heavy meal, drinking caffeine or alcohol, exercising, or using tobacco products.** These things can temporarily raise your blood pressure. A full bladder can also raise your blood pressure, so use the rest room first.
- **Rest both feet flat on the floor with your back supported.** Rest your arm at heart level on a table or the arm of a chair, using a small pillow if needed.
- **Sit quietly for 5 minutes or more before taking your blood pressure.** Avoid talking or other distractions. Take 2 or 3 readings at least 2 minutes apart, and record all the results.
- **Record the day and time you take your blood pressure.** Your blood pressure can go up or down based on the time of day or what you're doing. Recording the time you take your blood pressure will help you and your blood pressure team see a pattern.
- **Record which arm the reading is from.** Most patients should measure BP in the non-dominant arm. (That is, if you're right handed, measure on your left arm.) However, because blood pressure in one arm can be different from the other arm, your doctor may recommend you check both arms at first. If there is a consistent difference, tell your doctor and then regularly measure in the arm with the higher reading.
- If you have a fistula in your arm (for dialysis), or if you've had a stroke or a radical mastectomy on one side, take your BP on the other arm — unless your doctor tells you otherwise.



- ➔ Before taking your blood pressure, sit quietly for 5 minutes or more, with both feet flat on the floor. If possible, rest your arm at heart level on a table or the arm of a chair.

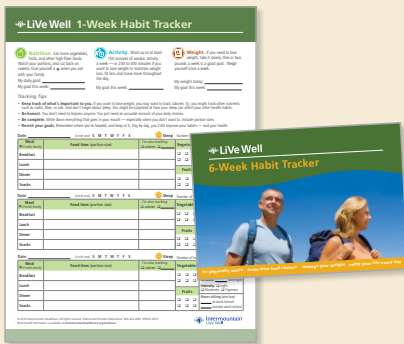
USE A TRACKER TO RECORD YOUR RESULTS

See [page 19](#) for information on Intermountain's *BP Tracker*.

Getting Started

TRACKING HELPS

Keeping track of your lifestyle changes — just like keeping track of your blood pressure — can motivate you to keep going. Intermountain Healthcare's **Habit Trackers** help you track your activity, diet, sleep, and weight. You can also track specific nutrients in your diet, such as salt.



The Live Well **1-week Habit Tracker** and **6-week Habit Tracker** are available online at intermountainhealthcare.org/BP. You can print out pages as you need them.

This book recommends a number of important ways to help manage your blood pressure. It might seem like a lot to think about at once. Start by writing down a few recommended activities. Then choose the one or two things you feel most ready and able to do, and start there.

Lifestyle change

Write in one thing you could do to get started in each of the **MAWDS** lifestyle change categories (described on [pages 8 to 17](#)). Then choose just one at a time and make a plan to start working it into your routine.

- **Medicines** ([pages 8 and 9](#)) _____
- **Activity** ([pages 10 and 11](#)) _____
- **Weight management** ([pages 12 and 13](#)) _____
- **Diet** ([pages 14 and 15](#)) _____
- **Stop smoking** ([page 16](#)) _____
- **Manage stress** ([page 17](#)) _____

Work with your healthcare team and track your progress

Write in one or two things you could do to work more closely with your healthcare team. Below are some examples.

- **Follow up with your healthcare team.** For example: *Make an appointment to come back and have your blood pressure checked again.*

- **Manage your medicine.** For example: *Have an honest talk with your doctor about your concerns about medicines, and what would help.*

- **Home tracking.** For example: *Get a blood pressure monitor that you can use at home and make sure you know how to use it correctly.*

- **Other:** _____

Looking Forward

As you start to bring your blood pressure into control, you may have questions about what high blood pressure means for your future. Below are a few common questions and responses.

Can high blood pressure be cured?

No. High blood pressure cannot be cured, but it can be managed. The treatments are very effective and generally very safe. If you continue with the lifestyle changes and medicines your doctor recommends, you'll be able to keep your blood pressure in control. If you stop these treatments, your blood pressure will probably go up again quickly.

How long will I have to take blood pressure medicines?

If you're controlling your blood pressure with medicines, you'll probably always need to take them. If you're able to improve your blood pressure with lifestyle change, you can talk with your doctor about reducing your dose or, possibly, stopping medicines. If you do, it's very important to keep checking your blood pressure to make sure it's in control.

If I get my blood pressure in control, am I still at risk for serious health problems?

If you follow your treatments and keep your blood pressure in control, your risk of coronary heart disease (like a heart attack), congestive heart failure, and stroke go down significantly. In fact, if you follow the lifestyle recommendations described in this book, most aspects of your health will improve.

There's no guarantee that you won't have a problem at some point, but keeping your blood pressure in control is one of the best things you can do for your health.



I WANT TO BE ABLE TO TAKE CARE OF MYSELF.

“ My sister had high blood pressure for years. She thought if she couldn't see it or feel it, then it must not be all that bad. She hated taking pills, and she missed a lot of days.

Then she had a stroke and was paralyzed on her left side. Her doctor said it was the high blood pressure that caused it. Now she lives with me and I take care of her every day.

I love my sister, and I'd do anything for her. But this is *not* easy — for either of us.

When it comes to me, I'm taking my blood pressure pills. I'm eating right. I go walking every single day.

All of it. ”

— BEVERLEY
managing her blood pressure

To find these and other resources, go to:
intermountainhealthcare.org/BP



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