

# Metabolic Syndrome: The Silent Killer Of Society



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## Metabolic Syndrome



- HIGH BLOOD GLUCOSE
- HIGH BLOOD PRESSURE
- HIGH LIPID PROFILE
- LARGE WAIST SIZE
- LOW HDL LEVELS.

- ▶ Physical Activity And Nutrition
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# Presentation Objectives

## Describe

- Describe The 5 Risk Factors And The Main Cause Of Metabolic Syndrome

## Outline

- Outline The Current Global Situation Of Metabolic Syndrome

## Describe

- Describe The Dangers Of Metabolic Syndrome

## Discuss

- Discuss The Management Of Metabolic Syndrome

# Introduction To Metabolic Syndrome

- ▶ Also known as insulin resistance syndrome
- ▶ Metabolic syndrome is a group of risk factors increasing the rate of Cardiovascular Disease And Diabetes Mellitus
- ▶ Body responds less to insulin leading to type 2 diabetes
- ▶ Quintuples the risk of diabetes mellitus
- ▶ Doubles the risk of blood vessel and heart disease, leading to heart attacks and strokes



# The Five Risk Factors Of Metabolic Syndrome

- ▶ High blood glucose (sugar)
- ▶ Low levels of HDL (“good”) cholesterol in the blood
- ▶ High levels of triglycerides in the blood
- ▶ Large waist circumference or “apple-shaped” body
- ▶ High blood pressure

**RISK FACTOR**



# Diagnosis of metabolic syndrome

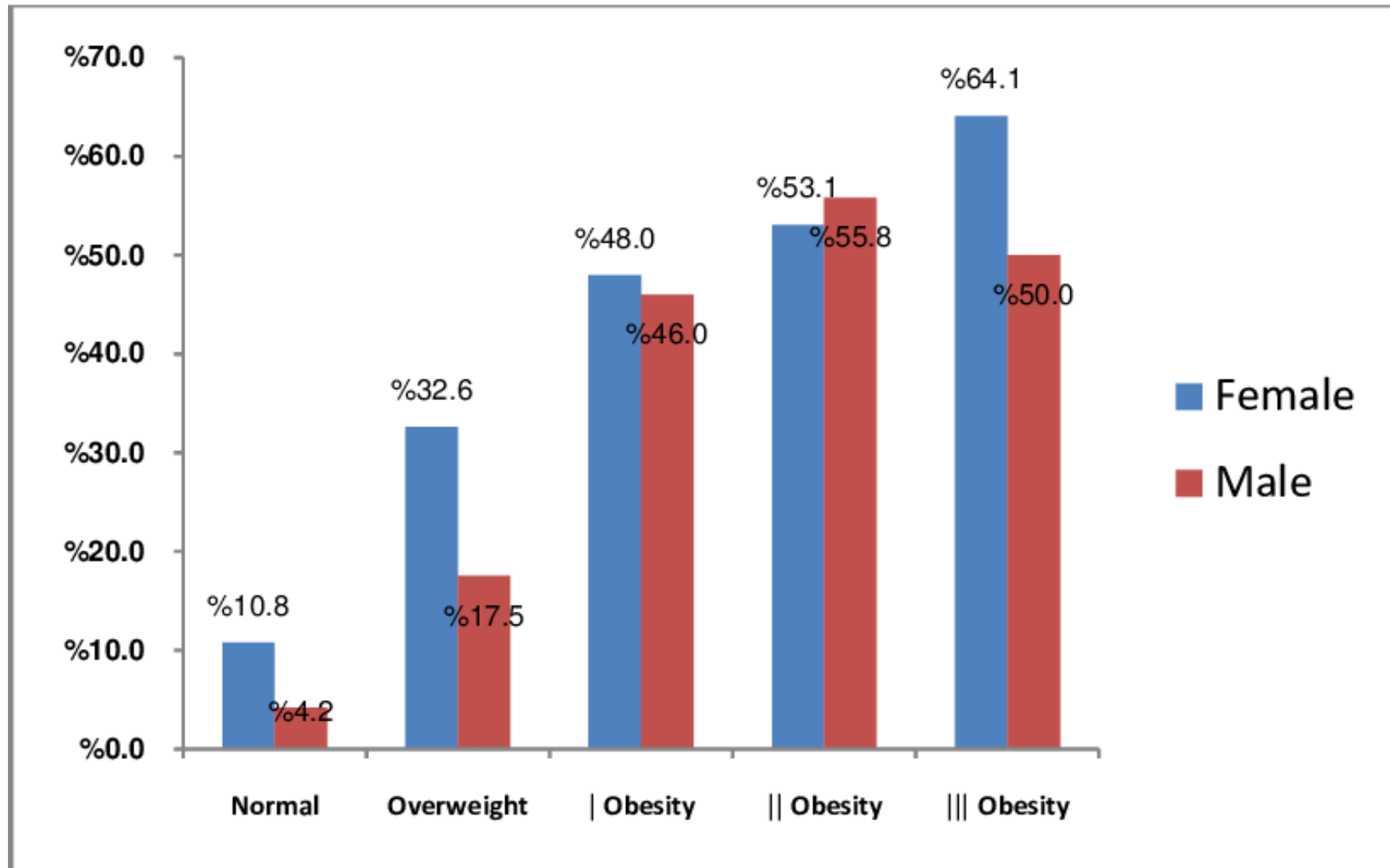
Component	ATP III (3 of the following)
<b>Abdominal obesity (Waist circumference)</b>	Men >102 cm (40'') Women > 88 cm (35'')
<b>Hypertriglyceridaemia</b>	$\geq 150$ mg/dL (1.7mmol/L)
<b>Low HDL - C</b>	Men <40mg/dL (1.036mmol/L) Women <50mg/dL (1.295mmol/L)
<b>Elevated BP</b>	$\geq 130/85$ or use of anti HT Rx
<b>Elevated fasting glucose</b>	$\geq 110$ mg/dL (6.1 mmol/L)

# The Main Cause Of Metabolic Syndrome

- ▶ Unhealthy Life Style (Exercise, Eating, Alcohol) leads to obesity
- ▶ Obesity makes it difficult for cells in the body to respond to insulin. Causing type 2 diabetes
- ▶ Obesity and a sedentary lifestyle contributes to risk factors
- ▶ Hormone Imbalance



# Metabolic Syndrome Prevalence Vs Weight Class

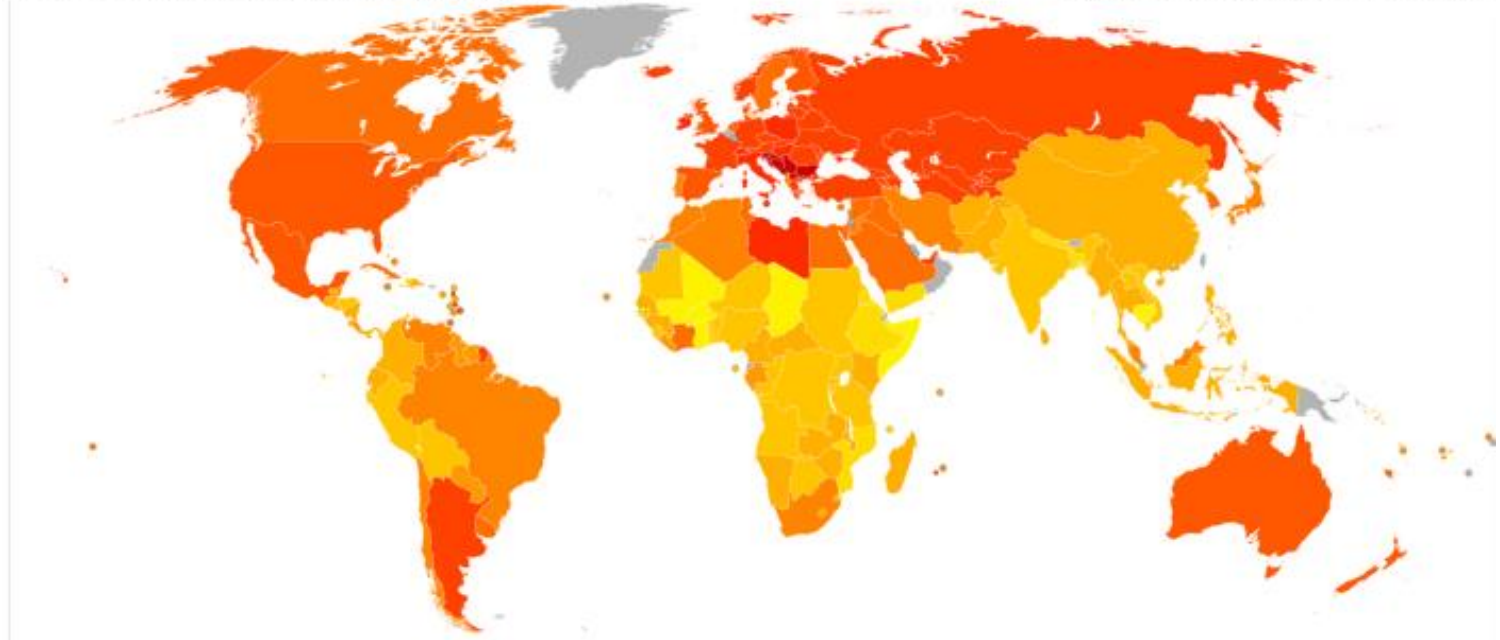


# The Current Global Situation Of Metabolic Syndrome

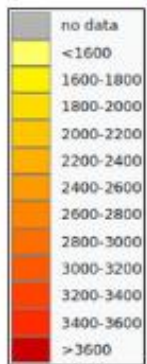
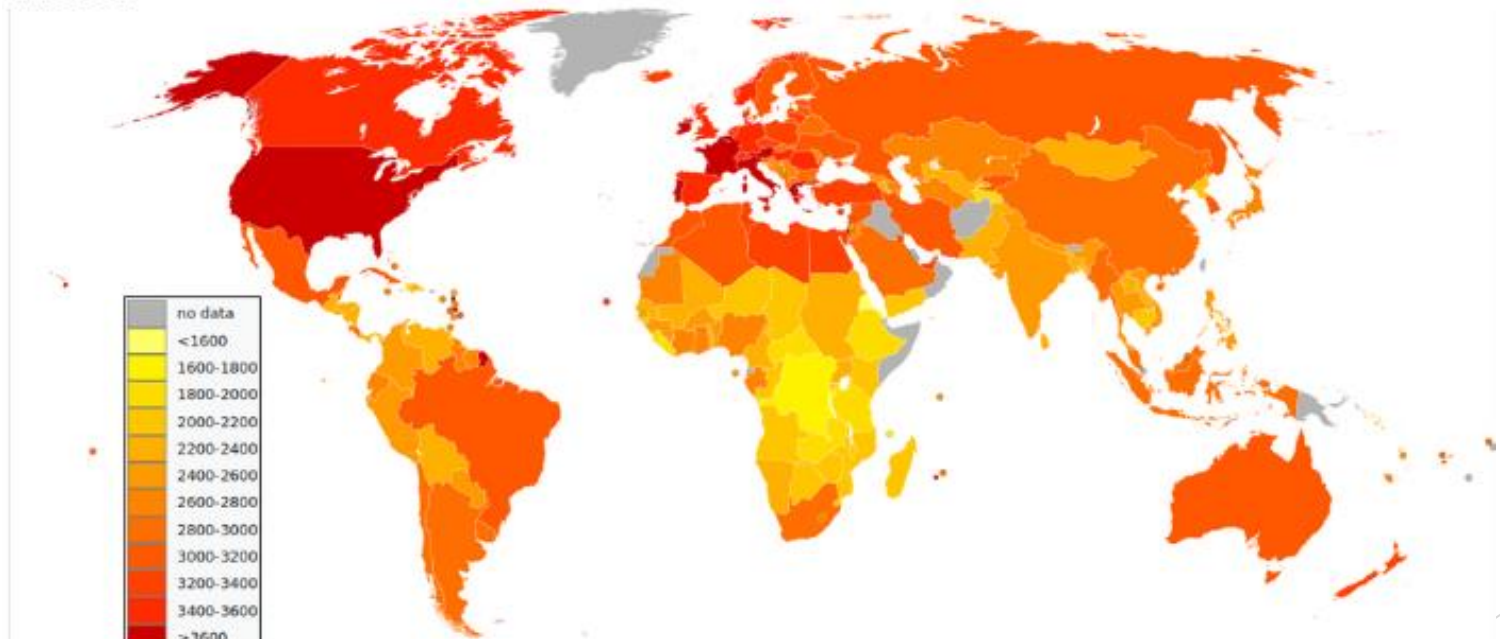
- ▶ Average BMI in USA increases by 0.37% per year in both men and women.
- ▶ Waist circumference increased by 0.27% per year in
- ▶ 12.2% of USA adults had type 2 diabetes.
- ▶ About one third of US adults have metabolic syndrome
- ▶ In China the prevalence of overweight and obesity increased from 20 to 29%.
- ▶ The prevalence of Metabolic Syndrome in China is 15.5%.







1979-1981



2001-2003

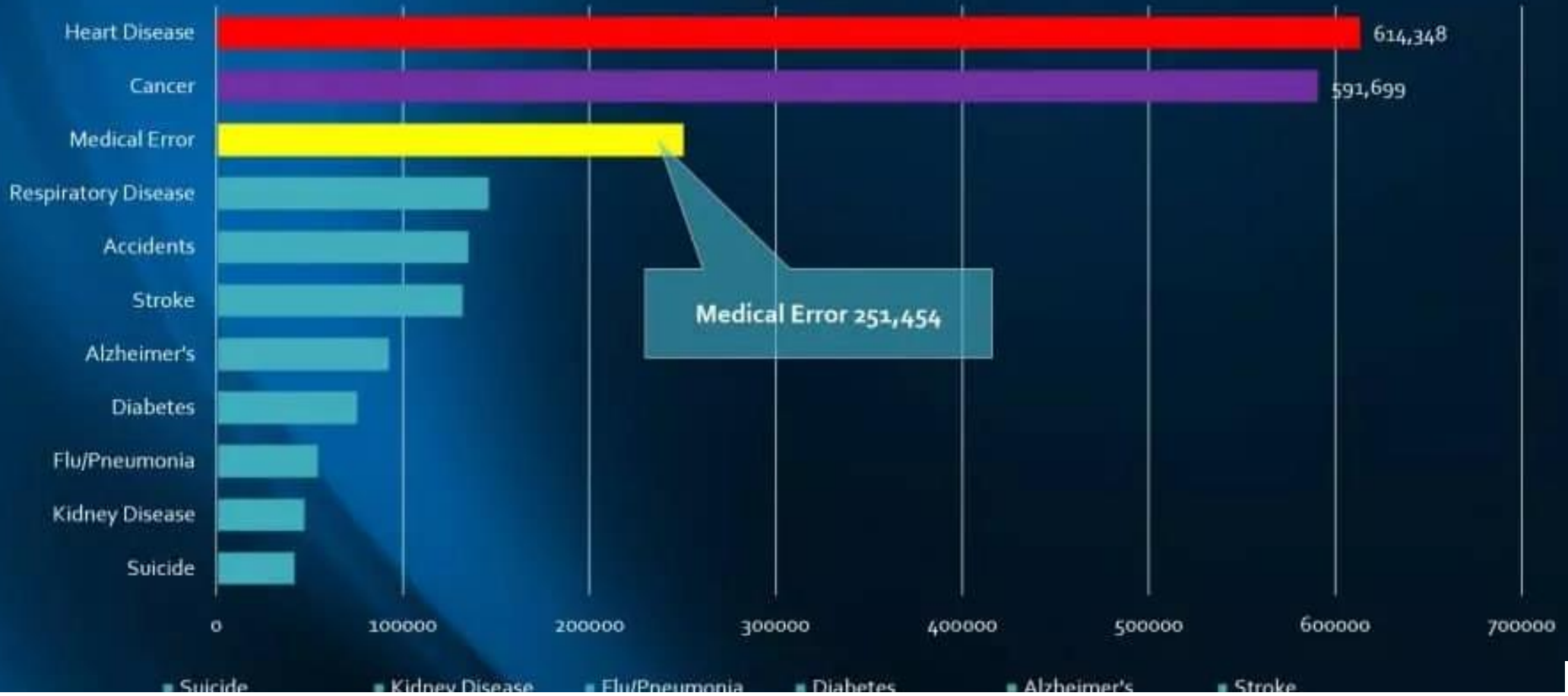
# Why Is Metabolic Syndrome So Dangerous?

- ▶ Doubles Risk Of Blood Vessel And Heart Disease
- ▶ Quintuples Risk Of Diabetes Type 2
- ▶ Atherosclerosis
- ▶ Diabetes
- ▶ Obesity Is Present More Often Than Not
- ▶ High blood pressure
- ▶ Having Diabetes, HBP, and Obesity is particularly dangerous



# USA Leading Causes Deaths

Deaths

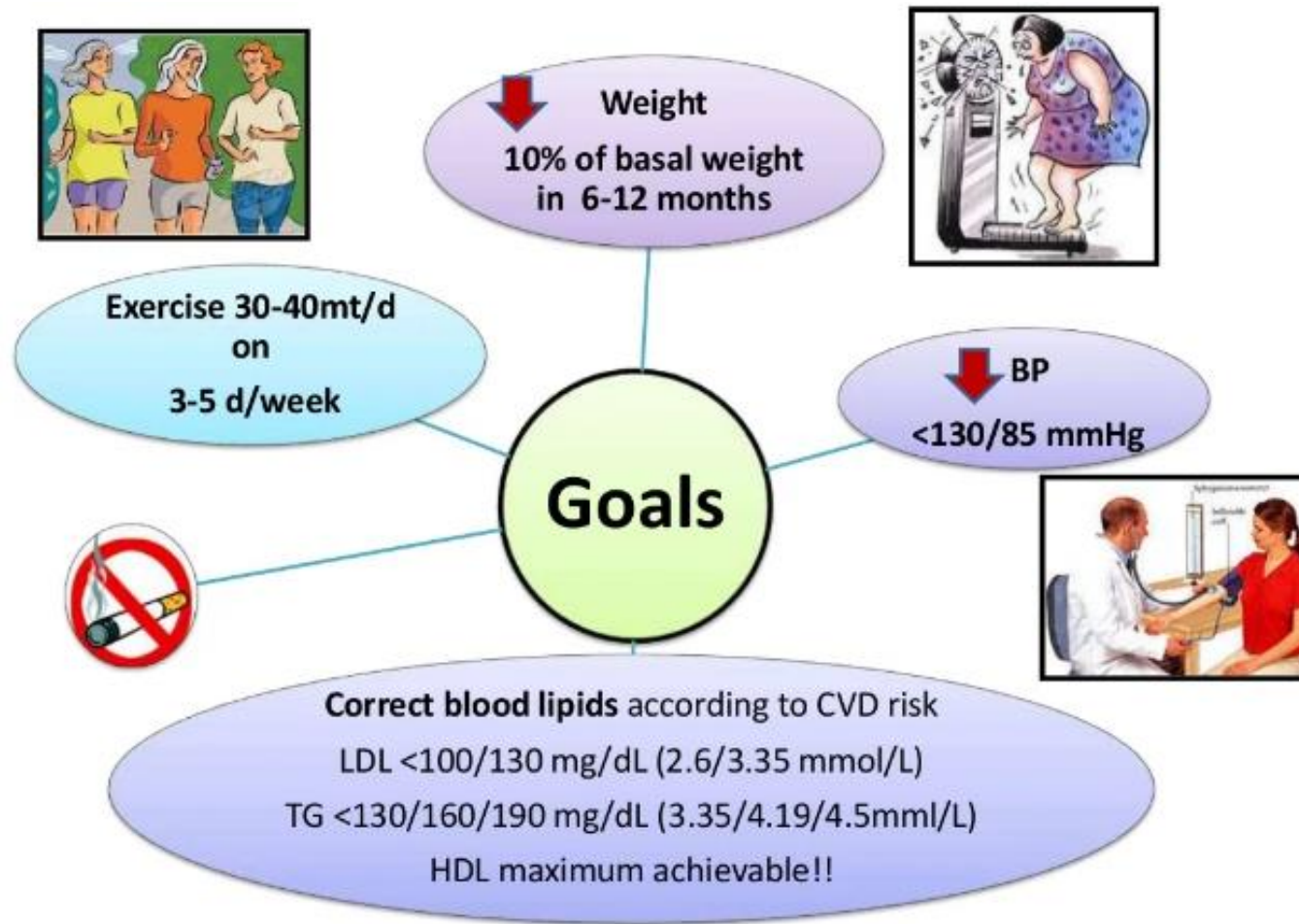


Source: National Center for Health Statistic 2016

# Management Of Metabolic Syndrome

- ▶ Primary Goal To Reduce risk factors for CVD
- ▶ Exercise (skeletal muscle most insulin sensitive - primary goal for improving insulin resistance)
- ▶ Eat Healthier
- ▶ Pharmacotherapy when lifestyle hasn't made a difference (Anti Hypertension, Statin, Nicotinic Acid)





# Conclusion

- ▶ Metabolic syndrome is preventable but dangerous
- ▶ Increase in calories and standard of living has led to higher rate of obesity
- ▶ Taking care of your body and health should be a top priority

# References

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**THANK**

**YOU!**