

### **What is a family history of heart disease?**

You have a family history of early heart disease if a first-degree relative (parent, brother or sister, or child) was diagnosed with heart disease or died suddenly from heart problems before age 65 in female relatives, or before age 55 in male relatives.

### **How does family history put me at risk?**

Heart disease is a complex disease that is partly caused by genes inherited from your parents. These genetic factors and their interaction with lifestyle factors (such as diet and exercise) determine your likelihood of developing heart disease and heart disease risk factors.

Heart disease tends to cluster in families because genes that predispose someone to develop major heart disease risk factors (such as diabetes, high blood pressure, and high cholesterol) run in families. In addition, families often share unhealthy habits such as smoking, lack of exercise, and poor diet.

### **How much does family history increase my risk for heart disease?**

A positive family history of early heart disease puts you at increased risk for heart disease, even if you don't have other risk factors such as high cholesterol, high blood pressure, diabetes, and obesity.<sup>1</sup>

Women with a family history of early heart disease have up to a 3-fold higher risk of heart attack and a 5-fold higher risk of dying from heart disease than women with no family history of heart disease.<sup>2,3</sup> Some studies suggest that a family history of heart disease may be a stronger risk factor in women than in men, but this has not been fully proven.<sup>4</sup> Among people who had a heart attack at age 60 or younger, more women than men have a parent, brother, or sister with heart disease.

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### Does the risk vary depending on the family member(s) affected?

Several factors affect how much a positive family history increases your risk for heart disease. The younger your relative(s) were when they developed heart disease and the more affected relatives you have, the higher your risk.<sup>5, 6</sup> One study found that women who had a single parent or sibling with heart disease were twice as likely to have a heart attack as women without a family history, while those with 2 or more relatives with heart disease were over 4 times as likely to have a heart attack.<sup>7-9</sup> <sup>2</sup> If you have a sister or brother with heart disease, you are also at higher risk than if you have only a parent with heart disease. This is because in addition to genes, siblings usually grow up with the same lifestyle risk factors (such as bad diet and lack of exercise).

A Swedish study also found that heart disease is more likely to be inherited from your mother than your father – possibly because of conditions in the womb, and because children often spend more time with their mothers and so may be more likely to acquire unhealthy behaviors from them.

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### Why is family history important if I can't change it?

Even though you can't change your family history, it's important for people with a strong family history of heart disease to lower their overall risk by focusing on the risk factors they can change. Most people whose parents or siblings have heart disease have at least one other risk factor such as high cholesterol or high blood pressure.<sup>11</sup> Risk factors are often inherited, and knowing which ones run in your family can help you target those for which you are at the highest risk. In nearly all cases, these risk factors are caused by many different genes, some of which aren't completely understood, so DNA testing isn't usually helpful. In addition to heart disease, many other health problems such as certain cancers run in families. Knowing your family history can help you learn which preventive health strategies are best for you.

Collecting a detailed family history and sharing it with your doctor is an important step in controlling your risk for heart disease: one large survey found that although 96% of people believe that family history is important for their own health, less than 30% have collected health information from their relatives to develop a family health history.<sup>12</sup>

### How do I record my family history?

There are several online tools that can help you collect and organize a useful family history. The US Surgeon General's [My Family Health Portrait](#) allows you to create and print a personalized family health history report. See the links below for more information and tips on how to collect your family history.

### For More Information:

National Society of Genetic Counselors: Family History  
<http://www.nsgc.org/consumer/familytree/>

US Surgeon General's Family History Initiative  
<http://www.hhs.gov/familyhistory/>

Centers for Disease Control and Prevention Family History  
<http://www.cdc.gov/genomics/famhistory/famhist.htm>

### References

1. Williams RR, Hunt SC, Heiss G, et al. Usefulness of cardiovascular family history data for population-based preventive medicine and medical research (the Health Family Tree Study and the NHLBI Family Heart Study). *Am J Cardiol.* 2001;87:129-135.
2. Leander K, Hallqvist J, Reuterwall C, Ahlbom A, de Faire U. Family history of coronary heart disease, a strong risk factor for myocardial infarction interacting with other cardiovascular risk factors: results from the Stockholm Heart Epidemiology Program (SHEEP). *Epidemiology.* 2001;12:215-221.
3. Colditz GA, Stampfer MJ, Willett WC, Rosner B, Speizer FE, Hennekens CH. A prospective study of parental history of myocardial infarction and coronary heart disease in women. *Am J Epidemiol.* 1986;123:48-58.
4. Marenberg ME, Risch N, Berkman LF, Floderus B, de Faire U. Genetic Susceptibility to Death from Coronary Heart Disease in a Study of Twins. *N Engl J Med.* 1994;330:1041-1046.
5. Pohjola-Sintonen S, Rissanen A, Liskola P, Luomanmaki K. Family history as a risk factor of coronary heart disease in patients under 60 years of age. *Eur Heart J.* 1998;19:235-239.
6. Rissanen AM, Nikkila EA. Coronary artery disease and its risk factors in families of young men with angina pectoris and in controls. *Br Heart J.* 1977;39:875-883.
7. National Cholesterol Education Program Expert Panel on Detection E, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III). *Third Report of the Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III) Full Report.* Bethesda, MD: U.S. Department of Health and Human Services: National Institutes of Health, National Heart, Lung, and Blood Institute.; September 2002 2002.

8. Nasir K, Michos ED, Rumberger JA, et al. Coronary artery calcification and family history of premature coronary heart disease: sibling history is more strongly associated than parental history. *Circulation*. 2004;110:2150-2156.
9. Murabito JM, Pencina MJ, Nam B-H, et al. Sibling Cardiovascular Disease as a Risk Factor for Cardiovascular Disease in Middle-aged Adults. *JAMA*. 2005;294:3117-3123.
10. Sundquist K, Li X. Differences in maternal and paternal transmission of coronary heart disease. *Am J Prev Med*. 2006;30:480-486.
11. Genest JJ, Jr., Martin-Munley SS, McNamara JR, et al. Familial lipoprotein disorders in patients with premature coronary artery disease. *Circulation*. 1992;85:2025-2033.
12. Centers for Disease Control and Prevention. *Awareness of family health history as a risk factor for disease - United States* 2004.

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