

BIOMETRIC SCREENING

Understanding Your Results

Tests	National Reference	Tests	National Reference
Blood Pressure ¹	< 120/80	Desirable HDL ⁴	40 or greater
Desirable Waist Circumference ²	Male ≤ 40 Female ≤ 35	Preferred Total Cholesterol/HDL Risk Ratio ⁵	≤ 5
Body Fat Percentage ³	Male 18 - 25% Female 25 - 31%	Triglycerides	<150
Total Cholesterol ⁴	<200	Glucose - Fasting ⁶	<100
LDL ⁴	< 100	Glucose - Random Non-Fasting ⁶	<140

Blood Pressure

Blood pressure is the pressure of the blood on the walls of the arterial blood vessels (blood vessels that carry blood from the heart to other parts of the body). The top number, or systolic pressure, is the peak pressure on the blood vessel when the heart is contracting. The lower number, or diastolic pressure, occurs when the heart relaxes between beats. Normal blood pressure is less than 120/80 mmHg (millimeters of mercury). Pre-hypertension is defined as a blood pressure in the range of 120-139 or over 80-89. High blood pressure is diagnosed when multiple readings are above 140/90 mmHg.

Waist Circumference

Carrying extra weight around the middle puts people at a higher risk for heart disease, some types of cancer and diabetes. Women should aim for a waist measurement of 35 inches or less, while men should stay at 40 inches or less.

Body Fat Percentage

Body fat percentage is the percent of total body weight that is composed of fat. Increases in body fat dramatically worsen health and increase the risk for heart disease, diabetes, stroke and cancer. The ideal body fat percentage for men is 18 - 25% and for women is 25 - 31%.

Cardiovascular Health

Cardiovascular disease is the No. 1 killer in the world. Early detection of risks and appropriate intervention can help prevent the many devastating effects of heart disease. The same intervention techniques can also help prevent other diseases and conditions, such as hypertension, stroke and weight issues.

The lipid panel – the most common blood test for cardiovascular disease – measures the way fats are packaged and transported in the blood. It includes total cholesterol, LDL, HDL and triglycerides.

Body Mass Index (BMI)

Body mass index is derived from a formula that uses weight and height to estimate body fat and gauge health risks caused by carrying too much weight. BMI does not take into account lean body mass or body frame. Muscular individuals may have an elevated BMI even if they have normal percent body fat, so take into account BMI along with waist circumference.

Male and Female BMI Ranges⁷

Underweight = < 18.5

Normal weight = 18.5 - 24.9

Overweight = 25 - 29.9

Obesity = BMI of 30 or greater



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Metabolic Syndrome

Metabolic syndrome is a combination of medical disorders that increase your risk of developing chronic medical conditions.

Metabolic syndrome diagnosis is based on having 3 out of 5 of the following risk factors⁸:

- 1 Waist circumference:**
 - › Greater than or equal to 40 inches for males
 - › Greater than or equal to 35 inches for females
- 2 Fasting Triglyceride levels equal or above 150mg/dl (also known as hypertriglyceridemia)**
- 3 HDL levels:**
 - › Below 40 mg/dl
- 4 Blood pressure equal or greater than 130/85**
- 5 Fasting blood glucose levels equal or greater than 100 mg/dl (our baseline for non-fasting results is 140 mg/dl)**

Cholesterol (Total)

Cholesterol is a waxy, fat-like substance that is found in all cells of the body. Manufactured by the liver, cholesterol is an essential component of cell membranes and nerve fiber insulation. Cholesterol is important for the metabolism and transport of fatty acids, and in the production of hormones and vitamin D. Excess cholesterol in your blood can build up in the walls of your arteries. This buildup of cholesterol is called plaque. Over time, plaque can cause narrowing of the arteries. This is called atherosclerosis or “hardening of the arteries.” Some plaques have a thin covering and can rupture, releasing fat and cholesterol into the bloodstream, which can result in a clot. A clot can block the flow of blood. This blockage can cause angina (tightening feeling in the chest) or a heart attack. Lowering your cholesterol level decreases your chance of having a plaque burst, causing a heart attack. Lowering cholesterol may also slow down, reduce or even prevent plaque from building up. Plaque and its resulting health problems can also occur in arteries anywhere in the body. It’s important to remember that in order for cholesterol to be transported in the blood stream, it must be packaged and carried by a lipoprotein. There are two main types of lipoproteins: HDL and LDL. It is important to have healthy levels of both. Therefore, it is important to pay particular attention to your LDL and HDL levels.

LDL (Low-Density Lipoprotein)

LDL is referred to as “lousy cholesterol.” LDL packages cholesterol in such a way that it has a tendency to build up excess fat which then sticks to blood vessel walls. The higher the LDL level in your blood, the greater your chance of getting heart disease. Low LDL levels have been shown to offer protection from arterial disease and damage. Nutritional and pharmaceutical measures that reduce high levels of LDL cholesterol have been proven to decrease risk for hardening of the arteries. In addition to the drugs commonly used for controlling cholesterol — statins, cholestyramine, high-dose niacin, etc., — certain nutrients and phytochemicals can be helpful. Diets very low in saturated and trans fats, especially diets that emphasize fiber may produce dramatic reductions in LDL cholesterol. Decreasing abdominal fat and participating in regular aerobic exercise will also help.

HDL (High-Density Lipoprotein)

HDL is referred to as “healthy cholesterol” because it carries cholesterol from other parts of your body back to your liver, where it is removed from your body. The higher your HDL cholesterol level, the lower your chance of getting heart disease. A low HDL cholesterol level may have little significance if Total Cholesterol is also low. Decreased HDL cholesterol is a common feature of “insulin resistance syndrome,” a risk factor of diabetes and heart disease. Increased exercise can increase your HDL level. Exercise creates HDL from LDL by removing fat from LDL particles for use as energy.

Triglycerides

Triglyceride is the technical name for things we call fat. Triglycerides are fats that contain three fatty acids. Triglycerides are the main carriers of fatty acids from fat cells to other parts of the body. They are one of the two main components of body fat and are associated with increased cardiovascular risk. Measures that tend to lower elevated triglycerides (high-dose niacin, fish oil or omega-3 fatty acids, gemfibrozil, pantethine, exercise training and weight loss) are also likely to reduce your risk for heart disease and diabetes.

Blood Sugar or Glucose

Blood glucose is a simple blood sugar, the body’s main source of energy. A blood test measuring glucose can be used to diagnose diabetes, monitor diabetic control, or for screening purposes.

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