

This fact sheet explains the U.S. Preventive Services Task Force's (Task Force) draft recommendation statement on screening for cardiovascular disease (CVD) risk with electrocardiography (ECG). It also tells you how you can send comments about the draft recommendation to the Task Force. Comments may be submitted from December 19, 2017 to January 22, 2018. The Task Force welcomes your comments.

## Screening for Cardiovascular Disease Risk with ECG

The Task Force has issued a **draft recommendation statement** on *Screening for Cardiovascular Disease Risk with Electrocardiography*. The Task Force reviewed whether using ECG, a test that records the activity of a person's heart, in addition to other traditional risk factors for CVD, can better assess risk for heart attack or stroke.

The Task Force found that adults at low risk for CVD should not be screened using ECG. It also found that there is not enough evidence to recommend for or against ECG screening in adults who are at medium or high risk for CVD.

This recommendation applies to adults without signs, symptoms, or an earlier diagnosis of CVD.

### What is cardiovascular disease?

Cardiovascular disease (CVD), also commonly called heart disease, refers to diseases of the heart and blood vessels.

CVD can limit blood flow and lead to dangerous cardiovascular events such as heart attacks and strokes.

## Facts about CVD and ECG

CVD is the leading cause of death for all adults in the United States. It can limit blood flow and lead to heart attacks or strokes.

A heart attack happens when the flow of blood to a section of heart muscle suddenly becomes blocked and the heart can't get oxygen. A stroke occurs if the flow of blood to a part of the brain is blocked.

There are several risk factors that increase risk of CVD, heart attack, and stroke:

- Older age,
- Male sex,
- High blood pressure,
- Smoking,
- High cholesterol,
- Diabetes,
- Obesity, and
- An inactive, or sedentary, lifestyle.

Clinicians check someone's risk for CVD by using traditional risk factors and assessment tools. These risk factors and tools estimate the chance a person has of experiencing a heart attack or stroke in the next ten years. A risk level of less than 7.5 percent is considered low risk. Risk levels of greater than 7.5 percent are considered medium or high.

An ECG is a test that records the electrical activity of the heart. It can show normal or abnormal heart activity and can signal a higher risk for future CVD events, including heart attack, and stroke. An ECG can be taken while someone is at rest or exercising, usually on a treadmill. An exercise ECG is commonly called a stress test.

## Potential Benefits and Harms of Screening for CVD Risk with ECG to Prevent Heart Attack and Stroke

For this recommendation, the Task Force looked at evidence on whether adding ECG screening to traditional risk assessments for CVD provides additional information that helps clinicians better assess risk for heart attack or stroke.

For people at intermediate or high risk of CVD, who show no signs or symptoms, the Task Force found that there is not enough evidence to determine if adding resting or exercise ECG to traditional risk assessment tools is beneficial.

For people at low risk of CVD, evidence shows that there is no benefit of using resting or exercise ECG to screen for CVD and there may be harm.

The harms of resting ECGs are minimal. A small number of people having an exercise ECG may experience injury or have a heart attack.

However, there are larger potential harms from other procedures that may be done if someone without signs or symptoms of CVD has an abnormal result on their ECG. These procedures may include:

- Angiograms, a type of x-ray of the blood vessels, can cause heart rate changes, stroke, heart attack, or death. People can also be allergic to the contrast dye used during the test.
- Angioplasty, a procedure that reduces blockages in blood vessels, can lead to heart attack, a tear to a blood vessel, bleeding, kidney failure, or death.

## The Draft Recommendations on Screening for CVD with ECG: What Do They Mean?

Here are the Task Force's draft recommendations on screening for CVD Risk with ECG. They are based on the quality and strength of the evidence about the potential benefits and harms of screening for this purpose. They are also based on the size of the potential benefits and harms. Task Force recommendation grades are explained in the box at the end of this fact sheet.

When the Task Force issues a **Grade D**, it recommends against screening because it has more potential harms than benefits. When there is not enough evidence to judge benefits and harms, the Task Force does not make a recommendation for or against screening and instead issues an **I Statement**.

Before you send comments to the Task Force, you may want to read the [draft recommendation statement](#). The recommendation statement explains the evidence the Task Force reviewed and how it decided on the grade. An [evidence document](#) provides more detail about the scientific studies the Task Force reviewed.

- 1 The USPSTF recommends against screening with *resting or exercise electrocardiography* (ECG) to prevent *cardiovascular disease* (CVD) events in *asymptomatic* adults at *low risk* for *CVD events*. **(Grade D)**
- 2 The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of using resting or exercise ECG to screen asymptomatic adults at *intermediate or high risk* of cardiovascular disease to prevent CVD events. **(I Statement)**

## Notes

- 1 *resting or exercise electrocardiography (ECG)*  
An ECG is a test that records the electrical activity of the heart. It can show normal or abnormal heart activity and can signal increased risk for CVD, heart attack, and stroke. Resting ECG is taken while someone is still and lying down. Exercise ECG is taken while someone is exercising, usually on a treadmill. ECGs are also called electrocardiograms.

*Cardiovascular disease (CVD)*  
CVD, also commonly called heart disease, relates to diseases of the heart and blood vessels

*Asymptomatic*  
Having no signs or symptoms of CVD, heart attack, or stroke.

*Low risk*  
A risk level of less than a 7.5 percent chance of having a heart attack or stroke in the next 10 years.

*CVD events*  
CVD can limit blood flow and lead to events such as heart attacks and strokes.

- 2 *intermediate or high risk*  
Risk levels of more than a 7.5 percent chance of having a heart attack or stroke in the next 10 years.

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

The Task Force is an independent, volunteer 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, and preventive medicines. The recommendations apply to people with no signs or symptoms of the disease being discussed.

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 AFib, Stroke, and ECG

- Heart Diseases**  
(MedlinePlus)
- Heart Disease Facts**  
(Centers for Disease Control and Prevention)
- What is Coronary Heart Disease?**  
(National Heart, Lung, and Blood Institute)
- What is a Heart Attack?**  
(National Heart, Lung, and Blood Institute)
- What is a Stroke?**  
(National Heart, Lung, and Blood Institute)

## Click Here to Comment on the Draft Recommendation



The Task Force welcomes comments on this draft recommendation.



Comments must be received between December 19, 2017 and January 22, 2018.



All comments will be considered for use in writing final recommendations.