

BIOMETRICS: YOUR PATHWAY TO PERSONAL HEALTH

LEARN YOUR NUMBERS AND FOLLOW THE FIVE 'KEY' STEPS TO OPTIMAL HEALTH

Biometric measurements help assess your health as well as indicate your risk for certain disease and medical conditions and often include **blood pressure, body mass index, cholesterol, glucose, and triglycerides**. Knowing your numbers can empower you to reduce your risk for illness and disease, leading you on a path to optimum health and wellness.

A word about risk factors: some risk factors can be modified, treated, or controlled while others cannot. Risk factors that cannot be modified, treated, or controlled include age, gender, family history, ethnicity, and race. Risk factors that can be modified, treated, or controlled include smoking, being overweight or obese, high blood cholesterol levels, high blood pressure, physical inactivity, and diabetes.

Control Blood Pressure Blood pressure is the force of blood pushing against artery walls as the heart pumps out blood. If this pressure rises and stays high, it can damage your heart, kidneys, eyes, and more.

- Reach and maintain a desirable body weight (see below).
- Follow the DASH Diet. Find DASH meal plan and guidelines <https://www.nhlbi.nih.gov/health-topics/dash-eating-plan>. Limit sodium by eating more whole, unprocessed foods and using sodium-free spices.
- Enjoy 30 minutes of moderate exercise daily. Check with your doctor before starting an exercise program.
- Limit alcohol
- Do not smoke
- Get adequate sleep
- Manage stress levels

BLOOD PRESSURE RISK CATEGORY	SYSTOLIC (Upper #)		DIASTOLIC (Lower #)
Normal	Less than 120	And	Less than 80
Elevated	120-129	And	Less than 80
High Blood Pressure/Hypertension Stage 1	130-139	Or	80-90
High Blood Pressure/Hypertension Stage 2	140 or higher	Or	90 or higher
Hypertensive Crisis (consult your doctor immediately)	Higher than 180	And/or	Higher than 120

Source: American Heart Association, 2018. Numbers are expressed in millimeters of mercury (Hg).

Reach and Maintain a Desirable Body Weight Being overweight increases your chance of developing high blood pressure, high cholesterol, diabetes, and heart disease.

- Promote gradual weight loss by eating less and burning more through physical activity. Visit www.myplate.gov to find out how many calories you need daily and the recommended number of serving sizes from each food group.
- Too much fat in the stomach area increases disease risk. A waist measurement of more than 35 inches in women and more than 40 inches in men is considered high.
- Body Mass Index (BMI) a measure of body fat based on height and weight. It does not consider muscle to fat ratio, so if you work out and are increasing muscle mass, BMI may seem disproportionately high.

BMI CATEGORY	BMI RANGE
Underweight	<18.5
Normal	18.5 to 24.9
Overweight	25 to 29.9
Obese	30 or greater

Source: National Institutes of Health (NIH). To calculate your BMI visit: https://www.nhlbi.nih.gov/health/public/heart/obesity/lose_wt/BMI/bmicalc.htm

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Control Blood Cholesterol Cholesterol is a wax-like substance produced by the liver or eaten in certain animal foods. Too much cholesterol in the blood can cause arterial blockage and increases your risk of heart attack and stroke.

- Reach and maintain a desirable body weight (see above).
- Keep your intake of total fat to 25-35% of calories and focus on healthy unsaturated fat food sources.
- Limit saturated fat intake to less than 7% of calories and try to avoid all trans-fat.
- Consume plenty of fruits, vegetables, and whole grains.
- Enjoy 30 minutes of moderate exercise daily. Check with your doctor before starting an exercise program.

TOTAL CHOLESTEROL	RISK CATEGORY
Less than 200 mg/dL	Desirable
200-239 mg/dL	Borderline high
240 mg/dL and above	High
LOW DENSITY LIPOPROTEIN ('lousy' LDL) CHOLESTEROL	
Less than 100 mg/dl	Optimal
100-129 mg/dL	Near optimal
130-159 mg/dL	Borderline high
160-189 mg/dL	High
190 mg/dL and above	Very high
HIGH DENSITY LIPOPROTEIN ('healthy' HDL) CHOLESTEROL	
< 40 (men) / <50 (women)	Undesirable
≥ 60	Optimal

Source: Third Report of the Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III) based on complete lipoprotein profile after 9-12 hour fast.

Control Triglycerides Triglycerides are the chemical form in which fat exists in food as well as in the body. Elevated triglycerides can build up to unhealthy levels in the blood, raising the risk of heart attack and stroke.

- Reach and maintain a desirable body weight (see above).
- Eliminate sugar and other refined carbohydrates foods and beverages.
- Limit saturated fat intake and try to avoid all trans-fat. Enjoy foods with unsaturated and omega-3 fats. Discuss omega-3 fatty acid supplementation with your physician and registered dietitian.
- Enjoy 30 minutes of moderate exercise daily. Check with your doctor before starting an exercise program.

RISK CATEGORY	TRIGLYCERIDE LEVEL (mg/dL)
Optimal	< 150
Borderline high	150-199
High	200-499
Very high	> 500

Control Blood Glucose Glucose is measured in the blood to determine if a person has diabetes or pre-diabetes. Maintaining optimal blood glucose control minimizes your risk for developing many diseases.

- Reach and maintain a desirable body weight (see above).
- Eat a healthful diet including lean protein, whole grains, legumes, vegetables, and fruits.
- Eliminate sugar and other refined carbohydrates foods and beverages.
- Limit saturated fat intake and try to avoid all trans-fat. Enjoy foods with unsaturated and omega-3 fats.
- Enjoy 30 minutes of moderate exercise daily. Check with your doctor before starting an exercise program.
- Work with a registered dietitian to help you develop a personalized meal plan: visit the website of the Academy of Nutrition & Dietetics, www.eatright.org and click on "Find a Registered Dietitian."

FASTING BLOOD GLUCOSE CATEGORY	FASTING BLOOD GLUCOSE (mg/dL)
Normal	70- 99
Impaired Fasting Glucose/Pre-diabetes	100-125
Diabetes	Greater than 126 on 2 separate days