

February, 2014 • Members

# Heart Disease

## Managing Risk

### What is heart disease?

There are many kinds of heart disease. Some of these are atherosclerosis, heart failure, heart valve problems, heart rhythm problems, and heart problems that a child can be born with. Atherosclerosis is a common type of coronary heart disease. This type of heart disease affects the blood vessels of the heart. It happens when lipids (eg, cholesterol) build up in the arteries of the heart and form a plaque. When a plaque ruptures, it can cause a blood clot. The blood clot can block the flow of blood to the heart, causing a heart attack.

Coronary heart disease is the leading cause of death in the United States. It caused about a third of all deaths in 2010.<sup>1</sup> Many of these occurred without warning or symptoms.

### What are the basic risk factors for coronary heart disease?

These things increase your risk of developing heart disease:

- Age (older than 45 for men, older than 55 for women)
- High blood pressure
- High levels of bad cholesterol (LDL-cholesterol)
- Low levels of good cholesterol (HDL-cholesterol)
- Smoking
- Diabetes
- Being overweight
- Lack of physical activity
- Family history of early coronary heart disease

### What other risk factors are there?

There are many other things that might affect your risk of heart disease. These can be as important or more important than the basic risk factors. They include:

- The types, size, and number of HDL and LDL cholesterol particles you have<sup>2</sup>
- The amount of proteins that carry cholesterol in the body<sup>2</sup>
- The amount of inflammation in your arteries<sup>3</sup>
- Your genetic makeup<sup>3</sup>



### What can I do to reduce my risk and/or keep it low?

These things can help you be healthy and lower your risk of heart disease:

- Eat a healthy diet.
- Get to or stay at a healthy weight.
- Stop smoking (if you smoke).
- Get plenty of exercise.
- Manage your stress.

### What else can I do?

- Talk with your doctor about your risk factors.
- Ask if there are other tests you should have to get a more complete picture of your risk.
- Make sure you follow all your doctor's instructions for lifestyle changes and drug treatment.

### How will my doctor determine my risk?

Your doctor will ask questions to find out how old you are, whether you smoke, and how physically active you are. He or she will take your blood pressure and find out how much you weigh. Your doctor will also order some blood tests to learn about your cholesterol levels. Once the results are back, your doctor can put it all together and let you know your risk.

### What else might my doctor do?

Your doctor might ask if anyone in your family has had heart disease. If you answer yes, your doctor might order more blood tests. These tests can find out if the DNA in your genes increases your risk of heart disease.

If you have certain risk factors, like diabetes or being overweight, your doctor might also order more blood tests. These tests can give your doctor a more complete picture of your risk.

If you have an increased risk of heart disease, your doctor may suggest treatment. Once your treatment has begun, your doctor might order more blood tests to see if the treatment is working. Some blood tests can tell if you are still at risk after being treated. That is, they can determine your residual risk.

### How can the laboratory help?

The laboratory does all the blood testing for your doctor. If your doctor orders Cardio IQ™ tests from Quest Diagnostics, the laboratory will send a special report. This report can help you and your doctor better understand your results and what they mean. It can also help your doctor:

- Get a better idea of your risk of coronary heart disease
- Decide whether you need treatment
- Decide what is the best treatment for you
- Find out how well the treatment is working
- Decide whether changes need to be made to your treatment
- Determine whether family members may be at risk and could benefit from testing

### References

1. Go AS, Mozaffarian D, Roger VL, et al. Heart disease and stroke statistics—2014 update: a report from the American Heart Association. *Circulation*. 2014;129:e28-e292.
2. Superko HR. Advanced lipoprotein testing and subfractionation are clinically useful. *Circulation*. 2009;119:2383-2395.
3. Kones R. Molecular sources of residual cardiovascular risk, clinical signals, and innovative solutions: relationship with subclinical disease, undertreatment, and poor adherence: implications of new evidence upon optimizing cardiovascular patient outcomes. *Vasc Health Risk Manag*. 2013;9:617-670.