

Health by the Numbers

Fasting Cholesterol, Triglycerides and C-Reactive Protein (hs-CRP) Levels

Measures risk for heart disease

Total Cholesterol Level

< 200 mg/dL	Low risk
200 - 239 mg/dL	Borderline high risk
≥ 240 mg/dL	High risk

HDL Cholesterol

< 40 mg/dL (for men)	High risk
< 50 mg/dL (for women)	
≥ 60 mg/dL	Low risk

LDL Cholesterol Level

<100 mg/dL	Optimal
100 - 129 mg/dL	Near or above optimal
130 - 159 mg/dL	Borderline high risk
160 - 189 mg/dL	High risk
≥ 190 mg/dL	Very high risk

Triglyceride Level

< 100 mg/dL	Optimal
< 150 mg/dL	Normal
150–199 mg/dL	Borderline high risk
200–499 mg/dL	High risk
≥ 500 mg/dL	Very high risk

hs-CRP (mg/L)

<1	Low Risk
1.0 - 3.0	Average Risk
>3.0	High Risk

Source for Cholesterol & Triglyceride Guidelines: American Heart Association website, 11 October 2012 article, http://www.heart.org/HEARTORG/Conditions/Cholesterol/AboutCholesterol/What-Your-Cholesterol-Levels-Mean_UCM_305562_Article.jsp; Original source: 2001 National Cholesterol Education Program (NCEP) guidelines.

Source for C-Reactive Protein Guidelines: The Heart website, 28 January 2003 article, <http://www.theheart.org/article/262255.do>; Original source: American Heart Association and the Centers for Disease Control and Prevention recommendations based on a March 2002 Joint AHA/CDC Workshop.

Body Composition

BMI and waist circumference (not body fat percentage level) are the two measurements that are recognized by major health institutes to assess overweight and body fat content.

Body Fat Percentage Levels

	Women	Men
Essential Fat	10 – 13%	2 – 5%
Athletes	14–20%	6 – 13%
Fitness	21–24%	14 – 17%
Average	25 – 31%	18 – 24%
Obese	32%	25%

Source: American Council on Exercise (not an official government agency), retrieved 4 November 2012, <http://www.acefitness.org/calculators/bodyfat-calculator.aspx>

Body Fat Percentage Levels

Gender	Obesity	Upper	Mid	Low
Males				
6 – 17 years	>31%	26-31%	11-25%	5-10%
18 – 34 years	>22%	22%	13%	8%
35 – 55 years	>25%	25%	18%	10%
55+ years	>23%	23%	16%	10%
Females				
6 – 17 years	>36%	31-36%	16-30%	12-15%
18 – 34 years	>35%	35%	28%	20%
35 – 55 years	>38%	38%	32%	25%
55+ years	>35%	35%	30%	25%

Source: IDEA Health & Fitness Association, November 2010, <http://www.ideafit.com/fitness-library/important-risk-factor-and-fitness-assessment-1dquonumbersrdquo>. Adapted from Heyward, V.H. 2006. *Advanced Fitness Assessment and Exercise Prescription* (5th ed.). Champaign, IL: Human Kinetics.

Waist Circumference

Waist Circumference Measurement

Men	>40"	High Disease Risk
Women	>35"	High Disease Risk

Source: *The Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report*, produced by the National Heart, Lung, and Blood Institute, http://www.nhlbi.nih.gov/guidelines/obesity/e_txtbk/txgd/411.htm

Body Mass Index

Body mass index (BMI) is a screening tool used to classify individuals as overweight or obese. However, please note that BMI does not take into consideration your body composition (how much of your body weight is fat, muscles, water, and other tissue).

Classification of Overweight & Obesity by BMI

	BMI (kg/m ²)	Obesity Class
Underweight	<18.5	
Normal	18.5 - 24.9	
Overweight	25.0 - 29.9	
Obesity	30.0 – 34.99	I
Obesity	35.00 – 39.99	II
Extreme Obesity	40	III

Source: *The Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report*, produced by the National Heart, Lung, and Blood Institute, http://www.nhlbi.nih.gov/guidelines/obesity/e_txtbk/txgd/411.htm

Calculating BMI

Using the inch-pound system, the BMI formula is weight in pounds (lb) divided by the square of height in inches (in), x 703

$$\text{BMI} = (\text{lb} / (\text{in}^2)) \times 703$$

Body Mass Index Table:

http://www.nhlbi.nih.gov/guidelines/obesity/bmi_tbl.htm

Adult BMI Calculator (ages 20 & older):

http://www.cdc.gov/healthyweight/assessing/bmi/adult_BMI/english_bmi_calculator/bmi_calculator.html

Child & Teen BMI Calculator (ages 2 – 19):

<http://apps.nccd.cdc.gov/dnpabmi/Calculator.aspx>

Blood Pressure

Hypertension = high blood pressure; Blood pressure reading = systolic pressure (mm Hg)/ diastolic pressure (mm Hg)

Blood Pressure Category	Systolic (upper #)		Diastolic (lower #)
Normal	>120 mm Hg	and	>80 mm Hg
Prehypertension	120 – 139 mm Hg	or	80 – 89 mm Hg
Hypertension Stage 1	140 – 159 mm Hg	or	90 – 99 mm Hg
Hypertension Stage 2	160 mm Hg	or	100 mm Hg
Hypertensive Crisis (Emergency Care Needed)	>180 mm Hg	or	>110 mm Hg

Source: *American Heart Association website*, updated 4 April 2012, http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/AboutHighBloodPressure/Understanding-Blood-Pressure-Readings_UCM_301764_Article.jsp

Maximal Oxygen Consumption (VO₂max)

VO₂max is the most relevant measure of the cardiorespiratory system's functional capacity. VO₂max, measured as ml/kg/min, is the highest rate at which oxygen can be consumed, distributed and used by the body during exercise.

VO₂max classification ranges

Age (years)	Poor	Fair	Good	Excellent	Superior
Women					
20 - 29	≤ 35	36 - 39	40 - 43	44 - 49	50+
30 - 39	≤ 33	34 - 36	37 - 40	41 - 45	46+
40 - 49	≤ 31	32 - 34	35 - 38	39 - 44	45+
50 - 59	≤ 24	25 - 28	29 - 30	31 - 34	35+
60 - 69	≤ 25	26 - 28	29 - 31	32 - 35	36+
70 - 79	≤ 23	24 - 26	27 - 29	30 - 35	36+
Men					
20 - 29	≤ 41	42 - 45	46 - 50	51 - 55	56+
30 - 39	≤ 40	41 - 43	44 - 47	48 - 53	54+
40 - 49	≤ 37	38 - 41	42 - 45	46 - 52	53+
50 - 59	≤ 34	35 - 37	38 - 42	43 - 49	50+
60 - 69	≤ 30	31 - 34	35 - 38	39 - 45	46+
70 - 79	≤ 27	28 - 30	31 - 35	36 - 41	42+

Source: Shape Sense website, retrieved 4 November 2012, <http://www.shapesense.com/fitness-exercise/articles/vo2-and-vo2max.aspx>; Adapted from V. H. Heyward, *Advanced Fitness Assessment and Exercise Prescription*, Fifth Edition, 2006, Champaign, IL: Human Kinetics. Original Source: The Cooper Institute for Aerobics Research, *The Physical Fitness Specialist Manual*. Dallas, TX. 2005.

Blood Glucose and Type 2 Diabetes

Blood glucose is the amount of sugar present in the blood. There are three different tests your doctor can use to determine whether you have prediabetes: the fasting plasma glucose test (FPG), the oral glucose tolerance test (OGTT), or the A1C test.

	Normal	Pre-Diabetes	Diabetes
Fasting Blood Glucose (FPG) Test	<100 mg/dl	<126 mg/dl 100 mg/dl	126 mg/dl
Oral Glucose Tolerance Test (OGTT)	<140 mg/dl	<200 mg/dl 140 mg/dl	200 mg/dl
A1C Test	<5.7%	<6.5% 5.7%	6.5%

Source: American Diabetes Association website, retrieved 4 November 2012, <http://www.diabetes.org/diabetes-basics/prevention/pre-diabetes/diagnosis.html>

Metabolic Syndrome (MetS)

Metabolic syndrome is a cluster of clinical disorders that increases your risk for cardiovascular disease and diabetes.

Metabolic Syndrome (MetS) is diagnosed if **3 or more** of these risk factors are present:

Elevated waist circumference	40" in men 35" in women
Elevated triglycerides	150 mg/dl
Reduced HDL cholesterol	<40 mg/dl in men <50 mg/dl in women
Elevated blood pressure	130/85 mmHg
Elevated fasting blood glucose	100 mg/dl

Source: American Heart Association website, 24 August 2011 article, http://www.heart.org/HEARTORG/Conditions/More/MetabolicSyndrome/Symptoms-and-Diagnosis-of-Metabolic-Syndrome_UCM_301925_Article.jsp, Adapted from the Third Report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III).

Discuss any questions about your numbers with your healthcare provider. If your numbers are not in the healthy range, collaborate with your healthcare provider to develop an appropriate holistic strategy to improve your health.

For additional wellness resources, fitness tips and inspiration, go to www.padmafitnessandyoga.com.