

## Screening for Coronary Heart Disease with Electrocardiography

The U.S. Preventive Services Task Force (Task Force) has issued **final** recommendations on *Screening for Coronary Heart Disease with Electrocardiography*.

These recommendations are for adult men and women who do not have symptoms of coronary heart disease (CHD) such as chest pain, and who have not been diagnosed with CHD.

The Task Force reviewed research studies on the use of resting or exercise electrocardiography (ECG) to prevent CHD. The recommendations

summarize what it learned about the potential benefits and harms of this screening: (1) For people at low risk for CHD, the possible harms of ECG screening are greater than the possible benefits. (2) For people at medium or high risk for CHD, there is not enough evidence to determine whether the potential benefits of ECG screening are greater than the potential harms.

This fact sheet explains the recommendations and what they might mean for you.

What is coronary heart disease (CHD)?

CHD, also known as coronary artery disease, is a narrowing of the small blood vessels that supply blood and oxygen to the heart. CHD can lead to chest pain and heart attacks.

### Screening for CHD with ECG

CHD is the leading cause of death in the United States. Every year, more than 1 million men and women have a heart attack. For some people, CHD causes chest pain, but for others a heart attack is the first sign that they have CHD.

Your risk for CHD is based on your age and gender; whether you have diabetes, high blood pressure, or abnormal blood cholesterol; and lifestyle factors, such as smoking, diet, and physical activity. Using these factors, a health care professional can determine whether you are at low, medium, or high risk for developing CHD. Knowing your level of CHD risk helps you and your doctor or nurse decide what actions you can take to reduce your chances of having a heart attack.

ECG is a test that records the heart's electrical activity through soft, sticky patches called electrodes, which are taped to your skin. It can be done while you are resting and completely still or while you are exercising. ECG is used to see whether the heart is beating and functioning normally.

### Potential Benefits and Harms

The Task Force reviewed evidence to determine whether ECG can be used to find out whether you are at increased risk for developing CHD. It also looked at the benefits and harms of using ECG for this purpose.

For people who are at low risk for CHD, the Task Force found few benefits. The information from an ECG probably won't change the actions your doctor or nurse will suggest you take to reduce your risk for CHD.

For people who are already at medium or high risk for CHD, the Task Force didn't find enough information to determine whether an ECG would provide enough additional useful information to help guide treatment and lead to reduced CHD.

The Task Force also found that screening with an ECG may lead to some harms. It can lead to additional tests or treatment that may not be needed or more treatment than is needed.

## The Task Force Recommendations on Screening for CHD with ECG: What Do They Mean?

Here are the recommendations on screening for CHD with ECG. The recommendations have letter grades. The grades are based on the quality and strength of the evidence about the potential benefits and harms of the screening test. They are also based on the size of the potential benefits and harms. Task Force evidence grades are explained in the box at the end of this fact sheet.

When the Task Force recommends against screening (Grade D), it is because the potential benefits of screening are not greater than the potential harms. When there is not enough evidence to judge potential benefits and harms, the Task Force does not make a recommendation for or against—it issues an I Statement. The Notes next to the recommendations help to explain key ideas.

Visit the Task Force Web site to read the [full recommendation statement](#) on screening for CHD with ECG. The statement explains the evidence that the Task Force reviewed and how it decided on the grades. An [evidence report](#) on this topic provides more detail about the studies the Task Force considered.

**1** The Task Force recommends against screening with resting or exercise electrocardiography (ECG) for the **prediction of coronary heart disease (CHD) events** in **asymptomatic adults** at **low risk** for CHD events. **Grade D**

**2** The Task Force concludes that the current **evidence is insufficient** to assess the balance of benefits and harms of screening with resting or exercise ECG for the prediction of CHD events in asymptomatic adults at **intermediate or high risk** for CHD events. **I Statement**

## Notes

### 1 prediction

This recommendation applies only to predicting the chances of future heart attacks, not to other medical uses for ECG.

**coronary heart disease (CHD) events**  
Heart attacks.

### asymptomatic adults

Men and women ages 18 and older who have no symptoms of CHD (such as chest pain) and who have not been diagnosed with CHD.

### low risk

Health care professionals use factors such as age, gender, blood pressure, cholesterol level, and smoking to calculate the risk for a future heart attack. A person with less than a 10% risk for a heart attack in the next 10 years is considered to be at low risk.

### 2 evidence is insufficient

The Task Force did not find enough information on this use of ECG to determine potential benefits and harms.

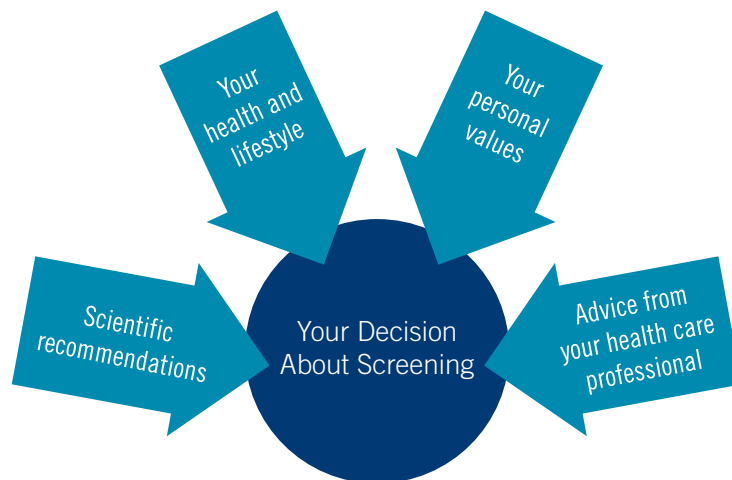
### intermediate or high risk

Health care professionals use factors such as age, gender, blood pressure, and smoking to calculate the risk for a future heart attack. A person with a 10% to 20% risk for a heart attack in the next 10 years is considered to be at intermediate (medium) risk. A person with a greater than 20% risk is generally considered to be at high risk.

## Should You Be Screened for CHD with ECG?

Getting the best health care means making smart decisions about what screening tests, counseling services, and preventive medicines to get and when to get them. Many people don't get the tests or counseling they need. Others get tests or counseling they don't need or that may be harmful to them.

Task Force recommendations can help you learn about screening tests, counseling services, and preventive medicines. These services can keep you healthy and prevent disease. The Task Force recommendations do not cover diagnosis (tests to find out why you are sick) or treatment of disease.



### How should you decide whether to be screened for CHD with ECG?

Consider your own health and lifestyle. Think about your personal beliefs and preferences for health care. Talk with your health care professional about risk factors for CHD and what screening tests you may need to do to determine your level of risk. And consider scientific recommendations, like this one from the Task Force. If you do get a screening test, talk with your health care professional about the results of your test and next steps you may need to take.

## What is the U.S. Preventive Services Task Force?

The Task Force is an independent group of national experts in prevention and evidence-based medicine. The Task Force works to improve the health of all Americans by making evidence-based recommendations about clinical preventive services such as screenings, counseling services, or preventive medicines. The recommendations apply to people with no signs or symptoms of the disease being discussed. Recommendations only address services offered in the primary care setting or services referred by a primary care clinician.

To develop a recommendation statement, Task Force members consider the best available science and research on a topic. For each topic, the Task Force posts draft documents for public comment, including a draft recommendation statement. All comments are reviewed and considered in developing the **final recommendation statement**. To learn more, visit the [Task Force Web site](#).

USPSTF Recommendation Grades	
Grade	Definition
A	Recommended.
B	Recommended.
C	Recommendation depends on the patient's situation.
D	Not recommended.
I statement	There is not enough evidence to make a recommendation.

**Click Here to Learn More About CHD and ECG Screening**

- Keep Your Heart Healthy** (healthfinder.gov)
- Heart Health: Conversation Starters** (healthfinder.gov)
- Coronary Heart Disease** (National Heart, Lung, and Blood Institute)
- Electrocardiogram** (National Heart, Lung, and Blood Institute)