Numbers to know for your heart's health

Many factors are known to increase the risk for coronary heart disease. The more risk factors a person has, the greater the likelihood that he or she will develop heart disease and suffer a heart attack. Some risk factors are beyond your control, including increasing age and a family history of heart disease. However, most risk factors, including an unfavorable cholesterol profile, high blood pressure, and high blood sugar, can be modified by making relatively simple lifestyle changes—quitting smoking, increasing physical activity, losing excess weight, and improving your diet—and, if necessary, taking certain medicines.

Some years ago, the American Heart Association adopted the slogan "Know your numbers" to boost the public's awareness of heart health. Let's review 11 numbers that are worth knowing.

The fats in your blood are collectively known as lipids, the most important of which are **LDL (bad) cholesterol** and **HDL (good) cholesterol**. The lower your LDL and the higher your HDL, the lower your odds of having a heart attack. **Total cholesterol** is a useful general measure. High **triglycerides** also increase risk, especially in combination with excess weight, high blood sugar, and low HDL cholesterol.

Your blood pressure has two components: **systolic pressure** (the top number of a blood pressure reading, or your pressure when your heart contracts) and **diastolic pressure** (the bottom number, or your pressure when your heart relaxes). The higher each reading is, the greater your chance of experiencing a heart attack or stroke.

Excess weight—especially at the waist—adversely affects heart health. **Body mass index** (BMI) indicates weight in relation to height. To calculate your BMI, multiply your weight in pounds by 703, divide the resulting number by your height in inches, and then divide again by your height in inches. Individuals with a BMI of 18.5 to 24.9 are considered to be at a healthy weight, while those with a BMI of 25 to 29.9 are overweight, and those with a BMI of 30 or more are obese. To determine your **waist circumference**, hold a tape measure at the level of your navel and circle your torso with it. Measure below, not at, the narrowest part of your abdomen.

Diabetes, or high blood sugar, is harmful to the heart. **Fasting blood sugar** provides a snapshot of your blood sugar at one point in time, while **hemoglobin A1c** gives a time-lapse look over several weeks. Although doctors typically order the latter test only for patients with diagnosed diabetes, some are now also recommending it for individuals at higher-than-usual risk for diabetes and heart disease.

Other substances in the blood, including **C-reactive protein** (CRP), homocysteine, lipoprotein(a), and fibrinogen, have recently been linked to an increased risk for heart disease. Of these, CRP has received the most publicity. An elevated CRP level indicates low-grade inflammation, a process implicated in heart disease. However, it is unclear exactly what level of CRP increases your risk and whether controlling CRP will help lower that risk.

Having more than one risk factor for heart disease is especially worrisome, because risk factors tend to "gang up" to worsen each other's effects. One potent cluster—an increased waist circumference, high triglycerides, low HDL cholesterol, high blood pressure, and high blood sugar—is known as the **metabolic syndrome**. About 1 in 4 U.S. adults have this syndrome, which is associated with an increased risk for diabetes, heart disease, and stroke.

Estimating your heart disease risk

There are tools that use your numbers to estimate your likelihood of having a first heart attack or being diagnosed with heart disease in the next 10 years. One widely used tool is the Framingham risk score. Go to http://hin.nhlbi.nih.gov/atpiii/calculator.asp, or ask your healthcare provider to calculate your score. Two web-based tools—www.reynoldsriskscore.org and www.yourdiseaserisk.harvard.edu—developed by researchers at Harvard Medical School and Harvard School of Public Health, respectively, give alternate estimates of your heart disease risk. The Harvard tools incorporate a wider array of potential risk factors than does the Framingham tool. The latter Harvard website also offers personalized tips for prevention, as well as tools for estimating your risk for stroke, diabetes, certain cancers, and osteoporosis.

Being aware of your heart disease risk may motivate you to make healthy lifestyle changes and will help your doctor determine whether to prescribe certain medicines to lower your risk. Drugs that lower blood pressure or favorably affect cholesterol levels can prevent heart attacks and increase survival in people at above-average cardiovascular risk. All of us can benefit from adopting healthy lifestyle choices and, when warranted, taking medications. Indeed, the greater your cardiovascular risk is, the greater the payoff from prevention efforts is likely to be.

Do you know your numbers?

Indicator	Ideal	When to worry[a]	How often should It be measured?[b]	Write your number here
Lipids			Every 5 years	
Total cholesterol	Under 200 mg/dL	240 mg/dL or higher		
HDL cholesterol	Over 50 mg/dL	40 mg/dL or lower		
LDL cholesterol	Under 100 mg/dL[c]	160 mg/dL or higher[d]		
Triglycerides	Under 150 mg/dL	200 mg/dL or higher		
Blood pressure			Every year	
Systolic	Under 120 mm Hg	140 mm Hg or higher[e]		
Diastolic	Under 80 mm Hg	90 mm Hg or higher[f]		
Body measurements			At every physical exam	
Body mass index	Under 25 kg/m^2	30 kg/m^2 or higher		
Waist circumference				
Men	Under 35 inches	40 inches or higher		
Women	Under 30 inches	35 inches or higher		
Fasting blood sugar[g]	Under 100 mg/dL	Over 125 mg/dL	Every 3 years	
Hemoglobin A1c[h]	Under 7%[h]	Over 8%[h]	Every 3 to 6 months[h]	
C-reactive protein (CRP)[i]	Under 1 mg/L	3 mg/L or higher	Not determined	

a. When to take action beyond lifestyle changes. These numbers may be different for people with heart disease, stroke, diabetes, or other medical issues.

b. More often for people with abnormal values or at increased risk for heart disease.

c. For people who have an LDL cholesterol level below 100 mg/dL but are at high risk for heart disease because of other risk factors, a goal of below 70 mg/dL is recommended.

d. This depends on how many other risk factors are present. For people with many risk factors, an LDL over 100 or 130 suggests the need for treatment with cholesterol-lowering medications; for others, an LDL of 160 or more, or 190 or more, does so.

e. 130 mm Hg or higher for people with heart disease, diabetes, or kidney disease.

f. 80 mm Hg or higher for people with heart disease, diabetes, or kidney disease.

g. People with blood sugar levels of 100 to 125 mg/dL have prediabetes, and those with blood sugar levels of 126 mg/dL or higher have full-blown diabetes.

h. For people with diabetes. Goal may vary depending on other risk factors.

i. CRP levels may vary by race/ethnicity. Some guidelines recommend CRP screening (using a high-sensitivity or cardio CRP test) for people at moderate risk for heart disease by virtue of other risk factors.