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Understanding Risk Factors

Part of learning how to take charge of your health involves understanding your risk factors for different diseases. Risk factors are things in your life that increase your chances of getting a certain disease. Some risk factors are beyond your control. You may be born with them or exposed to them through no fault of your own.

Risk factors that you have little or no control over include your:

- family history of a disease
- sex
- ancestry
- age
- health — having one health problem may raise your risk of having another (for instance, having diabetes increases your chances of getting heart disease)

Risk factors you can control include:

- what you eat
- how much physical activity you get
- whether you use tobacco
- how much alcohol you drink
- whether you use illegal drugs
- whether you use your seatbelt

In fact, it has been estimated that almost 35 percent of all U.S. early deaths in 2000 could have been avoided by changing just three behaviors:

- stopping smoking
- eating a healthy diet (for example, eating more fruits and vegetables and less red meat) and getting more physical activity

Having more than one risk factor

You can have one risk factor for a disease or you can have many. The more risk factors you have, the more likely you are to get the disease. One doctor has suggested thinking of multiple risk factors for a disease in terms of your chances of breaking a leg when leaving a building.* If you're a healthy person and don't have any risk factors for, say, heart disease, it's like leaving the building on the ground floor. In this case, your chances of breaking a leg are small. But let's say you have one risk factor for heart disease: diabetes. Now it's like leaving the building by jumping from the second floor. Your chances of breaking a leg are now greater. If you also have another risk factor, such as high blood pressure, it's like jumping from the third floor. If you also smoke tobacco, now you're jumping from the fourth floor. To lower your risks, all you have to do is come down the stairs. In the case of heart disease, that means taking steps such as quitting smoking and controlling your blood pressure through healthy eating, physical activity, and taking medications.

Inheriting risk — your family health history

Rarely, you can inherit a mutated gene that alone causes you to get a disease. Genes control chemical reactions in our bodies. If you inherit a faulty gene, your body may not be able to carry out an important chemical reaction. For instance, a faulty gene may make your blood unable to clot. This problem is at the root of a rare bleeding disorder. More often, you can inherit genes from one or both of your parents that put you at higher risk of certain diseases. But having a gene for a certain disease does not mean you will get it. There are many unknown factors that may raise or lower your chances of getting the disease. You can't change your genes, but you can change behaviors that affect your



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health, such as smoking, inactivity, and poor eating habits. People with a family health history of chronic disease may have the most to gain from making lifestyle changes. In many cases, making these changes can reduce your risk of disease even if the disease runs in your family. Another change you can make is to have screening tests, such as mammograms and colorectal cancer screening. These screening tests help detect disease early. People who have a family health history of a chronic disease may benefit the most from screening tests that look for risk factors or early signs of disease. Finding disease early, before symptoms appear, can mean better health in the long run.

How do I find out my disease risks?

It is important to talk to your doctor or nurse about your individual health risks, even if you have to bring it up yourself.

And it's important for your doctor to know not just about your health, but your family health history as well. Come to health care visits armed with information about you, your children, siblings, parents, grandparents, aunts and uncles, and nieces and nephews, including:

- major medical conditions and causes of death
- age of disease onset and age at death
- ethnic background
- general lifestyle information like heavy drinking and smoking

Your doctor or health professional will assess your risk of disease based on your family health history and other risk factors. He or she may also recommend things you can do to help prevent disease, such as getting more physical activity, changing your diet, or using screening tests to detect disease early. ■

*Edwards A. Communicating risks through analogies. *BMJ*. 2003;327:749.