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SAVE YOUR HEART

Leon H. Rottmann
Extension Specialist (Human Development)

Heart Risk Factors:

- Smoking -
- Overweight -
- Too Little Exercise -
- Poorly Handled Stress -
- Improper Diet -
- Hypertension -
- Diabetes -
- Age -
- Sex -
- Family History -

The first five risk factors are habits or patterns *you* can do something about—they can be reduced or eliminated.

The next two risk factors or diseases—can very often be controlled.

The final three factors have to do with who you are—they cannot be changed.

Being responsible for your health care implies an understanding of the important aspects of behavior that you can control. In guarding your heart, remember that the effects of risk factors add up. Research shows that the more risk factors you have, the more likely it is that you will develop heart disease, or some other serious illness. The fewer risk factors you have, the more likely it is that your body will withstand such a disease.

RISK FACTORS IN HEART DISEASE

Cigarette Smoking

Cigarette smoking increases the risk of coronary heart disease. The more you smoke, the greater the risk.

What individual behavioral factors influence the need to smoke? Is the smoker or the smoking the culprit? Do those who smoke for some genetic, constitutional, or behavioral reasons display an increase in coronary heart disease? Do they smoke to fill a need unique to their behavioral configuration? Do they have a higher level of emotional stress and tension than those who can either resist smoking initially or discontinue it?

New and greater concerns must be raised for women because of the increasing number who smoke and the greater risk factor present for those who smoke in combination with the use of oral contraceptives. Current research indicates that persons who have never smoked or who have quit smoking have a decreased incidence of heart disease.

Recent German investigations reveal that heavy cigarette smokers are much younger at the time of acute heart attack. It is still to be determined whether stopping smoking reduces coronary heart events as a result of chemical or behavioral adjustments. From a practical standpoint, however, stopping smoking remains the most powerful preventive tool against coronary arteriosclerosis of all other risk variables.

High Blood Pressure

High blood pressure is a common problem—one out of every five Nebraskans is affected. People with untreated high blood pressure have an increased risk for strokes, heart disease, and kidney failure. In fact, all of the recent publicity concerning the dangers of hypertension—often referred to as the "silent killer" because it rarely produces warning signals—is based on evidence that effective treatment reduces the risk of early disability or death. At present, most physicians recognize the importance of treating an otherwise healthy person whose blood pressure, on repeated examination, is or exceeds "160 over 100." But what about the "gray" areas of milder elevations of blood pressure or readings that are in the high range only once in a while?

High blood pressure refers to the fact that, at a given moment, one's blood pressure is "up" compared to the normal range for his age. Such an elevation can occur during moments of tension or even quiet concern (as is often the case when someone's blood pressure is being checked). While it is generally typical for blood pressures to increase with age, you should check with your physician to learn what is "normal" at your present age. Most physicians encourage people to maintain a stable reading throughout life.

The diagnosis of *hypertension* should be reserved for a pattern of consistently elevated blood pressure as determined by at least two separate blood pressure measurements by the same person using the same equipment under relaxed conditions—unless the initial blood pressure is so high as to indicate clearly an abnormality that does not need further verification. There is good reason for being cautious in labeling someone as hypertensive, because this diagnosis usually leads to a recommendation for extended if not life long treatment, as well as to increased insurance premiums.

In deciding whether a given level of pressure deserves treatment, many physicians consider the presence of factors that tend to increase the risk of

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Leo E. Lucas, Director

complications-such as smoking, diabetes, elevated cholesterol levels, and family history.

Some physicians who are strongly prevention oriented urge treatment for patients with even mild hypertension; they argue that blood pressure readings comprise a continuum in terms of complications and even patients with "borderline" hypertension will, in time, develop more strokes than those in lower ranges. Other physicians are less convinced of the need to recommend lifelong therapy to combat what they perceive to be a slight risk.

Causes.

The majority of hypertension cases turn out to have *no* easily identifiable and remediable cause; these cases are referred to as "primary." We know that hormones and nerve impulses may contribute to primary hypertension. Some families may show a pre-disposition to hypertension problems. In addition, the following factors are of increasing interest in terms of prevention and treatment.

Salt Intake. Researchers can produce hypertension in certain animals simply by feeding them high salt diets (the real culprit in salt is the sodium content). And human societies in which individual daily salt intake averages less than 4 grams (one scant teaspoon)—versus the average American consumption of 12 grams— show a greatly reduced occurrence of hypertension. Few experts claim that salt is the sole cause of hypertension; rather, they describe salt as an important contributing factor in the 10-20% of Americans who are genetically susceptible to high blood pressure. And, for such persons, the hidden salt in the processed food of the typical American diet is a real hazard. For example, (Consumer Reports, March, 1979) says one ounce of Corn Flakes contains twice as much sodium (the component of salt related to high blood pressure) as an equivalent serving of Planters Peanuts, and a Big Mac hamburger comes loaded with five times as much sodium as the one ounce of Corn Flakes. Salt is an acquired taste we can learn to live without.

Excessive Weight. Many studies have documented that obesity increases risk of hypertension. Indeed, the association of heart disease with excessive weight appears not to be due to weight itself—but to the higher incidence of hypertension, diabetes, and elevated cholesterol levels in obese persons. Conversely, weight loss can serve as effective treatment for high blood pressure—and is sometimes all that's needed in mild cases. The role of exercise in the prevention of hypertension is less clear-though its contribution to weight loss would be expected to decrease the risk of hypertension.

Treatment: Death rates caused by hypertension have been reduced (by as much as 35%) in the last 10 years. Many experts think that the decline in the death rate from heart attacks and strokes is attributable in part to the improved treatment for hypertension developed during the past 25 years:

(1) Food and Life Style Changes: Salt restriction and weight loss may be all that is needed to control very mild elevations of blood pressure; in these cases, some would even quibble about using the term "hypertension."

(2) Behavioral Therapies: Several studies have reported mild lowering of blood pressure using techniques of relaxation, meditation, and biofeedback; other studies, however, have shown no effect. These approaches (particularly those that involve no expensive equipment or investment) may be worthy of trial under the guidance of a physician in cases of very mild hypertension and in combination with drug therapy for more severe cases.

(3) Drug Therapy: Most persons with blood pressure levels above 160/100 will require one or more drugs to bring their pressure levels into a normal range. The idea of having to take drugs, often for the remainder of one's life, is not appealing. Yet it is not an overstatement to suggest that the majority of persons requiring drug therapy will find a program of treatment that produces very little interference with normal living. However, some persons taking antihypertensive drugs must learn to live with unpleasant side effects.

The skilled use of antihypertensive medications requires thorough familiarity with many kinds of drugs. In difficult cases, the care of a specialist is required. For most patients, however, family physicians can provide all that is needed.

Diagnosis of hypertension requires careful consideration of many factors. Once an accurate diagnosis has been made, effective treatment is available for the majority of cases. Such treatment reduces the occurrence of heart disease, strokes, and kidney failure—complications that make hypertension the "silent killer."

Cholesterol

High blood cholesterol levels are related to atherosclerosis (cardiovascular disease). However, the effectiveness of lowering blood cholesterol level as a preventative device has been questioned. Various dietary alterations including lowering of total dietary cholesterol, lowering of total fat, and lowering of saturated fats (primarily animal and solid fats) effectively lower high blood cholesterol levels.

Recent discussion has turned to two types of blood cholesterol, high and low density. High density cholesterol seemingly acts as a protective form of cholesterol while low density cholesterol is the damaging form. It appears that the ratio between high density and low density cholesterol is as important as is the blood cholesterol level. In addition to the dietary factors, exercise and genetic background are important in achieving a desirable ratio.

Diabetes Mellitus

Diabetes mellitus should not be considered in itself a risk factor for heart disease. For the person with diabetes, coronary heart disease is certainly more frequent; but, for the population at large, diabetes cannot be considered a risk in itself. Twenty million Americans have been diagnosed as diabetic, however, this represents only a small fraction of the total. The reasons for the higher incidence of atherosclerosis (fatty deposits or fibrosis of the inner walls of the arteries) associated with diabetes await the understanding of diabetes itself. The ability to reduce atherosclerosis by better control of the condition remains an important research goal. Unfortunately, complete control of the diabetes is not associated with the reversal of the atherosclerosis. Diabetes appears to accelerate the atherosclerotic process, thereby contributing to the "premature" emergency of coronary heart disease.

Typically, the non-insulin dependent diabetic can control diabetes by reducing weight. Weight loss and dietary control are the most important methods for control of the onset of diabetes in adults.

Obesity

Obesity, without associated risk factors, is not a proven and significant risk factor in coronary heart disease. Yet, actuarial tables demonstrate the association between obesity and premature death for a number of causes. Reduction in body weight is often a successful treatment to control high levels of fats in the blood and hypertension. Obesity contributes to and increases the risk of coronary heart disease whenever it is associated with any other accepted risk factor such as cigarette smoking or hypertension.

Two risk factors related to heart disease for which the individual has the choice and control are smoking and overweight. While the decision to smoke or to remain overweight appears to be a simple one for some persons, it becomes a part of a complicated set of interaction patterns for most individuals.

Poorly Handled Stress

Each individual must learn what patterns and reactions to living work best for him and for his family. Each of us needs to look out for himself and to take time out for himself. Each member of the family should have a place at home where he can have privacy and quiet for a while each day.

Many of us need to learn to live a less than perfect life. We need to learn ways to relax that work for us—for our particular body and within our lifestyle. We may need to employ a variety of techniques; we want to find ourselves more resilient and able to handle problems more calmly and effectively. Getting upset or angry about every problem is inefficient and unnecessary. We may need to find ways to "blow off steam" once in awhile. Such behavioral expressions can be very helpful when done appropriately.

Most important, we need to keep healthy. Enough sleep, adequate rest and relaxation, along with appropriate work and meaningful involvements are basic. We need to pay special attention to diet and the variety of foods our body needs (for our age, for this time in our lives). It is important to take care of health problems when they are minor.

Many of us may need to gain more understanding and a more reasonable outlook on our own mortality and potential life stage developments such as illness, divorce, singleness, separation, death, and physical or emotional limitations.

In terms of life style and a potential for stress reduction, exercise coupled with relaxation is an excellent combination.

Woven in and through the fabric of individual life style, each person must identify life change events that are building up. Do you have stress associated with these life change events? Do you recognize goals in life for yourself? Are they realized?

There is wide variation in our response to stress when compared to others or when compared to previous stages in life. How easy is it for you to swing with the punches of life? The important question remains: How easy is it for you to handle stress?

Family History

Although family history is a risk factor over which we have no control, it is important for us to be aware of its significance. If you have had a blood relative (mother, father, sister, brother) who has died of heart disease before age 55, you will want to avoid compounding your risk by such behaviors as cigarette smoking, uncontrolled high blood pressure, excessive weight, or inappropriate eating habits.

Heart Attack and Its Symptoms

Pain may be the most prominent symptom of heart attack. This pain, usually in the center of the chest behind the breastbone, may be accompanied by pallor, weakness, nausea, sweating, shortness of breath, and often a feeling of impending disaster. The pain may radiate to the arm, neck, or jaw.

The severity of pain a person feels during a heart attack will vary according to the person's ability to recognize or feel pain. In some cases, the pain is mild and may feel like tightness or pressure in the chest; in fact, many people describe the discomfort of heart attack as "indigestion." In other cases the pain may be unbearably intense.

Unfortunately, too many people do not report their symptoms promptly. By failing to call a physician when unusual symptoms exist, they place their life in danger, or may cause unnecessary damage to their heart.

What Happens in Heart Failure

Actual heart failure may be caused by heart attack, by the effects of some diseases, especially rheumatic fever, or by defects in the heart present at birth. Or, the heart may be weakened by high blood pressure (hypertension) which has been present for long periods of time. Gradual narrowing of the arteries that nourish the heart (atherosclerosis) also can cause failure, especially in elderly people.

When the heart fails to pump efficiently, the flow of blood slows down and the circulation is thrown out of balance. Blood which is returning to the heart through the veins tends to back up, causing congestion in the tissues.

As the flow of blood fails to move along normally some of the fluid in the blood is forced out through the thin blood vessel walls into the surrounding tissues. Here the fluid accumulates and produces congestion. The result is swelling (edema) which can occur in many parts of the body, but is seen most

commonly in the legs and ankles. Sometimes fluid collecting in the lungs interferes with breathing and makes the patient short of breath.

Heart failure also affects the ability of the kidneys to dispose of sodium and water. The sodium which is normally eliminated in the urine stays in the body and holds the water there, too. The fluid retained in this way adds to the extent of the edema.

Signs and Symptoms. Difficulty in breathing and swelling (edema) are the most common indications of heart failure. When activities a person usually performs without trouble begin to cause unusual shortness of breath, consult a physician. This could happen in climbing a flight of stairs, or in hurrying for a bus. Waking at night with shortness of breath, if it occurs often, is another symptom. Sometimes heart failure patients must prop themselves up in bed with two or more pillows before they can sleep and breathe comfortably.

Swelling in the legs, ankles, and sometimes in the abdomen, and increasing weight, caused by an accumulation of water in tissues, also may be signs.

Do these signs and symptoms always mean the heart is failing? Certainly not. Vigorous exercise, even in a trained athlete, can make breathing difficult. Any unusual exertion and even excitement or nervousness can cause shortness of breath as can selected allergic reactions and lung conditions. But labored breathing during ordinary activity may be a warning signal.

Puffy ankles, common to many people are due to many causes. Varicose veins, pregnancy, and other conditions cause them, or they may swell up just from sitting or standing for a long time. Whenever there is a history of heart disease, report the swelling to a physician.

Does heart failure come suddenly? Not as a rule. There are some acute, emergency cases, but usually the condition develops slowly. It builds up as the heart muscle, already weakened by a heart condition, is increasingly strained. As effects accumulate, signs and symptoms become more apparent.

Only a physician can recognize and treat heart failure. The sooner he is consulted, the sooner the condition can be relieved or controlled.

Is it a serious condition? Yes. However, most mild and moderate cases, and many severe ones, respond well to treatment. Patients usually can live comfortably and usefully when they cooperate with their physician in a well-monitored treatment program. Even when they begin to feel well, they should continue medication and limit their activities for as long as advised. With medical supervision, heart failure need not make an invalid of the patient.

SUMMARY

Is there enough evidence to warrant any kind of risk factor modification? In certain areas, the answer is a resounding *yes*. These areas, in order of priority, include cigarette smoking, hypertension, weight control, and dietary modification. The role of diabetes is less clear. While no clear evidence has yet demonstrated the contribution of sedentary lifestyle, an improvement of some risk factors can be achieved through exercise. The most controversial factor at this time is cholesterol level and its effect on heart disease.

Although cause and effect relationships are unclear, the predictive value, in a purely actuarial sense, of cigarette smoking, hypertension, and obesity (when associated with another risk factor) is not well-known but is an important rating practice of insurance companies. For example, control of cigarette smoking and hypertension has been followed by lowered incidence of heart disease and complications. Still, the traditional risk factors have not been identified in more than half the new cases of coronary heart disease. This demonstrates the need to seek new avenues toward the solution of the heart disease dilemma.

There are other influences, risk factors, interactions, yet to be determined. Differences in cultures and societies are complicated, but the presence or absence of industrialization readily distinguishes the risk of coronary heart disease. The more industrialized the culture, the higher the risk of heart disease. Therefore, risk factors must be considered in concert with the degree of industrialization of the society in question. The role of industrialized society needs to be better understood and clarified with regard to its impact on coronary heart disease.

Actions

You can do something to decrease risk from coronary heart disease (atherosclerosis). These actions for good heart health for the whole family include:

* No use of cigarettes
* A careful monitoring of possible hypertension
* Maintenance of a desirable weight
* A proper diet which includes a variety of foods
* Adequate exercise
* Handling of stress within a positive life style
* Appropriate actions and reactions to present age, sex, and family history (genetic inheritance)

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