

# Metabolic Risk Factors

## Body Mass Index (BMI)

Category	BMI range – kg/m <sup>2</sup>
Severely underweight	from 15.0 to 16.0
Underweight	from 16.0 to 18.5
Normal (healthy weight)	from 18.5 to 24.9
Overweight	from 25 to 29.9
Obese Class I (Moderately obese)	from 30 to 34.9
Obese Class II (Severely obese)	from 35 to 39.9
Obese Class III (Very severely obese)	over 40

$$\text{BMI} = \frac{\text{weight (lb)} * 703}{\text{height}^2 (\text{in}^2)}$$

- BMI is an estimate of body fat and a good gauge of your risk for diseases that can occur with more body fat.
- The higher your BMI, the higher your risk for certain diseases such as heart disease, high blood pressure, type 2 diabetes, gallstones, breathing problems, and certain cancers.
- \*It may overestimate body fat in athletes and others who have a muscular build.
- \*It may underestimate body fat in older persons and others who have lost muscle.

## Blood Pressure (BP)

Blood Pressure Category	Systolic mm Hg (upper #)		Diastolic mm Hg (lower #)
Normal	less than 120	and	less than 80
Prehypertension	120 – 139	or	80 – 89
High Blood Pressure (Hypertension) Stage 1	140 – 159	or	90 – 99
High Blood Pressure (Hypertension) Stage 2	160 or higher	or	100 or higher
Hypertension Stage 3 (Emergency care needed)	Higher than 180	or	Higher than 110

- Systolic: pressure that comes out of your heart when it beats; when heart contracts.
- Diastolic: when the heart rests between beats; resting pressure in vessels.
- High Blood Pressure means your blood is moving through your arteries with a pressure that is higher than normal.

## Waist Circumference

	Men	Women
High-risk	Greater than 40 in.	Greater than 35 in.

- Measuring waist circumference helps screen for possible health risks that come with overweight/obesity.
- If most of your fat is around your waist rather than at your hips, you're at a higher risk for heart disease and type 2 diabetes.

## Body fat %

Classification:	Women:	Men:
Essential Fat	10 - 12%	2 - 4%
Athletes	14 - 20%	6 - 13%
Fitness	21 - 24%	14 - 17%
Acceptable	25 - 31%	18 - 25%
At Risk	32% plus	25% plus

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## Cholesterol (mg/dL)

	Total Cholesterol	HDL ("good")	LDL ("bad")	Triglyceride
<b>Desirable</b>	Less than 200	60 and above	Less than 129	Less than 150
<b>Borderline high</b>	200 - 239		130 - 159	150 - 199
<b>High-risk</b>	240 and above	Less than 40	160 and above	200 and above

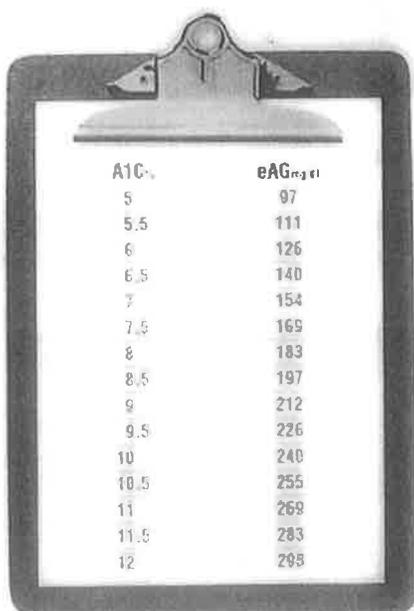
- High cholesterol is one of the major controllable risk factors for coronary heart disease, heart attack and stroke.
- Triglyceride is a form of fat made in the body.
- Smoking, being overweight and being sedentary can all result in borderline to high-risk cholesterol levels.
- LDL cholesterol and Triglycerides can be lowered and HDL cholesterol raised if you:
  - ✓ control your weight, eat nutritious meals
  - ✓ avoid tobacco, limit alcohol consumption
  - ✓ engage in physical activity

## Fasting Blood Sugar (FBS)

Category of a person	Fasting Value		After eating meal
	Minimum Value	Maximum Value	Value 2 hours after consuming glucose
Normal	70	100	Less than 140
Early Diabetes	101	126	140 to 200
Established Diabetes	More than 126		More than 200

- Food is broken down into sugar and enters the bloodstream. Sugar from food makes the blood sugar level rise. Insulin helps sugar move from the bloodstream into cells to lower blood sugar levels.
- Type 2 Diabetes: your body prevents the insulin your body makes from working right. Your body may make some insulin but not enough.
- Type 2 diabetes usually develops in people who are older or those who are overweight.

## A1C



A1C%	eAG <sub>mg/dl</sub>
5	97
5.5	111
6	126
6.5	140
7	154
7.5	169
8	183
8.5	197
9	212
9.5	226
10	240
10.5	255
11	269
11.5	283
12	298

- A1C is the best way to test average blood sugars over the past 2-3 months.
- A1C acts like a "memory" of your blood sugar levels.
- Lowering your A1C to below 7% reduces your risk of problems from diabetes.
- It is recommended that you get an A1C test :
  - ✓ At least 2 times per year if your blood sugar is under control
  - ✓ 4 times per year if you are not meeting your goals.

\*eAG=estimated average glucose (blood sugar)