

## What is Metabolic Syndrome?

Metabolic syndrome is a cluster of conditions that have shown to increase risk for stroke, diabetes, and cardiovascular disease (coronary heart disease and heart attack.) It may also contribute to urologic conditions like Erectile Dysfunction (ED) and Benign Prostatic Hyperplasia (BPH). \

Must have at least 3 of the 5 criteria below to have metabolic syndrome:

1. Fasting glucose  $\geq 100$  mg/dL (or receiving drug therapy for diabetes)
2. Blood pressure  $\geq 130/85$  mm Hg (or receiving drug therapy for high blood pressure)
3. Triglycerides  $\geq 150$  mg/dL (or receiving drug therapy for high triglycerides). Triglycerides are a type of fat found in the blood stream.
4. HDL-C  $< 40$  mg/dL in men or  $< 50$  mg/dL in women (or receiving drug therapy for reduced HDL-C). HDL is a good cholesterol that helps reduce cardiovascular disease.
5. Large waistline. Waist circumference  $\geq 102$  cm (40 in) in men or  $\geq 88$  cm (35 in) in women; if Asian American,  $\geq 90$  cm (35 in) in men or  $\geq 80$  cm (32 in) in women.

## Risk Factors

The primary risk factors for metabolic syndrome are obesity and physical inactivity and these can be prevented by mostly everyone. A risk factor that cannot be prevented is older age. Sleep apnea has been found to be closely related to metabolic syndrome as well.

## Screening & Prevention

The best way to prevent metabolic syndrome is live a healthy lifestyle by eating healthy and exercising often. Diets are not usually successful because they are often short lived. What people need are long-term *lifestyle* changes. To find out your cholesterol levels, blood pressure, and blood sugar levels you will need to see your primary care doctor and have labs drawn.

## What treatment is needed?

1. Lifestyle modifications (Most important intervention)
  - a. Diet rich in whole grains, fruits, and vegetables
  - b. Avoid foods with high sugar and saturated fat content
  - c. Physical activity
    - i. The American Heart Association recommends at least 30 minutes of moderate-intensity aerobic activity 5 days per week AND moderate- to high-intensity muscle-strengthening activity at least 2 days per week for additional health benefits.
  - d. Lose weight
2. Medications
  - a. To control high blood sugar (diabetes)
  - b. To control high triglycerides and high cholesterol
3. Other modalities
  - a. Sleep study to check for sleep apnea if has history of snoring, obese, and fatigue.

## Goals of treatment

The main goals of treatment are to prevent cardiovascular disease such as coronary heart disease, myocardial infarction (heart attack) and stroke. The other goal is to prevent Type 2 diabetes which also greatly increases risk for heart disease, kidney disease, neuropathy and other systemic complications.

## References:

Metabolic Syndrome. (n.d.). Retrieved December 28, 2017, from <http://www.heart.org/HEARTORG/>

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