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**Facts About Heart Disease and Women:
ARE YOU AT RISK?**

Heart Disease Risk Factors

Risk factors are habits or traits that make a person more likely to develop a disease. Many of those for heart disease can be controlled. These include:

- Cigarette smoking
- High blood pressure
- High blood cholesterol
- Overweight
- Physical inactivity
- Diabetes

The more risk factors you have, the greater your risk. So take action--take control!

CORONARY HEART DISEASE is a woman's concern. Every woman's concern. One in ten American women 45 to 64 years of age has some form of heart disease, and this increases to one in five women over 65. Heart disease is the number one killer of American women. In addition, 1.6 million women have had a stroke, and 90,000 women die of stroke each year. This fact sheet tells you what kinds of habits and health conditions increase the chances of developing these diseases--and how you can help keep your heart healthy.

What Are These Diseases?

Both heart disease and stroke are known as cardiovascular diseases, which are disorders of the heart and blood vessel system. Coronary heart disease--the main subject of this fact sheet--is a disease of the blood vessels of the heart that causes heart attacks. A heart attack happens when an artery becomes blocked, preventing oxygen and nutrients from getting to the heart. A stroke occurs when not enough blood gets to the brain, or in some cases, from bleeding in the brain. Some other cardiovascular diseases are high blood pressure, angina (chest pain), and rheumatic heart disease.

Who Gets Cardiovascular Diseases?

Some women have more "risk factors" for cardiovascular diseases than others. Risk factors are habits or traits that make a person more likely to develop a disease. Some risk factors for heart-related problems cannot be changed, but many others can be.

The three biggest risk factors for cardiovascular disease that you can do something about are cigarette smoking, high blood pressure, and high blood cholesterol. Other risk

factors, such as overweight and diabetes, also are conditions you have some control over. Even just one risk factor will raise your chances of having heart-related problems. But the more risk factors you have, the more likely you are to develop cardiovascular diseases--and the more concerned you should be about protecting your heart health.

MAJOR RISK FACTORS

Smoking

Smoking by women in this country causes almost as many deaths from heart disease as from lung cancer. If you smoke, you are two to six times more likely to suffer a heart attack than a nonsmoking woman, and the risk increases with the number of cigarettes you smoke each day. Smoking also boosts the risk of stroke.

Cardiovascular diseases are not the only health risks connected to smoking. Women who smoke are much more likely to develop lung cancer than nonsmoking women. Cigarette smoking is also linked with cancers of the mouth, larynx, esophagus, urinary tract, kidney, pancreas, and cervix. Smokers also are more likely to develop other kinds of lung problems, including bronchitis and emphysema.

Smoking during pregnancy is also linked to a number of problems. They include bleeding, miscarriage, premature delivery, lower birth weight, stillbirth, and sudden infant death syndrome, or "crib death." Also, young children who breathe in cigarette smoke have more lung and ear infections.

There is simply no safe way to smoke. Although low-tar and low-nicotine cigarettes may reduce the lung cancer risk somewhat, they do not lessen the risks of heart diseases or other smoking related diseases. The only safe and healthful course is not to smoke at all.

High Blood Pressure

High blood pressure, also known as hypertension, is another major risk factor for coronary heart disease and the most important risk factor for stroke. Even slightly high levels can increase your risk. High blood pressure also boosts the chances of developing kidney disease.

Older women have a higher risk of high blood pressure, with more than half of all women over age 55 suffering from this condition. High blood pressure is more common and more severe in black women than it is in white women. Using birth control pills can contribute to high blood pressure in some women.

Blood pressure is the amount of force exerted by the blood against the walls of the arteries. Everyone has to have some blood pressure, so that blood can get to the body's organs and muscles. Usually, blood pressure is expressed as two numbers, such as 120/80 mm Hg. Blood pressure varies through the day and in response to your activities. It is considered high when it stays above normal levels over a period of time.

High blood pressure is called the "silent killer" because most people who have it do not feel sick. That means it is important to have it checked each time you see your doctor or

other health professional. But because blood pressure changes often, your health professional should check it on several different days before deciding if your blood pressure is too high. If your blood pressure stays at 140/90 mm Hg or above, you have high blood pressure.

Although high blood pressure can rarely be cured, it can be controlled with proper treatment. If your blood pressure is not too high, you may be able to control it entirely through weight loss if you are overweight, regular physical activity, and cutting down on alcohol, table salt and sodium. (Sodium is an ingredient in salt that is found in many packaged and processed foods, baking soda, and some antacids.)

But if your blood pressure remains high, your doctor will probably prescribe medicine in addition to the lifestyle changes described above. The amount you take may be gradually reduced, especially if you are successful with the changes you make in your lifestyle.

During pregnancy, some women develop high blood pressure for the first time. Other women who already have high blood pressure may find that it gets worse during pregnancy. Without treatment, such high blood pressure can be life-threatening to both mother and baby. Since you can feel perfectly normal and still have high blood pressure, it is important to get regular prenatal checkups so your doctor can find and treat a possible high blood pressure problem.

Blood pressure tends to get higher as you age. That means even if your blood pressure is normal now, it makes sense to take steps to prevent high blood pressure in the years to come. You will be less likely to develop high blood pressure if you are physically active, maintain a healthy weight, limit your alcohol intake, and cut down on table salt and sodium.

High Blood Cholesterol

High blood cholesterol is another very important risk factor for coronary heart disease that you can do something about. Today, about one-quarter of American women have blood cholesterol levels high enough to pose a serious risk for coronary heart disease.

Blood cholesterol levels among women tend to rise sharply beginning at about age 40, and continue to increase until about age 60. The higher your blood cholesterol level, the higher your heart disease risk.

The body needs cholesterol to function normally. It makes enough to fill its needs. But cholesterol also is taken into the body through the diet. Over a period of years, extra cholesterol and fat circulating in the blood settle on the inner walls of the arteries that supply blood to the heart. These deposits make the arteries narrower and narrower. As a result, less blood gets to the heart and the risk of coronary heart disease increases.

Getting Your Cholesterol Checked

Getting your blood cholesterol level checked is a relatively simple process. Your doctor or other health professional will take a small sample of your blood and measure the amount

of cholesterol. When you have this test for the first time, it is important to have the following measurements taken:

Total Blood Cholesterol.

For all adults, a desirable level of total blood cholesterol is less than 200 mg/dL. A level of 240 or more means you have high blood cholesterol. But even "borderline-high" levels (200-239) boost your risk of coronary heart disease.

High Density Lipoprotein.

You also will need a measurement of your level of high density lipoprotein, or HDL, if an accurate result is available. Lipoproteins are the packages that carry cholesterol through the bloodstream. HDL is often called "good cholesterol" because it helps remove cholesterol from the blood, preventing it from piling up in the arteries.

If your HDL level is less than 35, your risk of heart disease goes up. This is true even if your total cholesterol level is within a desirable range. The good news is that if your HDL level is 60 or above, you have a lower risk of developing heart disease.

Low Density Lipoprotein.

Your doctor also may want to measure your level of low density lipoprotein, or LDL. LDL is often called "bad cholesterol" because it carries most of the cholesterol in the blood, and if the LDL level is too high, cholesterol and fat can build up in the arteries. An LDL level below 130 is desirable, while levels of 130-159 are "borderline-high." An LDL level of 160 or above means you have a high risk of developing coronary heart disease.

If your LDL level is not checked during your first test, your doctor still may want to measure it if your initial tests show that you have any of the following:

- high total blood cholesterol
- borderline-high cholesterol and at least two other risk factors for heart disease
- desirable or borderline total blood cholesterol but low HDL levels.

Treatment

After studying your total cholesterol, HDL and LDL levels, and other risk factors for heart disease, your doctor may recommend a treatment plan for you. Lowering LDL cholesterol is the main goal of treatment. Cutting back on foods rich in fat, especially saturated fat, and in cholesterol, can lower both total and LDL cholesterol. Weight loss for overweight persons and increased physical activity may also lower blood cholesterol levels.

Losing extra weight and becoming more physically active, as well as quitting smoking, also may help boost HDL cholesterol levels.

Your doctor may also suggest that you take cholesterol-lowering medications. This recommendation will depend on how high your LDL cholesterol level remains after you have made the diet and lifestyle changes described above. The need for medicine will also depend on whether you have any other risk factors for coronary heart disease.

OTHER IMPORTANT RISK FACTORS

Physical Inactivity

Various studies show that physical inactivity is a risk factor for heart disease. Heart disease is almost twice as likely to develop in inactive people as in those more active.

So by getting regular physical activity--even mild to moderate exercise--you'll lower your risk of heart disease. The best exercises to strengthen your heart and lungs are aerobic ones, such as brisk walking, jogging, cycling, and swimming. Do them for 30 minutes, three or four times a week.

But even low-intensity activities, such as gardening and housework, can help lower your risk of heart disease if done daily.

Overweight

Excess body weight in women is linked with coronary heart disease, stroke, congestive heart failure, and death from heart-related causes. The more overweight you are, the higher your risk for heart disease.

Overweight contributes not only to cardiovascular diseases, but also to other risk factors, including high blood pressure, high blood cholesterol, and the most common type of diabetes. Fortunately, these conditions often can be controlled with weight loss and regular physical activity.

What is a healthy weight for you? There is no exact answer. Check the "What Should You Weigh?" table for the weight range suggested for women of your height. Ranges are given because women of the same height and amounts of body fat can differ in their amounts of muscle and bone. Weights above the suggested ranges are believed to be unhealthy for most people.

Body shape as well as weight may affect heart health. "Apple-shaped" individuals with extra fat at the waistline may have a higher risk than pear-shaped people with heavy hips and thighs. If your waist is nearly as large, or larger, than the size of your hips, you may have a higher risk for coronary heart disease.

Diabetes

Diabetes, or high blood sugar, is a serious disorder that raises the risk of coronary heart disease. The risk of death from heart disease is about three times higher in women with diabetes. Diabetic women also are more apt to have high blood pressure and high blood cholesterol.

Diabetes is often called a "woman's disease" because after age 45, about twice as many women as men develop diabetes. While there is no cure for this disorder, there are steps a person can take to control it. Being overweight and growing older are linked with the development of the most common type of diabetes in certain people. Losing excess weight and boosting physical activity may help postpone or prevent the disease. For lasting weight loss, get regular exercise and eat foods that are low in calories and fat.

Stress

In recent years, you may have heard a lot about the connection between stress and heart disease. In particular, you may have heard that "type A" behavior--being aggressive, competitive, and constantly concerned about time--is linked to the development of heart disease. But while some studies have shown this connection in men, there is no evidence that type A behavior in women is linked with coronary heart disease.

Employment outside the home is another factor that often has been connected to women's heart disease. But so far, studies show no difference in rates of coronary heart disease between homemakers and employed women. However, more research is needed before we can rule out stress as a risk factor for women.

Birth Control Pills

Women who use high-dose birth control pills (oral contraceptives) are more likely to have a heart attack or a stroke because blood clots are more likely to form in the blood vessels. These risks are lessened once the birth control pill is stopped.

The risks of using low-dose birth control pills are not fully known. Therefore, if you are now taking any kind of birth control pill or are considering using one, keep these guidelines in mind:

- If you smoke cigarettes, stop smoking or choose a different form of birth control. Smoking boosts the risks of serious cardiovascular problems from birth control pill use, especially the risk of blood clots. For women over 35, the risk is particularly high.
- Use of birth control pills may increase blood pressure, and the risks appear to increase with age and length of use. If you take oral contraceptives, you should get your blood pressure checked regularly. If hypertension develops, you should stop using the pill.
- If you are a diabetic or have a close relative who is and you take birth control pills, you should be especially careful to have regular blood sugar tests. Blood sugar sometimes changes dramatically in women who take birth control pills.
- If you have a heart defect, if you have suffered a stroke, or if you have any other kind of cardiovascular disease, oral contraceptives may not be a safe choice. Be sure your doctor knows about your condition before prescribing birth control pills for you.

OTHER FACTORS THAT AFFECT YOUR HEART DISEASE RISK

Alcohol

Several recent studies have reported that moderate drinkers--those who have one or two drinks per day--are less likely to develop heart disease than people who don't drink any alcohol. If you are a nondrinker, this is not a recommendation to start using alcohol. And certainly, if you are pregnant or have another health condition that could make alcohol use harmful, you should not drink. But if you're already a moderate drinker, you may be

less likely to have a heart attack.

But remember, moderation is the key. More than two drinks per day can raise blood pressure, and the "Dietary Guidelines for Americans" recommend that for overall health women should have no more than one drink a day. Further, binge drinking can lead to stroke. People who drink heavily on a regular basis have higher rates of heart disease than either moderate drinkers or nondrinkers.

Keep in mind, too, that alcohol provides little in the way of nutrients--mostly just extra calories. So, if you are trying to control your weight, you may want to cut down on alcohol and substitute calorie-free iced tea, soda, or seltzer.

Hormones and Menopause

Should menopausal women use hormone pills? There is no simple answer to this question. Menopause is caused by a decrease in estrogen and other hormones produced by a woman's ovaries. At this time, some women begin to take prescription hormone pills every day. Some women take pills that contain only estrogen. Others take estrogen combined with a second hormone called progestin.

Estrogen has several important benefits. Taking estrogen pills may relieve "hot flashes" and generally help you feel more comfortable as your body adjusts to lower estrogen levels. They also help to prevent osteoporosis, a thinning of the bones that makes them more likely to break in later life. Estrogen pills also may help protect women from developing coronary heart disease, but more research is needed before we will know this for sure.

Estrogen pills also have risks. They may increase the chances of developing gallbladder disease, and they may worsen migraine headaches. They also may increase the risk of breast cancer.

But by far, the biggest risk of taking estrogen pills is cancer of the uterus. Women on estrogen pills after menopause are up to six times more likely to develop uterine cancer than women not on this treatment. It is important to point out that women are much more likely to die of coronary heart disease than from uterine cancer. Still, the cancer risk exists and must be taken seriously and discussed with your doctor.

To reduce the risk of uterine cancer, some doctors now prescribe estrogen in combination with the hormone progestin. But we don't yet know how this newer "combo" treatment affects the risks of heart disease, osteoporosis, and breast cancer.

At present, a woman and her doctor must decide whether the benefits of hormone pills are worth the risks. If you are thinking about starting this treatment, you will need to consider your overall health and your personal and family history of heart disease, osteoporosis, and uterine and breast cancer.

If you are now taking hormone pills, check with your doctor to be sure you are taking the lowest possible effective dose. At least every 6 months, you and your doctor should discuss whether you need to continue treatment. Be alert for signs of trouble--abnormal

bleeding, breast lumps, shortness of breath, dizziness, severe headaches, pain in your calves or chest--and report them immediately. See your doctor at least once a year for a physical examination.

Aspirin

You may have heard that taking aspirin regularly can help prevent heart attacks. Is this a good idea for you? Maybe.

A recent study found that women who took a low dose of aspirin regularly were less likely to suffer a first heart attack than women who took no aspirin. But since this was the first study to show this benefit in women, more research is needed before we can be sure that aspirin is safe and effective in preventing heart attacks in women.

What we do know for sure is that aspirin is a powerful drug with many side effects. It can increase your chances of developing ulcers and having a stroke from a hemorrhage. Because of these serious risks, you should not take aspirin to prevent a heart attack without first discussing it with your doctor.

PREVENTING HEART DISEASE

You now know something about the kinds of habits, health conditions, and other factors that affect your chances of developing heart disease. Just as important, you know that by taking an active role in your own heart health, you can make a difference. A little prevention can have a big payoff--a longer, healthier, more active life.

If you would like to know more about keeping your heart healthy, the National Heart, Lung, and Blood Institute (NHLBI) has available free fact sheets on the following subjects: preventing high blood pressure, preventing high blood cholesterol, quitting smoking, and the heart benefits of physical activity.

Contact:

NHLBI Information Center
P.O. Box 30105
Bethesda, MD 20824-0105
(301) 251-1222

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Blood Cholesterol Levels

| | Desirable | Borderline-High | High |
|-------------------|---|-----------------|---------------------|
| Total Cholesterol | less than 200 mg/dL | 200-239 mg/dL | 240 mg/dL and above |
| LDL Cholesterol | less than 130 mg/dL | 130-159 mg/dL | 160 mg/dL and above |
| HDL Cholesterol | a low HDL cholesterol is less than 35 mg/dL | | |

What Should You Weigh?

Desirable Weights for Women 25 and Over*

| Height | Small Frame | Medium Frame | Large Frame |
|--------|-------------|--------------|-------------|
| 4'10" | 92-98 | 96-107 | 104-119 |
| 4'11" | 94-101 | 98-110 | 105-122 |
| 5'0" | 96-104 | 101-113 | 109-125 |
| 5'1" | 99-107 | 104-116 | 112-128 |
| 5'2" | 102-110 | 107-119 | 115-131 |
| 5'3" | 105-113 | 110-112 | 118-134 |
| 5'4" | 108-116 | 113-125 | 121-138 |
| 5'5" | 111-119 | 116-130 | 125-142 |
| 5'6" | 114-123 | 120-135 | 129-146 |
| 5'7" | 118-127 | 124-139 | 133-150 |
| 5'8" | 122-131 | 128-143 | 137-154 |
| 5'9" | 126-135 | 132-147 | 141-158 |
| 5'10" | 130-140 | 136-151 | 145-163 |
| 5'11" | 134-144 | 140-155 | 149-168 |
| 6'0" | 138-148 | 144-159 | 153-173 |

*While wearing indoor clothing and 2-inch heels.

Source: Metropolitan Insurance Company Actuarial Tables, 1959.

Move It and Lose It

| Activities | Calories Burned per Hour* |
|--|---------------------------------|
| Light Activity Cleaning house Playing golf | 240 |
| Moderate Activity Walking briskly (3.5 mph) Gardening Bicycling (5.5 mph) | 370 |
| Strenuous Activity Jogging (9 min. per mile) Swimming | 580 |
| Very Strenuous Activity Running (7 min. per mile) Skiing | 740 |

*For a healthy
140-pound woman.

Source: Dietary Guidelines for Americans, U.S. Department of
Agriculture/U.S. Department of Health and Human Services, 1990.

Use this chart to record your progress toward your healthy heart goals:

Smoking

Quit date _____

Total Cholesterol

Desirable level: under 200 mg/dL

| Date | Level |
|-------|-------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

