



Sanford Center for Screening

SANFORD[®]
HEART

Sanford Center for Screening

Did You Know

Even with no other symptoms, people with risk factors for heart disease such as hypertension, diabetes, and obesity, should be treated as aggressively as those with known heart disease?



One in Five

Americans has high blood pressure



One in Two

Americans have elevated cholesterol

The Best Care for Patients

The heart care team at Sanford Health believe that prevention and minimally invasive treatment is best for the patient. Sanford's cardiologists and surgeons are available 24/7. They work with the ER staff, family medicine providers, and other specialists to deliver the best results.

The Sanford Center for Screening is connected to our large network of providers who are able to offer care to patients no matter what the need.



Sanford Center for Screening

Screening and Education Services

Sanford Health Center for Screening provides people with resources and wellness information to improve their health. Our goal is to help develop an active and healthy community through screening services, education, and prevention.

Heart Screen

The Heart Screen is a group of tests that evaluates your risk of Heart Disease. The Heart Screen may include:

- CT Calcium Score
- Blood Pressure
- EKG
- Body Mass Index (BMI)
- Total Cholesterol

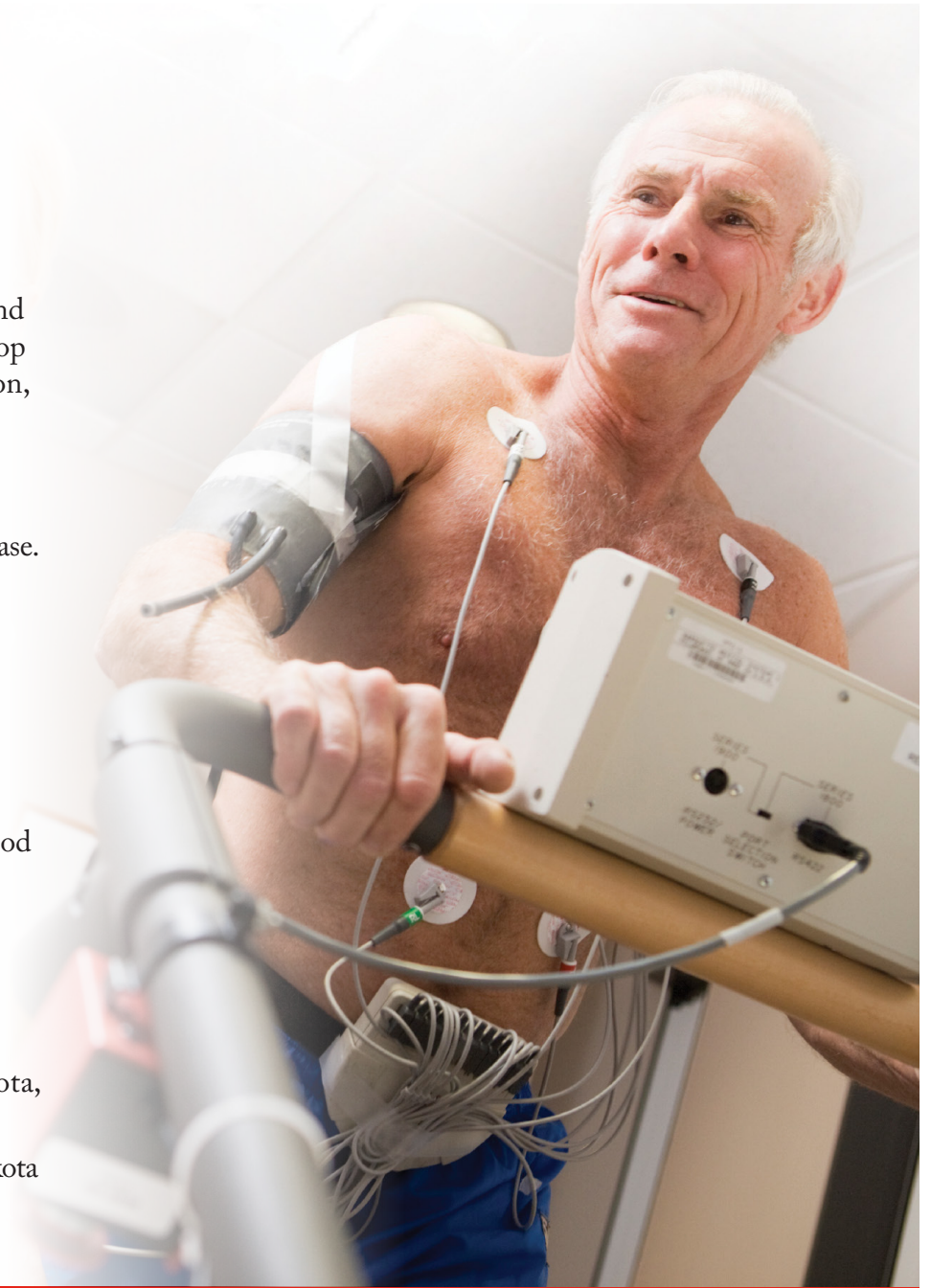
Vascular Screen

The Vascular Screen is a group of ultrasound tests that evaluate the blood vessels in the neck, legs and abdomen. The Vascular Screen includes:

- Carotid Artery Ultrasound
- Ankle Brachial Index
- Abdominal Aortic Aneurysm Ultrasound

For more information, or to schedule an appointment in South Dakota, Minnesota, or Iowa call (605) 312-2150.

For more information or to schedule an appointment in Fargo, North Dakota call (701) 417-4295.



The Heart Screen

The Heart Screen is a group of tests that evaluates your risk of Heart Disease.

Body Mass Index (BMI)

Compares your height and weight to a healthy weight.

Blood Pressure

Measures the pressure of the blood against the wall of your arteries. Elevated blood pressure increases the risk of heart disease and stroke.

Electrocardiogram (EKG)

Records electrical impulses as they travel through the heart. Patterns in heartbeats and rhythms may suggest a number of heart conditions.

Framingham Score

Estimates risk of having heart problems within the next 10 years.

Heart Calcium Score

Looks at the amount of plaque in the coronary arteries (blood vessels). The higher the score on your calcium test, the more plaque you have in the arteries of your heart. This increases your chance of having a heart attack.

Lipid Panel

Total Cholesterol (non-fasting) Measures:

- Total Cholesterol (TC)
- High Density Lipoprotein (HDL) - good cholesterol
- TC/HDL Ratio

Results that are outside of the normal range increase the risk of heart disease and stroke.



Prevention for Women

Screenings are one of the most important things you can do for your health. Review these guidelines and talk with your provider. The screenings recommended for you may vary based on your history.

General Screenings for Women	Ages 18-39	Ages 40-49	Ages 50-64	Ages 65 and older
Bone Density Screen		Talk with your provider	Talk with your provider. Women <64 and menopausal should be screened.	Get a bone mineral density test at least once. Talk with your provider about repeat testing.
Mammogram		Every 1-2 years. Talk with your provider	Every 1-2 years. Talk with your provider	Every 1-2 years. Talk with your provider. If you are older than 75, ask your doctor if you should be screened.
Pap Test	Every 3 years. Starting at age 21	Every 3 years	Every 3 years	Talk with your provider
Pelvic Exam	Every year beginning at age 21	Every year	Every year	Every year
Colorectal Cancer Screen			Talk with your doctor about which screening test is right for you.	Talk with your doctor about which screening test is right for you. If you are older than 75, ask your doctor if you should be screened.

Prevention for Men

Screenings are one of the most important things you can do for your health. Review these guidelines and talk with your provider. The screenings recommended for you may vary based on your history.

General Screenings for Men	Ages 18-39	Ages 40-49	Ages 50-64	Ages 65 and Older
General Physical Exam	Every year	Every year	Every year	Every year
Prostate-Specific Antigen (PSA)		Talk with your provider	Every year	Every year
Colorectal Cancer Screen			Talk with your doctor about which screening test is right for you.	Talk with your doctor about which screening test is right for you. If you are older than 75, ask your doctor if you should be screened.

Coronary Artery Disease

What Is Coronary Artery Disease?

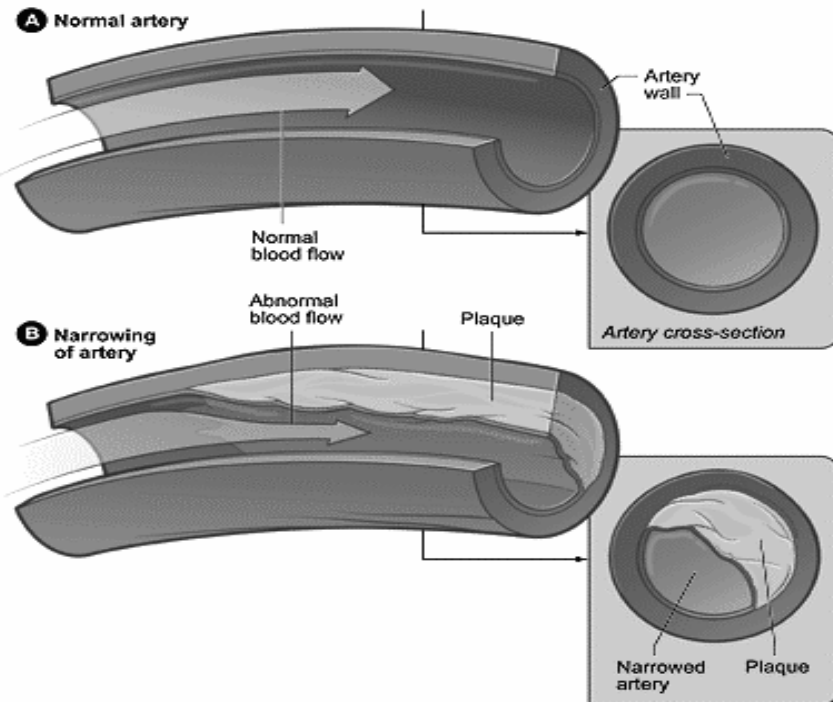
Coronary Artery Disease (CAD) is a narrowing of the small blood vessels that supply blood and oxygen to the heart.

What Happens When Narrowing Occurs?

When your coronary arteries are narrowed or blocked, oxygen-rich blood cannot reach your heart muscle. This can cause chest pain (angina) or a heart attack. A heart attack occurs when blood flow to an area of your heart muscle is completely blocked.

Over time, CAD can weaken the heart muscle leading to heart failure and an irregular heart beat.

CAD is the most common type of heart disease and the leading cause of death in the United States for both men and women.



Estimates of Health Risk

Body Mass Index

Body Mass Index (BMI) is calculated from a person's weight and height. For most people, BMI is a guide to how much body fat they have. It is used to screen for weight categories that may lead to health problems.

When determining BMI a lot of information is not used such as:

- Percent body fat
- Activity level
- Muscle mass

BMI may **underestimate** body fat in older persons and others who may have lost muscle mass. But, the BMI **overestimate** body fat in athletes or others who have a muscular build.

Underweight	18.5 or less
Normal Weight	18.5 - 24.9
Overweight	25 - 29.9
Obesity	30 or greater
Extreme Obesity	greater than 40

Waist Management

Just above your navel is your natural waist. The distance around your natural waist is your waist circumference. Your waist circumference goal should be 40 inches or less in men and 35 inches or less in women.

Waist-to-Hip Ratio

Where fat is stored can be an indication of your risk for heart disease, stroke, and diabetes. Measure your hips at the widest part of your buttocks. Using the waist measurement determined above, divide your waist measurement by your hip measurement.

Females	Males	Body Shape	Estimated Health Risk
0.80 or below	0.95 or below	Pear	Low
0.81 to 0.85	0.96 to 1.0	Avocado	Moderate
0.85+	1.0+	Apple	High

Blood Pressure

Blood pressure measures the force blood puts on blood vessel walls as it travels through the body. It is two numbers (for example, 120/80). The systolic (top) number shows the pressure in the heart and arteries when the heart contracts. The diastolic (bottom) number shows the pressure in the heart and arteries during the resting or filling stage of the heartbeat.

A “normal” blood pressure is less than 120/80 but will vary with activity or stress. Blood pressure readings that are usually elevated can lead to heart attack and other forms of heart disease. Because high blood pressure often has no symptoms, it is known as “the silent killer.” If high blood pressure is not treated, it leads to stress on the blood vessel walls causing them to thicken or weaken. It can cause clots to break off artery walls and plug an artery in the heart, brain or elsewhere in the body.

Blood Pressure Category	Upper Number (Systolic)		Lower Number (Diastolic)
Normal	Less than 120	and	Less than 80
Elevated	120 to 129	and	Less than 80
High Blood Pressure (Hypertension Stage 1)	130 to 139	or	80 to 89
High Blood Pressure (Hypertension Stage 2)	140 or higher	or	90 or higher
Hypertensive Crisis (talk with your provider immediately)	Higher than 180	and/or	Higher than 120

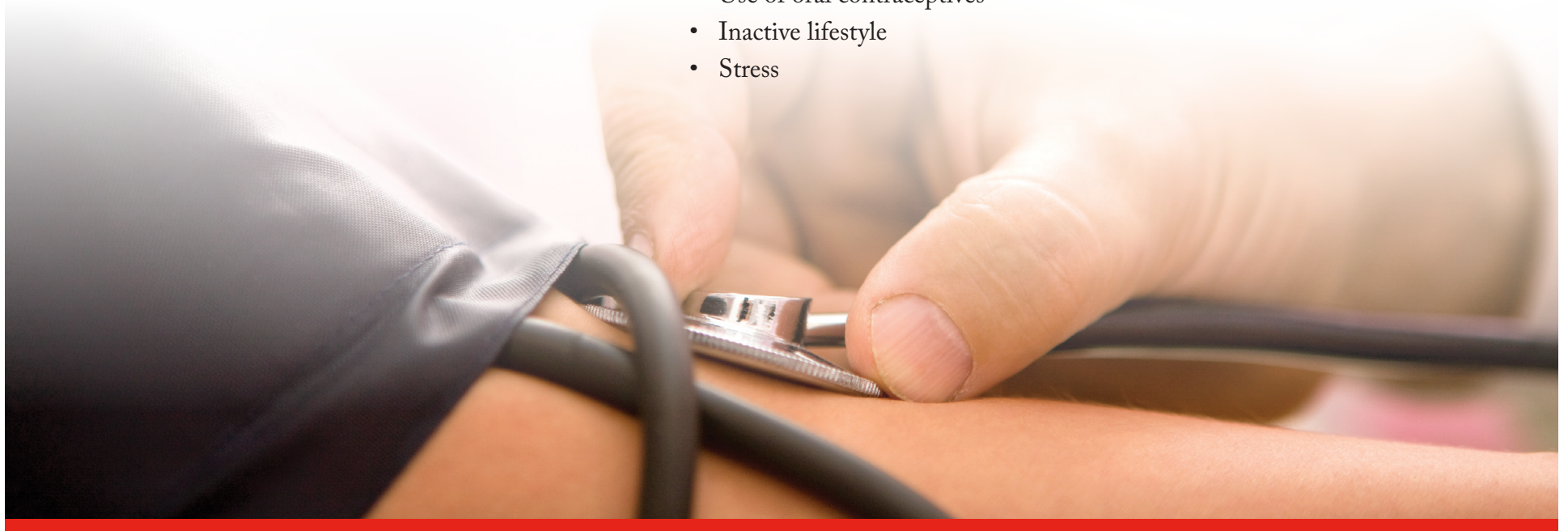
Blood Pressure

Tips to Control Blood Pressure

- Reach and maintain a healthy weight
- Use salt in moderation
- Eat foods low in fat, high in fiber and low in dietary saturated fats
- Get regular aerobic exercise
- Avoid alcohol or drink moderately
- Use caffeine in moderation
- Take medicine if prescribed
- Stop using tobacco

Risk Factors

- Family history of high blood pressure
- Gender – men are more likely to have high blood pressure; but women's chance of having high blood pressure increases after menopause
- Age – over 55 years of age
- Ethnicity – African Americans, Hispanics, and Asians are more likely to have high blood pressure
- Excess weight – a BMI of more than 25 or a Waist/Hip Ratio of more than 0.80 for women; or 0.95 for men
- Salt or sodium sensitivity
- Use of alcohol
- Use of oral contraceptives
- Inactive lifestyle
- Stress



Electrocardiogram (EKG)

An electrocardiogram – also called an EKG or ECG – is a recording of the electrical impulses of your heart. This brief snapshot of the heart's electrical activity can show if the heart is beating normally. If the heart is found to have an irregular rhythm, more tests may be needed.

The heart is a hollow muscle that contracts and relaxes to pump blood and oxygen to the body. Each heartbeat has an electrical impulse. Once the heart muscle has received the impulse, it contracts causing a heartbeat. After each beat, the muscle recharges.

The electrical impulses which cause the pumping action, create a series of peaks and valleys that represent a cardiac cycle (one heartbeat). An irregular heart rhythm may mean there is an abnormal heart structure, or problems with the oxygen and blood supply to the heart.



Electrocardiogram (EKG or ECG)

A resting EKG takes only a few minutes. Heart rhythms are evaluated for heart rate, regularity and cardiac cycle.

Heart Rate

A normal resting heart rate is between 60 and 100 beats per minute. A heart rate above 100 is known as “tachycardia” and a heart rate below 60 is known as “bradycardia.”

Heart Rhythm

A healthy heart beats regularly. Irregular rhythms are called arrhythmias. They can cause the heart to beat erratically. An arrhythmia can cause the heart to pump faster or slower than normal. If the irregular beat lasts longer than a few minutes, the change in blood flow can cause light-headedness, dizziness, or weakness.

Cardiac Cycle

The cardiac cycle may not be normal if the heart is enlarged or inflamed, has congenital changes, or other problems. How often the cycle is different is noted along with any symptoms that may occur at that time. If the change occurs often or with symptoms, your doctor may recommend more testing.

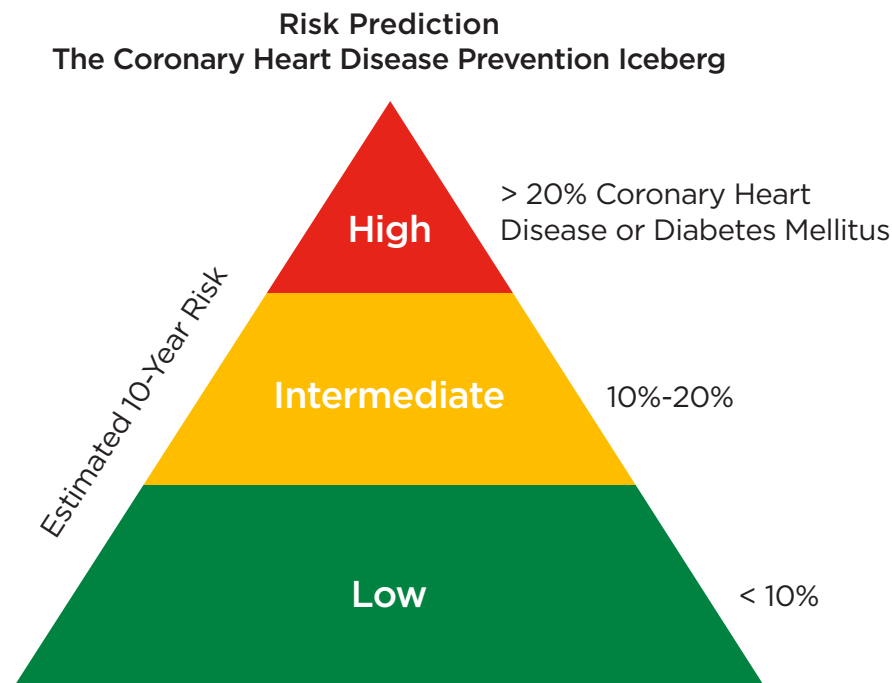
Framingham Score

Framingham Heart Study researchers have developed a score sheet that can help predict when a person may have angina (chest pain), a heart attack, or die from heart disease.

The score is determined by assessing your risk factors and personal health history that can lead to heart disease such as:

- High blood pressure
- Cholesterol
- Tobacco use
- Age and gender

The test gives you one number that estimates your risk of having heart disease within the next 10 years. This number can be greater than 1% or less than 30%.



Heart Calcium Scoring

Plaque is a build up of fat on the inside of the walls of your arteries. The heart calcium score looks at the amount of plaque in the coronary arteries. The higher the score on the calcium test the more plaque you have in the arteries of your heart. This increases your chances of having a heart attack or Coronary Artery Disease (CAD).

Why Is the Scan Done?

The scan helps detect early heart disease.

Who Should Have the Screening?

A doctor may recommend this test if you have risk factors for CAD but no clinical symptoms. It is often suggested for anyone 40 years of age or older or those with other risk factors.

Risks From the Screening

There is a slight risk from being exposed to any radiation, including the low levels used for a CT scan.

“For some people the **first sign** of underlying cardiovascular disease is sudden cardiac death.”



Cholesterol Facts

Cholesterol is a soft, waxy fat (lipid) found in the blood and body cells.

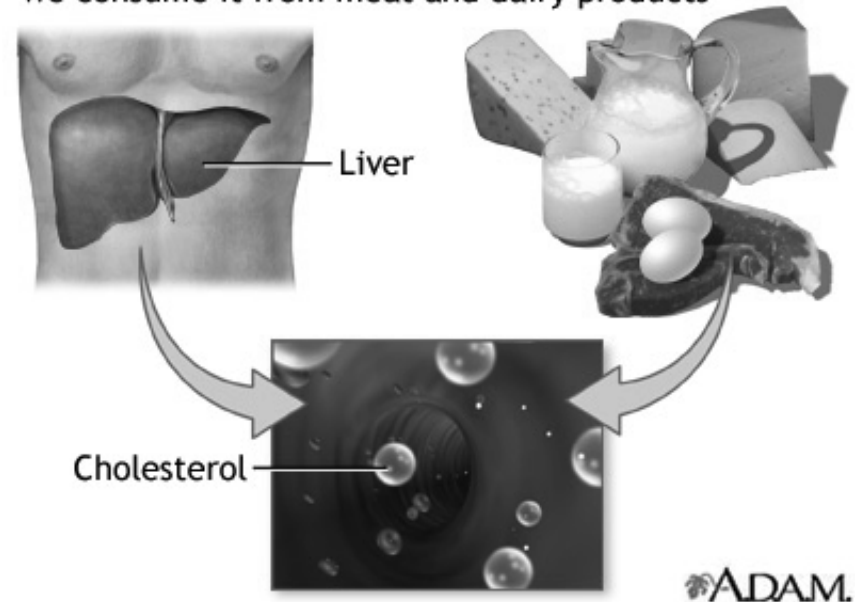
Cholesterol is needed to build cell walls, transmit nerve impulses, and produce hormones. The liver makes all the cholesterol the body needs, however we also get cholesterol through our diet.

Most people eat far too much cholesterol per day. Health experts recommend less than 300 mg/day and less than 200 mg/day if you already have high blood cholesterol.

High cholesterol levels increase the chance for plaque buildup in artery walls. This is called atherosclerosis.

Your body needs cholesterol to function. However, too much cholesterol can cause serious problems such as heart attacks.

Cholesterol is produced by the liver and we consume it from meat and dairy products



Types of Cholesterol

Total Cholesterol

Total Cholesterol (TC) is made up of both “good” and “bad” cholesterol. It measures the amount of cholesterol in the blood at a given time.

High-Density Lipoprotein (HDL)

High-Density Lipoprotein (HDL) is “good” cholesterol. It protects against plaque buildup by removing bad fats from artery walls. You can increase your HDL by doing aerobic exercise regularly and not using tobacco. TC/HDL Ratio is the balance between the TC and the HDL. When your level of HDL is low in relation to your total cholesterol, you may develop heart disease.

TC/HDL Ratio

is the balance between the total cholesterol and the HDL. When insufficient levels of HDL exist in relation to the total cholesterol, heart disease can develop.

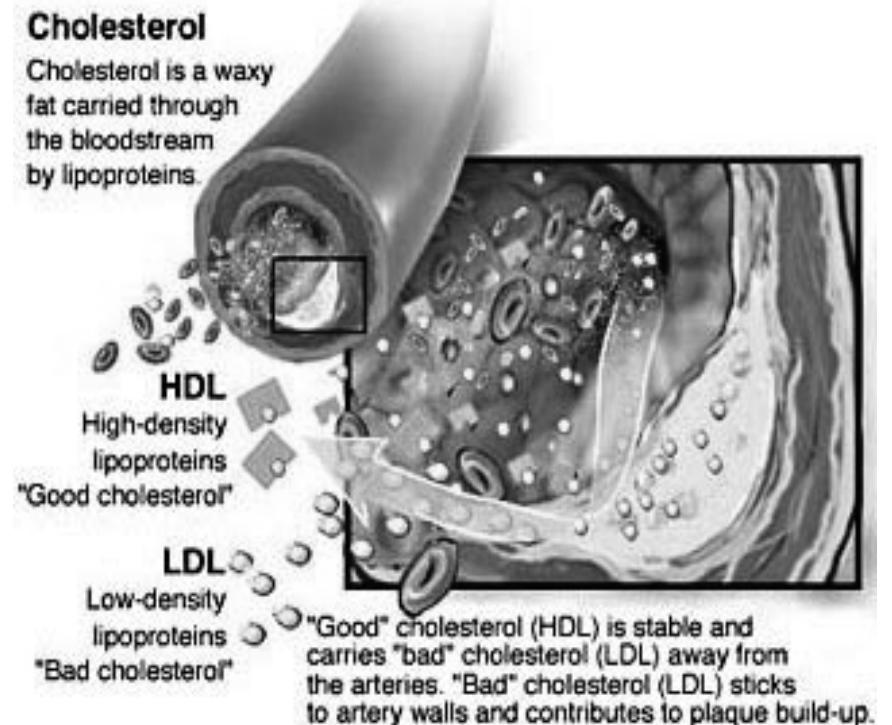
Low-Density Lipoproteins (LDL)

Low-Density Lipoproteins (LDL) is “bad” cholesterol that can build up as plaque in artery walls. Taking in less saturated fats and trans-fats can reduce LDL levels.

Triglycerides

Triglycerides are another form of fats found in the blood. They move LDL to the arteries where it creates plaque build-up. Triglycerides come from:

- Excess sugar
- Simple carbohydrates
- Excess alcohol intake
- Excess weight
- Poorly controlled blood sugar levels



Total Cholesterol (Non-Fasting)

The Total Cholesterol non-fasting screen measures your Total Cholesterol, HDL (good) Cholesterol and TC/HDL Ratio. Results outside the normal range increase your risk of heart disease and stroke.

	Recommended	Moderate Risk	High Risk
Total Cholesterol	199 or less	200 to 239	240 or greater
HDL (Good Cholesterol)	60 or greater	59 to 40	less than 40
TC/HDL Ratio	4.5 or less	4.6 to 5.9	6 or greater
LDL (Bad Cholesterol)	100 or less	130 to 159	160 or greater
Triglycerides	150 or less	150 to 199	200 or greater

General Tips to Reduce Cholesterol

- Trim fat from meat and remove skin from poultry.
- Replace highly saturated fats with polyunsaturated fats.
- Eat more seafood, such as, sardines, salmon, and mackerel, because they are high in omega-3 fatty acids.
- Increase your exercise to help improve HDL cholesterol.
- Try to eat five or more servings of fruits and vegetables each day.
- Drink skim milk instead of whole milk.
- Increase your intake of soluble fiber.
- Maintain a healthy weight. Extra weight is linked to higher levels of bad cholesterol (LDL).
- Give up tobacco. It depresses levels of good cholesterol (HDL).
- Relieve stress. Stress causes your body to increase the amount of fats in the bloodstream, which can cause plaque to build up faster.



Interventions

Stress Test

Sometimes called a treadmill test or exercise test, a stress test shows how well your heart handles work. As your body works harder during the test, it needs more oxygen, so the heart must pump more blood. The test can show if the blood supply is reduced in the arteries that supply the heart. It also helps providers know the kind and level of exercise that is best for you.

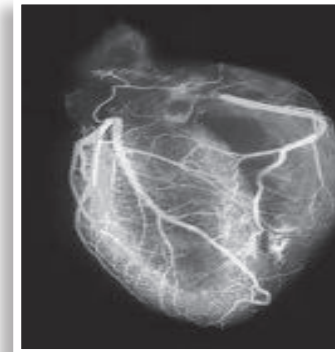
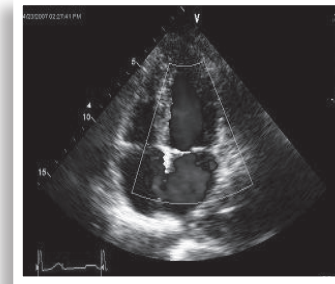
Echocardiogram

An echocardiogram uses ultrasound to examine the heart. A two-dimensional echo displays a cross-sectional “slice” of the beating heart, including the chambers, valves and the major blood vessels that exit from the left and right ventricle.

Angiogram

An angiogram uses x-rays to view your blood vessels. When the arteries are studied, it is called an arteriogram. When the veins are studied, it is called a venogram. Doctors often use this test to study narrow, blocked, enlarged, or arteries and veins that are not formed correctly. These may be in many parts of your body, including your:

- Brain
- Heart
- Abdomen
- Legs



Interventions

Cath Lab

The Cath Lab is a specially equipped x-ray room where cardiac catheterization is done. During Cardiac catheterization, a long, thin tube called a catheter is guided into the heart, usually through a blood vessel in the leg or arm. This lets the doctor learn about the arteries and find the blockage that is causing heart attack symptoms. If a blockage is found, other procedures may be done in the cath lab to treat the problem.

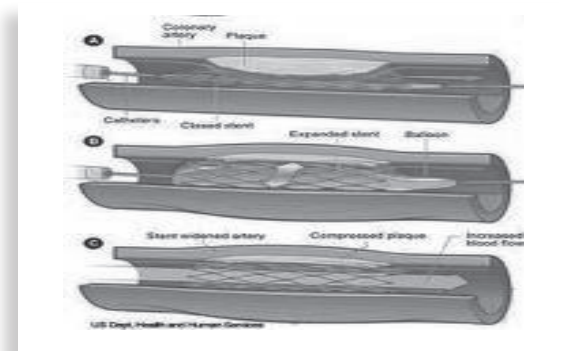
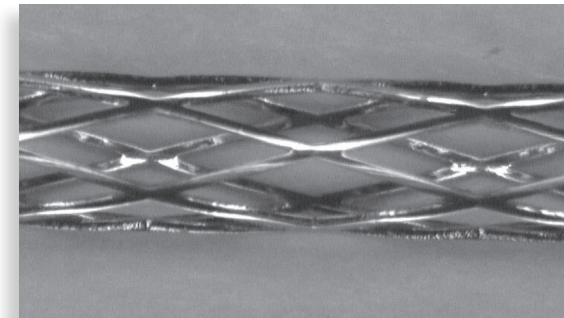
Stent

A stent is a wire metal mesh tube used to prop open an artery. The stent stays in the artery to hold it open. This improves blood flow to the heart muscle and relieves symptoms (usually chest pain). Within a few weeks from the time the stent was placed, the inside lining of the artery grows over the metal surface of the stent.

There Are Two Types of Stents:

Drug-eluting stents (DES) are coated with medication. The medication is slowly released to help prevent scar tissue in the artery lining. This helps the artery remain smooth and open, so there is good blood flow through the stent.

Bare-Metal Stents or (BMS) prop open blood vessels after they are widened in the cath lab. As the artery heals, tissue grows around the stent holding it in place.



Vascular Screen

The Vascular Screen is a series of ultrasound tests that evaluate the blood vessels in the neck, legs, and abdomen. A prob is placed over the blood vessels. Sound waves are used to create a picture of your blood vessels.

Who Should Have the Screening?

This screening is for people who are over the age of 40 and have a personal or family history of cardiac disease, heart attack, or stroke.

Risks From the Screening

There are no known risks with having vascular screening.

Carotid Artery Ultrasound

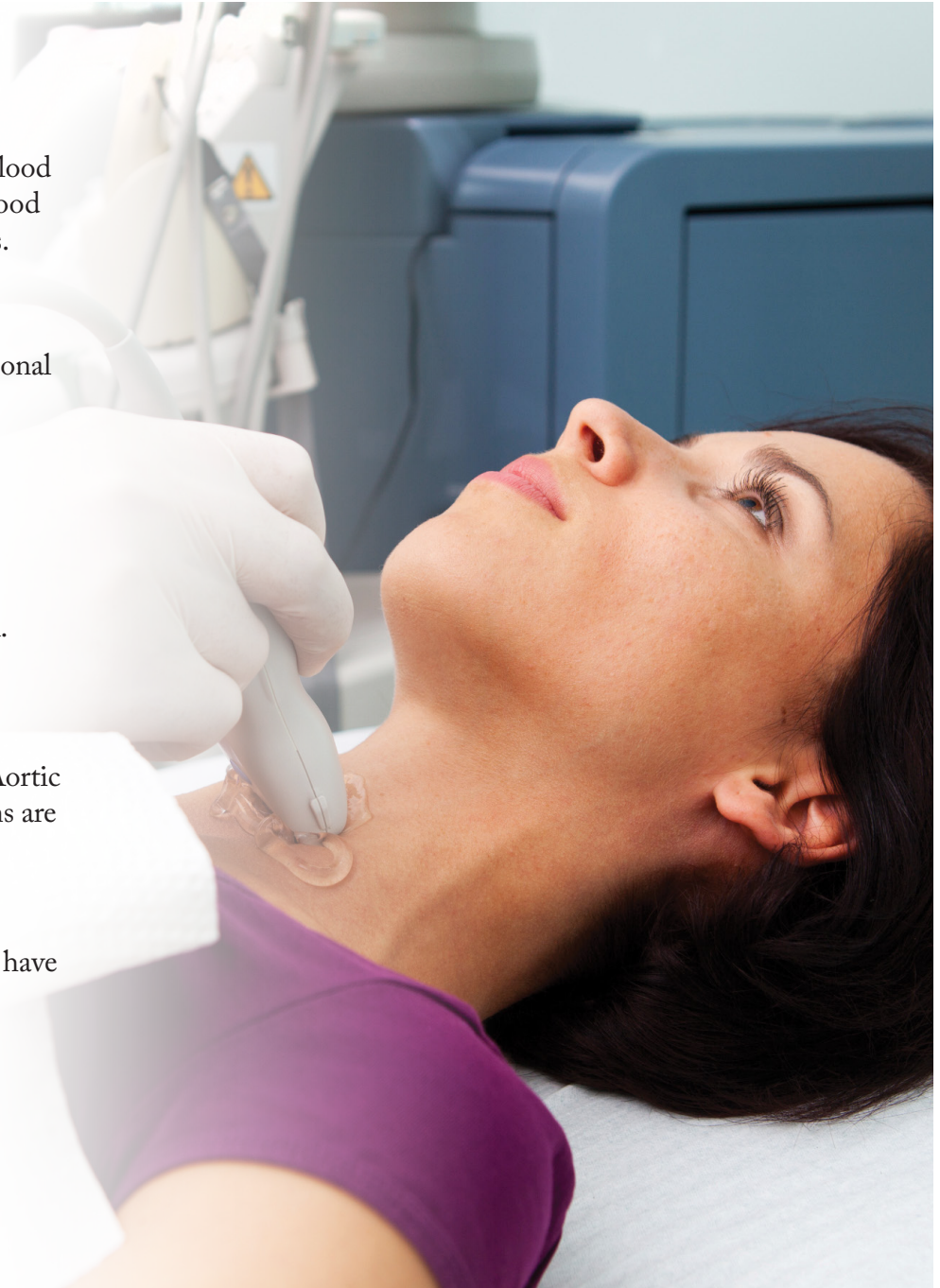
Checks for narrowing or blockage in the main arteries of your neck. It determines your risk for a stroke.

Abdominal Aortic Aneurysm Ultrasound

Checks for an enlargement or a bulge in the wall of your Abdominal Aortic Artery. This bulge is called an aneurysm. Abdominal Aortic Aneurysms are hereditary and may be fatal.

Ankle-Brachial Index

Checks the blood flow in your legs. Poor blood flow could mean you have a higher risk for heart disease.

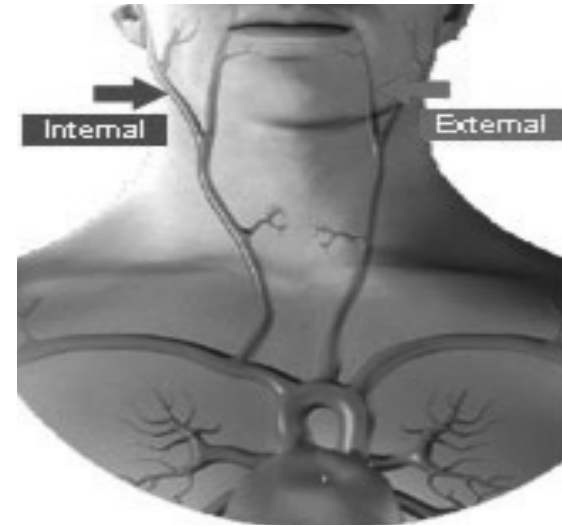


Carotid Artery

Carotid artery disease is a serious health problem because it can cause a stroke. Stroke is the third leading cause of death among adults in the US and is the leading cause of disability.

Normally our arteries are smooth and clean on the inside walls. Over time plaque can build up on these walls. Plaque build-up reduces blood flow in the carotid arteries. Sometimes the plaque build-up can cause a blood clot(s) to form. If the clot is large enough, it can reduce or stop the blood flow to your brain, causing a stroke. Other times plaque can break away from the artery wall and travel through the bloodstream. It can lodge in a smaller artery in the brain also causing a stroke.

An ultrasound is the most common test to check blood flow in the carotid arteries.

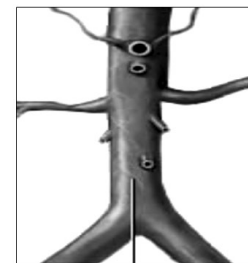
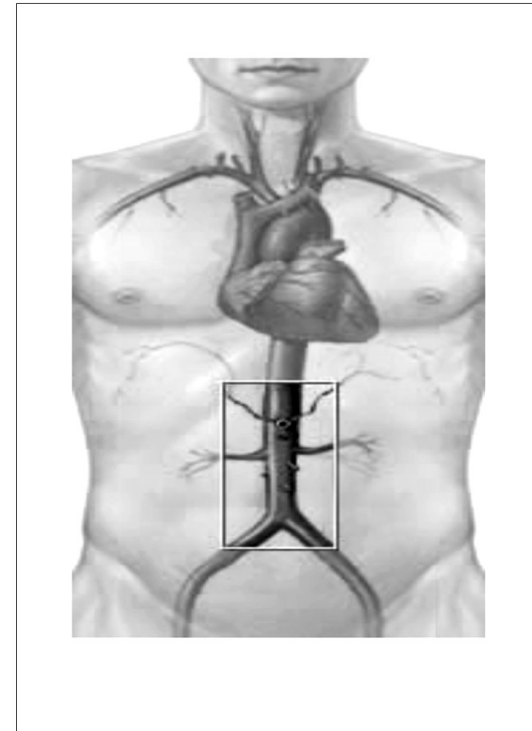


Abdominal Aortic Aneurysm (AAA)

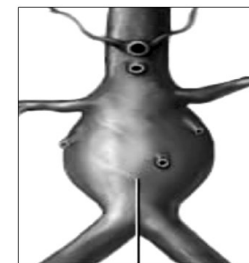
An aortic aneurysm is the weakening and enlargement of the aortic wall. If left untreated, this can lead to rupture and death. Plaque build-up (atherosclerosis) in the aortic artery can lead to a weakening of the wall. The damaged area of the artery can be stretched or “ballooned” from the pressure of blood flow inside the artery, leading to an aneurysm.

Risk Factors for Aneurysms, Which Increase With Age, Include:

- Tobacco use
- Atherosclerosis
- High blood pressure
- Diabetes
- High cholesterol
- Overweight or obesity
- Gender: men are up to 10 times more likely than women to develop an aneurysm
- Age: occurs more often in people 60 to 80
- Family history: immediate relative, such as a mother or brother, who had an aneurysm
- Inflammation or infection of the artery wall
- Certain diseases, such as Marfan syndrome, can weaken the wall of the aorta



Normal aorta



Aorta with large abdominal aneurysm

Peripheral Artery Disease (PAD)

About one out of 10 Americans older than 65 years, suffer from some form of peripheral arterial disease. The condition Peripheral Artery Disease (PAD) is more common in people who smoke, have high cholesterol levels, have diabetes mellitus, or are over the age of 65.

What is Peripheral Artery Disease?

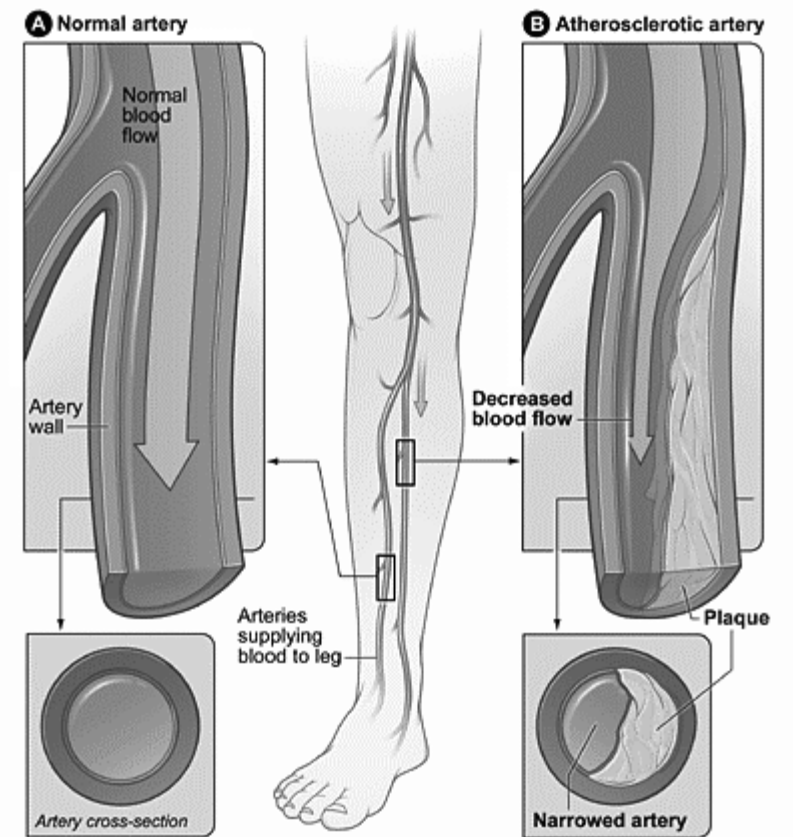
PAD is a disease of blood vessels outside the heart and brain. PAD most commonly affects the legs, but can affect other areas including the arms, stomach, or kidneys.

PAD involves the buildup of plaque and fatty substances in the inner lining of the arteries. The buildup of plaque inside the arteries narrows the vessels and reduces the blood flow.

PAD is also a risk factor for heart attacks and strokes.

During the early stages of PAD, symptoms are usually rare. As plaque continues to build up, it blocks the flow of blood through the arteries to tissues and organs.

Many people with PAD have pain in the back of one or both lower legs. This can affect their ability to walk.



PAD Risk Factors and Symptoms

How is PAD Diagnosed?

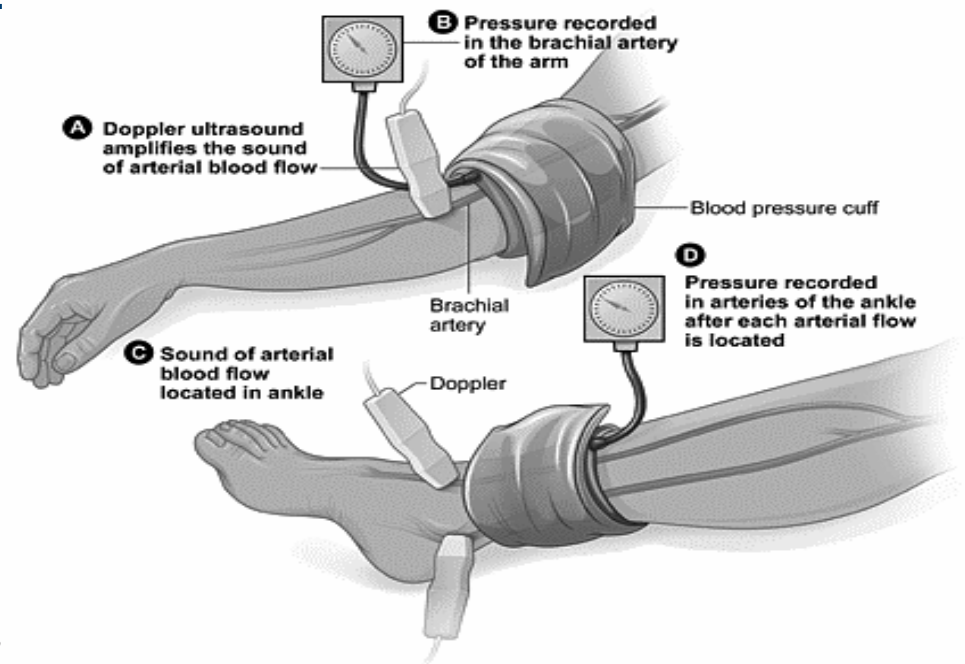
The ankle-brachial index (ABI) is one way to test for PAD. It uses a doppler probe and blood pressure cuff to check the circulation in your leg arteries. The blood pressures of both your arms and your ankles are taken and the ankle/brachial index is determined.

Risk Factors for Developing PAD Include:

- Tobacco use
- Diabetes
- Family history of heart disease
- Overweight or obesity
- High blood pressure
- High cholesterol
- Age (over 50 years)
- Inactive lifestyle

Symptoms of PAD Include:

- Claudication (dull pain in the buttocks, thighs, calves, or feet following exercise or walking)
- Numbness or tingling in the leg, foot, or toes
- Changes in skin color (such as paleness or a bluish color) in the leg, foot, or toes
- Absence of a pulse



Heart Disease

Your Risk of Heart Disease

Factors that you can control:

- Tobacco use
- Weight
- Blood Pressure
- Cholesterol
- Diabetes

Factors beyond your control:

- Age
- Gender
- Family History
- Ethnic Background
- Hormonal changes in women

Take steps to reduce your risk of heart disease.

- Quit using tobacco
- Stay physically active
- Reach and maintain a healthy weight
- Eat a heart healthy, low-fat diet
- Check your blood pressure and cholesterol regularly

Women and Heart Disease

Coronary Heart Disease is the leading cause of death in women. According to the American Heart Association, the number of cardiovascular disease related deaths for women have been more than those for men since 1984. This means more than one out of every three women has some form of cardiovascular disease. Hormonal changes in women increase their risk of developing heart disease.



Heart Attack Symptoms

Men and women often have different symptoms of a heart attack. It is important to recognize and understand which symptoms men and women are likely to have so you can act quickly.

Men	Women
Tightening, pressure, squeezing, aching sensation in the chest or arms	Discomfort or pain in the upper body or chest such as pressure, squeezing, or tightness lasting more than a few minutes
Discomfort in the neck or upper back, particularly between the shoulder blades	Pain that moves in the shoulders, neck, arms, jaws, teeth or back and spreads around.
A sharp, burning or cramping pain in chest or arms	Pain in the mid-chest, shoulders, elbows, upper abdomen or fingers
Aching, weakness or numbness that begins in or spreads to the neck, jaw, throat, shoulder or back of the arms	Unusual tiredness
Severe fatigue	Lightheadedness
Anxiety	Sweating
Paleness	Shortness of breath
Cold sweats	Nausea
Difficulty breathing	Loss of appetite
Nausea	Chronic heartburn before heart attack occurs
Vomiting	
Feeling of fullness	
Feeling of indigestion	

Diabetes and Your Heart

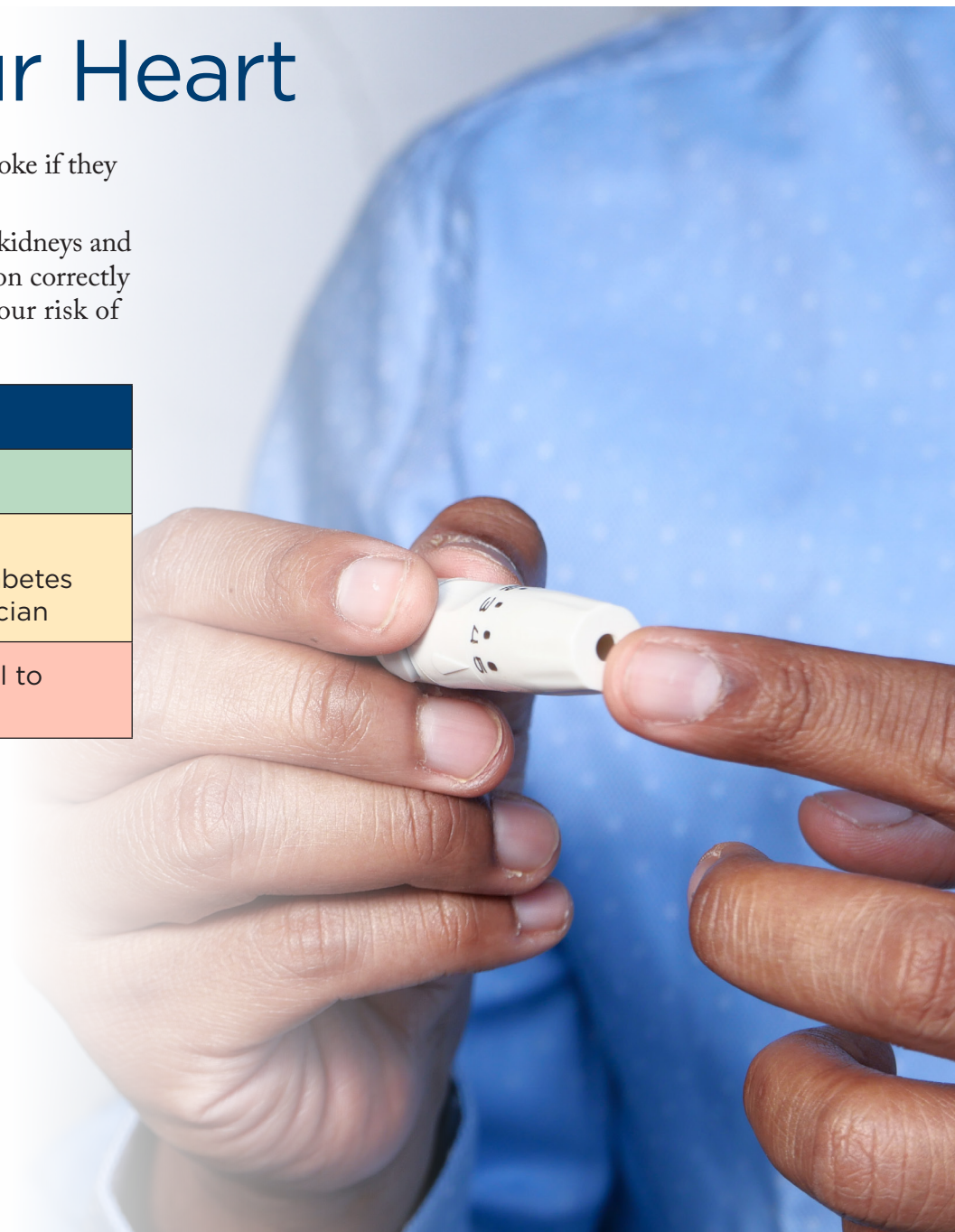
People with diabetes are more likely to have a heart attack or stroke if they are not correctly managing their diabetes.

High blood glucose levels can damage vital organs such as your kidneys and your eyes over time. If you have diabetes, taking your medication correctly and maintaining healthy blood sugar levels can help reduce your risk of heart disease.

Fasting Blood Sugar Ranges	
Recommended	70-99 mg/dL
Moderate	100- 125 mg/dL; recommend a pre diabetes visit with your physician
High	Greater than or equal to 126 mg/dL

Controlling Your Blood Sugar

- Eat three meals a day, **do not** skip meals
- Watch portion sizes
- Use less salt, fat, and sugar
- Eat the same amount of food each day
- Eat high fiber foods
- Eat your meals on a regular schedule



Heart Healthy Shopping

Before Shopping

- Be sure to eat so you are not hungry!
- Plan a week's worth of well-balanced meals.
- Make a grocery list when planning meals for the week.
- Consider grocery shopping on-line to limit impulse buying.

At the Store

- Read labels!
- Select a variety of brightly colored fruits and vegetables, fresh or frozen are best. Look for fruits and vegetables that are in season and grown locally.
- Buy “lite” or low-fat dairy products, salad dressings, and condiments.
- Look at bread labels for “whole grain” or “whole wheat” flour as the first ingredient. Then check for fiber content (3 plus grams per slice is best).
- Avoid baked goods with partially hydrogenated oils.
- Choose lean cuts of meat. Look for the words “loin” or “round” in the name.
- Look for reduced-fat, low sodium cold cuts at the deli.
- Choose frozen entrees with less than 800 mg of sodium per serving.



Heart Healthy Eating

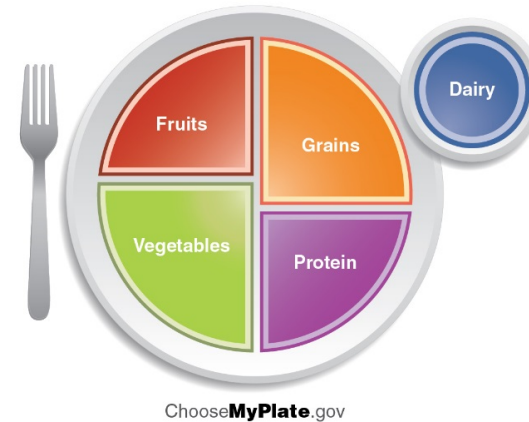
Eating healthy is an important part of living a healthy life. This means choosing the right foods as well as choosing the right amount of each food. Food choices play a role in preventing Coronary Artery Disease (CAD) and heart attacks along with promoting good health.

It is important to:

- Choose a variety of fruits and vegetables
- Choose whole grain and high fiber foods
- Choose lean meats (at least 90% lean)
- Choose low-fat dairy
- Limit sodium (salt) intake
- Limit added sugars

Balance Your Meal

- Use MyPlate as a guide (ChooseMyPlate.gov) when making choices.
- Have protein with most meals and snacks. Choose from many sources including plant items like beans, legumes, nuts, and seeds.
- Choose starchy foods in moderation.
- Fill up on larger amounts of non-starchy vegetables.



Choose the Right Fat

Choose monounsaturated fatty acids and omega-3 polyunsaturated fatty acids. The goal is to include two servings of omega-3 fatty acids per week.






Limit Desserts and Sweets

The American Heart Association recommends:

- Women take in no more than 26g of added sugar/day (6 tsp)
- Men take in no more than 36g of added sugar/day (9 tsp)

Food Choices

 High in sodium

	Recommended	Limit Use
Nuts and Seeds 1.5 ounces/day has heart health benefits	<ul style="list-style-type: none"> Almonds Pine nuts Cashews Pumpkin seeds Flax Pecans Chia Peanuts Sunflower seeds (unsalted) Walnuts Natural peanut/nut butter 	
Beverages	<ul style="list-style-type: none"> Coffee Tea Diet or low calorie beverages Tonic water Club soda 	<ul style="list-style-type: none"> High fat dairy drinks Malts Eggnog Ice cream drinks Alcohol Juice
Condiments	<ul style="list-style-type: none"> Mrs. Dash seasonings and packets Pepper Herbs and spices No salt added ketchup No salt bouillon cubes 	<ul style="list-style-type: none"> Ketchup  1 tbsp. = 160 mg Steak sauce  2 tbsp. = 560 mg Soy sauce  1 tbsp. = 900 mg BBQ sauce  1 tbsp. = 175 mg Pickles  1 slice = 90 mg
Fats and Oils	<ul style="list-style-type: none"> Extra-virgin olive oil Avocado oil/Avocados Canola oil Peanut oil Safflower oil Sesame oil Nuts Flaxseed 	<ul style="list-style-type: none"> Vegetable oil Coconut oil/Coconuts Palm oil/Palm kernel oil Lard Shortening Butter Margarine Fat in meat Whole fat dairy Cocoa butter Commercial baked goods and snacks Fried foods

Adding Flavor Without Salt

Salt is often used to add flavor to foods, but herbs and other spices can add flavor, too. Try some of these ideas for adding flavor without using salt:

- Try using a salt-free spice blend like Mrs. Dash. You can use the spice blend on the table instead of a saltshaker or in cooking.
- Choose spices carefully. Garlic powder is dehydrated, ground garlic. Garlic salt is garlic powder mixed with salt.
- Conversion: 1 tablespoon fresh herb = 1/2 tsp dry = 1/4 tsp powdered
- When doubling a recipe, add only 50 percent more seasoning.
- Freshen herbs by crushing or rubbing between your fingers before adding to recipe.
- In dishes such as stews requiring long cooking times, add herbs toward the end of cooking.
- In chilled foods such as dips, salads and dressings, add herbs several hours ahead.
- For maximum freshness, purchase herbs and spices in small quantities and keep in airtight containers.
- Add fresh flavor to many foods by using lemon juice.

Say **no** to salt substitutes!

- Most salt substitutes contain potassium chloride.
- Too much potassium can be dangerous with certain health conditions.
- 1/2 teaspoon of Nu-Salt = 1,590 mg of potassium
- Daily Value for potassium = 3,500 mg
- Talk to your doctor if you have questions about salt substitutes.

For More Information on Cooking With Herbs and Spices:

- American Heart Association:
www.heart.org
Search for “herbs and spices”
- Food & Nutrition
www.foodandnutrition.org
Search for “herbs and spices”

Dining Out the Healthy Way

How often do you dine out? Dining out includes any meal or snack eaten away from home or take-out ordered to be served at home. You do have healthier choices when dining out. The more you dine out, the more you will need to control what you eat. The following tips will make dining out a healthier experience.

- Plan ahead: Do not go to the restaurant starving. Eat a snack if you are going to eat later than usual. Choose a snack from the fruit, vegetable, or milk group to eat at your usual mealtime.
- Menu choices: Knowing which items are the healthiest will make your choice easier. Choose items with healthy descriptions more often.

Healthy Choices		Less Healthy Choices	
• Broiled	• Steamed	• Cheese sauce	• Fried/deep fried
• Garden fresh	• Poached	• Crispy	• Scampi style
• Roasted	• Charbroiled	• Breaded	• Buttery/butter sauce
• Boiled	• Tomato sauce	• Gravy	• Meat sauce
• Grilled	• Marinara	• Au gratin	• Creamed
• Marinated in juice/wine		• Marinated in oil/butter	• Alfredo

- Special requests: Request that items such as gravy, salad dressing, sour cream and margarine be served on the side. This way you can add the desired amount.
- Potatoes, pasta, and breads: Remember to skip or limit high-fat toppings and spreads.
- Slow down: Try to be the slowest eater at the table. You will be less tempted to help yourself to more if you are still eating when everyone else is finished.
- Portion control: To resist the temptation of having to clean your plate:
 - Have your waiter remove your plate as soon as you feel full.
 - Request a container for the leftovers as soon as you are full so you are not tempted to start nibbling again.
 - Request a container as soon as your meal is served. Place half of the meal in the container so it is out of your sight.
 - Order half an order or share one order with another person.
- Condiments: Many condiments are high in sodium. Limit how much you use.

Reading a Nutrition Facts Label

Look for the Following on the Food Label

- **Serving size:** The information on the label is for 1 serving. If you eat more you get more calories and nutrients.
- **Calories:** Choose foods that help you get the nutrients you need without going over your daily calorie goal.
- Total fat, saturated fat, and trans fat:
 - **Healthy fats.** Choose foods with less than 5 grams (g) of total fat per serving. Try to pick foods with heart-healthy fats.
 - **Saturated fat and trans fat.** Choose foods with less than 3g per serving of these fats because they are not heart healthy.
 - **Read ingredients.** If a food contains partially hydrogenated oils, then it has trans fat.
- **Sodium:** Look for foods that are low in sodium. Each day, eat less than 2400 mg sodium or the limit set for you by your healthcare team. For those with heart disease this may be 1500 mg of sodium a day.
- **Total carbohydrate and sugars:** If you have high triglycerides, choose foods with less than 30g total carbohydrate and less than 15g sugars per serving.
- **Dietary fiber:** Aim to get 25 to 30g of dietary fiber each day. To meet this goal, include foods with at least 5g fiber per serving.

Nutrition Facts	
8 servings per container	
Serving size	2/3 cup (55g)
Amount per serving	
Calories	230
% Daily Value*	
Total Fat 8g	10%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 160mg	7%
Total Carbohydrate 37g	13%
Dietary Fiber 4g	14%
Total Sugars 12g	
Includes 10g Added Sugars	20%
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 235mg	6%
<small>*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.</small>	

Exercise and Your Heart

Benefits of Exercise

Exercise helps your health in many ways. It:

- Strengthens the heart muscle so it can pump the amount of blood your body needs with less effort
- Increases levels of HDL, or “good” cholesterol, while decreasing triglycerides
- Reduces risk of heart disease, high blood pressure, osteoporosis, diabetes, and obesity
- Keeps joints, tendons, and ligaments flexible which make it easier to move around
- Reduces some of the effects of aging
- Adds to your mental well-being by improving your mood and helping to relieve stress and anxiety
- Increases your energy and endurance
- Helps you sleep better
- Helps you maintain a normal weight by increasing your metabolism (the rate you burn calories)

The F.I.T.T. principle in exercise is a set of regulations that help you get the most out of your workouts.

Frequency: how often you exercise

Time: how long you exercise

Intensity: how hard you work during exercise

Type: what type of activity you do

Guidelines	Cardiovascular	Strength
Healthy Adults under age 65	Moderately intense cardio 30 minutes a day, 5 days a week Or intense cardio 20 minutes a day, 3 days a week	8 to 10 strength training exercises Repeat each exercise 8 to 12 times, twice a week
Healthy Adults over 65 (or adults with chronic conditions)	Moderately intense cardio 30 minutes a day, 5 days a week Or intense cardio 20 minutes a day, 3 days a week	8 to 10 strength training exercises, Repeat each exercise 10 to 15 times, 2 to 3 times a week

Remember:

- Balance exercise and rest
- Talk with a doctor before beginning any exercise program.

Tobacco

Tobacco Use and Heart Health

The Surgeon General labeled tobacco use as one of the most preventable causes of death and disease in the United States. Smokeless tobacco increases the risk of high blood pressure which increases the risk for stroke. Smokers are more than 2 times as likely to die from heart attacks as non-smokers.

Smokers have a greater chance for developing peripheral vascular disease, a narrowing of the vessels that carry blood to our arms and legs. The walls of the vessels that carry blood to the brain, the carotid arteries, are compromised in smokers which can lead to stroke.

All forms of tobacco increase the risk of developing heart disease or stroke.

When you smoke one cigarette each day your:

- Heart rate and blood pressure increase and your major blood vessels narrow causing the heart to work harder
- Oxygen supply in your blood decreases causing shortness of breath and lack of oxygen
- Blood clots faster causing a greater chance of heart attack, stroke, and circulatory problems



Why to Quit Using Tobacco

Experience the Change After Quitting

20 Minutes

- Blood pressure drops to normal
- Pulse rate drops to normal
- Body temperature of hands and feet increases to normal

8 Hours

- Carbon-monoxide blood level drops to normal
- Oxygen blood level increases to normal

24 Hours

- Chance of heart attack begins to decrease
- Ability to smell and taste is improved

1 to 3 Months

- Blood circulation improves
- Walking becomes easier
- Lung function improves

3 to 9 Months

- Coughing, sinus congestion, fatigue, and shortness of breath decrease
- Tiny hairs that line the lung passages re-grow, increasing ability to “clean” lungs, reducing likelihood of infection
- Body’s overall energy increases

1 Year

- Added risk of coronary heart disease is half that of a smoker.

5 Years

- Lung cancer death rate decreases by half

15 Years

- You are no more at risk of heart disease than if you never smoked!



How to Quit Using Tobacco

Pick a Quit Day

Choose a day that is meaningful to you and stick to it.

Make a List of Reasons to Quit.

Pick meaningful reasons, such as: I want to see my children graduate.

Pick a Support Team!

Ask yourself these two questions:

- Who are my champions in this battle?
- Who want to see me succeed?

Battle Cravings

- Develop an action plan to battle cravings.
- If you usually smoke after you eat, plan to do something else such as taking a quick walk instead.

Resources to Stop Smoking

- smokefree.gov/talk-to-an-expert: (800) Quit Now or (800) 784-8669
- National Cancer Institute Smoking Quitline: (877) 44U-QUIT or (877) 448-7848)
- Live Tobacco Free: (855) 862-6198
- State Quitlines
 - **Iowa**: www.quitline.iowa.org (800) QUIT NOW / (800) 784-8669
 - **Minnesota**: www.quitplan.com (888) 354-PLAN / (888) 354-7526
 - **Nebraska**: www.quitnow.ne.gov (800) QUIT NOW / (800) 784-8669
 - **North Dakota**: www.ndhealth.gov/ndquits (800) QUIT NOW / (800) 784-8669
 - **South Dakota**: www.sdquitline.com (866) SD-QUITS / (866) 737-8487



Helpful Resources

Sanford Health
www.sanfordhealth.org

Sanford Vascular Associates
www.totalvascularcare.com

American Cancer Society
www.cancer.org

American College of Sports Medicine
www.acsm.org

American Heart Association
www.heart.org

Centers for Disease Control
www.cdc.gov

Exercise is Medicine
www.exerciseismedicine.org

Healthy South Dakota
www.healthysd.gov

Men's Health
www.cdc.gov/men

National Heart Lung and Blood Institute
www.nhlbi.nih.gov

Take Heart America
www.takeheartamerica.org

Women's Health
www.womenshealth.gov

North Dakota Department of Health
www.ndhealth.gov

Minnesota Department of Health
www.health.state.mn.us

South Dakota Department of Health
www.doh.sd.gov

Reference for this book: American Heart Association

