

Go Red Heart CheckUp

Risk Assessment FAQs



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What is the purpose of the tool?

This tool can help your patient's to:

- Assess their risk factors
- Find their risk of having a heart attack or dying from coronary heart disease in the next 10 years based on risk prediction equations derived from the *Framingham Heart Study*
- Show a summary of the risk factors that your patients can change
- Allow them to modify some of their risk factors and see how that might change their risk
- Find out whether they have metabolic syndrome based on the *Adult Treatment Panel (ATP) III Report* of the National Cholesterol Education Program (NCEP)
- Show your patients how to lower their risk by improving their risk factors

Once they have completed their information using the tool, they can print their risk assessment report and receive a summary report and action plans for those risk factors they need to work on.

Who should use this tool?

This Risk Assessment Tool is for women age 20 or older who do not have heart disease or diabetes. By age 40, everyone should know their risk score using this tool and should assess their risk every 5 years.

If they have a family member who had heart disease at an early age (mother or sister before age 65, or father or brother before age 55) they should know about their risk factors and be screened much earlier than age 20.

You cannot use this tool if you already have been diagnosed with heart disease, diabetes, peripheral arterial disease, abdominal aortic aneurysm or carotid artery disease. You are already at high risk (more than 20 percent) of having a heart attack or dying from coronary heart disease in the next 10 years, and your risk cannot be accurately calculated. This tool is designed for primary prevention, not secondary prevention.

What do my patients need to know to use this tool?

They must know their blood pressure, cholesterol (lipid) levels (total, LDL, HDL and triglycerides), and blood sugar levels. They also need to know their height, weight and waist circumference.



What is the Framingham Heart Study

Among the various risk prediction equations, those derived from the Framingham Heart Study are most commonly recommended for use in the United States. These equations calculate the absolute risk of coronary heart disease (CHD) events for patients with no known previous history of CHD, stroke or peripheral vascular disease (primary prevention). The Framingham risk equations have favorable characteristics: they were developed in a large prospective cohort of U.S. men and women aged 30 to 74 years and have been subsequently validated in multiple diverse populations.

The study's goal is to learn why people get cardiovascular disease, and how it evolves and results in death in the general population. This information will help researchers find out, over a long time, how people who develop cardiovascular diseases differ from those who don't.

The Framingham coronary prediction algorithm provides estimates of total CHD risk (risk of developing one of the following: angina pectoris, myocardial infarction or coronary disease death) over the course of 10 years. Separate score sheets are used for men and women, and the factors used to estimate risk include age, blood cholesterol (or LDL cholesterol), HDL cholesterol, blood pressure, cigarette smoking and diabetes mellitus. Relative risk for CHD is estimated by comparison to low-risk Framingham participants. The scores given below are specific to women.

The factors used in the Framingham risk calculation include:

- Age
- Gender
- Smoking status
- Total cholesterol level
- HDL (good) cholesterol level
- Systolic blood pressure (with or without medicines)

How is the risk calculated?

For women, the risk scores in each category are as follows. Once all areas are tabulated an overall risk score is derived.

1. Age

Age	Points
20–34	-7
35–39	-3
40–44	0
45–49	3
50–54	6
55–59	8
60–64	10
65–69	12
70–74	14
75–79	16

Points _____

2. Find **age and total cholesterol** in the chart below. Points are shown in red print.

Cholesterol (mg/dL)	Age 20–39	Age 40–49	Age 50–59	Age 60–69	Age 70–79
Under 160	0	0	0	0	0
160–199	4	3	2	1	1
200–239	8	6	4	2	1
240–279	11	8	5	3	2
280 or more	13	10	7	4	2

Points _____

3. **Smoking status**

Points

No **0**

Yes (see points below)

Age 20–39	Age 40–49	Age 50–59	Age 60–69	Age 70–79
9	7	4	2	1

Points _____

4. **HDL (good) cholesterol**

HDL, mg/dL

Points

60 or more

-1

50–59

0

40–49

1

less than 40

2

Points _____

5. **Systolic blood pressure.** If not taking blood pressure medicine, points are in column A. If taking blood pressure medicine, use column B.

Systolic blood pressure (first number, mm Hg)	A Not taking blood pressure medicine	B Taking blood pressure medicine
Less than 120	0	0
120–129	1	3
130–139	2	4
140–159	3	5
160 or more	4	6

Points _____

Add up points from the 5 categories above and write total here:

Points _____

Find your total points below to learn your risk of having a heart attack or dying of coronary heart disease in the next 10 years. The risk is a percentage. It tells you how many people out of 100 with this total will have a heart attack in the next 10 years.

Your total points	Your 10-year risk
Less than 9	Less than 1%
9–12	1%
13–14	2%
15	3%
16	4%
17	5%
18	6%
19	8%
20	11%
21	14%
22	17%
23	22%
24	27%
25 or more	30% or higher

Users of this risk algorithm should be aware of several caveats:

1. The risk estimating score sheets are only for persons without known heart disease.
2. The Framingham Heart Study risk algorithm encompasses only coronary heart disease, not other heart and vascular diseases.
3. The Framingham Heart Study population is almost all Caucasian. The Framingham risk algorithm may not fit other populations quite as well.
4. For some of the sex-age groups in Framingham, the numbers of events are quite small. Therefore, the estimates of risk for those groups may lack precision.
5. Other organizations are considering how the information from the Framingham risk algorithm, as well as other assessments of risk, might best be incorporated into clinical practice. As new information and guidelines become available, they will be added.
6. The Framingham risk score estimates the risk of developing CHD within a 10-year time period. This risk score may not adequately reflect the long-term or lifetime CHD risk of young adults. The lifetime risk for developing CHD after age 40 is 49% for men and 32% for women.
7. The presence of any CHD risk factor requires appropriate attention because a single risk factor may confer a high risk for CHD in the long run, even if the 10-year risk does not seem to be high.
8. Since age is a prominent determinant of the CHD risk score, the 10-year hazards of CHD are, on average, high in older persons. This may over-identify candidates for aggressive interventions. Relative risk estimates (risk in comparison with low-risk individuals) may be more useful than absolute risk estimates in the elderly.
9. The score derived from this algorithm *should not be used in place of a medical examination.*

What is ATP III?

The ATP III, is a report written by the National Cholesterol Education Program (NCEP) that provides guidelines on how to prevent, detect, evaluate and treat high cholesterol in adults.

ATP III is endorsed by the American Heart Association and is sponsored by the NHLBI (National Heart, Lung, and Blood Institute). For more information about ATP III, visit <http://www.nhlbi.nih.gov/guidelines/cholesterol/>

What is metabolic syndrome?

Some people may have a group of risk factors that greatly increase their chances of developing cardiovascular disease, including stroke, and diabetes. These risk factors include:

- a large waist circumference (abdominal obesity)
- high blood pressure
- high fasting blood glucose
- abnormal blood fats — high triglycerides and/or low HDL (good) cholesterol

Your patient may have the metabolic syndrome if he or she has three or more of the following:

- Abdominal obesity (waist circumference more than 40 inches for men or more than 35 inches for women)
- Blood triglycerides of 150 mg/dL or higher or on drug treatment for elevated triglycerides.
- HDL (good) cholesterol of less than 40 mg/dL for men or less than 50 mg/dL for women or on drug treatment for reduced HDL cholesterol.
- Blood pressure of 130/85 mm Hg or higher or antihypertensive drug treatment with a history of high blood pressure.
- Fasting blood glucose (sugar) of 100 mg/dL or higher or on drug treatment for elevated blood glucose.

