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**100% Effective Natural Hormone Treatment**  
**Menopause, Andropause And Other Hormone Imbalances**  
**Impair Healthy Healing In People Over The Age Of 30!**

**Obesity and the Metabolic Syndrome**

**By Cheryl Winter, M.S., R.D., R.N.**

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In recent years, scientists have found that some of the complications of obesity, which include diabetes, hypertension, insulin resistance, and heart disease, were more clearly related to the central distribution of fat (excessive fat tissue in the abdominal region), than to overall level of obesity.

This central location of fat and the release of fatty acids and cytokines (powerful chemical substances secreted by cells) from the enlarged fat cells in this area, provide the major agents that define the Metabolic Syndrome.

What is the Metabolic Syndrome?

Metabolic Syndrome, also called the dysmetabolic syndrome or Syndrome X, is a collection of factors that individually are risks for cardiovascular disease, the number one cause of death in the United States. Some of these factors that can be included in the syndrome are

- hyperinsulinemia
- hypertension
- abnormal blood lipids
- increased coagulant state (abnormal blood clotting)
- and other clinical features

What causes Metabolic Syndrome?

Metabolic Syndrome is caused from a genetic predisposition that involves insulin resistance and environmental factors, such as obesity and a sedentary lifestyle. The National Cholesterol Education Program (NCEP) through the Adult Treatment Panel III (ATP III), has provided criteria for diagnosing the presence of the Metabolic Syndrome. At least 3 of the criteria listed below must be present for a

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diagnosis:

Clinical Features of the Metabolic Syndrome:

Abdominal obesity (waist circumference):

Men: greater than 102 cm (40 in)

Women: greater than 88 cm (35 in)

HDL cholesterol:

Men: less than 50 mg/dL

Women: less than 60 mg/dL

Triglycerides: greater than or equal to 150 mg/dL

Fasting glucose: greater than 110 mg/dL

Blood Pressure(SBP/DBP): greater than or equal to 130/85 mmHg

What are the Risk Factors for the Metabolic Syndrome?

The most likely risk factors observed are abdominal obesity, elevated triglycerides, decreased HDL cholesterol, and elevated blood pressure. Once elevated fasting blood glucose is observed, then the likelihood of having diabetes is greatly increased, therefore, intervention prior to the observance of elevated fasting blood glucose is desired.

As mentioned above, Metabolic Syndrome is closely linked to insulin resistance. According to the American Heart Association, one group of such people are those with diabetes who have a defect in insulin action and can't maintain a proper level of glucose in their blood. Another is people, mainly those with high blood pressure, who are nondiabetic and insulin-resistant, but who compensate by secreting large amounts of insulin. This condition is known as hyperinsulinemia. A third group is heart attack survivors who, unlike hypertensives, have hyperinsulinemia without having abnormal glucose levels.

How Prevalent is Metabolic Syndrome?

The prevalence of Metabolic Syndrome is 25% in United States adults, and this increases with advancing age, increasing BMI and certain ethnicities, but overall, the individuals with Metabolic Syndrome are more alike than dissimilar across these groups. Metabolic Syndrome is a high cardiovascular risk state that is probably higher than the sum of it's components.

How is Metabolic Syndrome Treated and/or Prevented?

Therapies aimed at reducing insulin resistance, is the main treatment for the Metabolic Syndrome. WEIGHT LOSS of approximately 10% has been shown to significantly decrease insulin resistance, and it should be the primary target of intervention due to its ripple effect in other areas, including hypertension, increased triglycerides, decreased LDL, and decreased insulin resistance. The secondary target of intervention is EXERCISE, due to its ripple effects of decreased weight (improved insulin resistance), decreased blood glucose, decreased triglycerides, increased HDL and decreased

blood pressure.

Other steps of treatment of the Metabolic Syndrome

- Monitor blood glucose, lipoproteins and blood pressure
- Treat diabetes and hyperlipidemia
- Choose drug therapy for hypertensive people with care—different agents have different effects on insulin sensitivity

With the rate of obesity increasing at such an alarming rate, metabolic syndrome will be one of our nation's greatest challenges of the 21st century. It's imperative that we prevent or defer the progression of this disease, and reduce the associated risk factors, as described above.

References

American Heart Association

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## **The Case Of Syndrome X**

**By Namita Nayyar**

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Before you make a decision of whether to follow a low fat diet with lots of carbohydrates or a diet high in poly- and monounsaturated fats with fewer carbohydrates, there are certain factors that need to be understood. Prior to your decision go in for a lab test to determine your level of LDL- Cholesterol, HDL- cholesterol, triglycerides, blood sugar and insulin. Get these checked up by your family physician. If your blood pressure is fine and your blood level of these substances are within normal you don't need to worry about the portions of fat or carbohydrates you eat. The more out of range you are of these parameters, the more likely you are to have Syndrome X.

Abnormalities in glucose and lipid (blood fats) metabolism, obesity, and high blood pressure occur together. In fact, this cluster of abnormalities is known as a syndrome, going by a variety of names, including Syndrome X, the Deadly Quartet, and the Insulin Resistance Syndrome. Syndrome X. is a new term for a cluster of conditions, that, when occurring together, may indicate a predisposition to diabetes, hypertension and heart disease. Insulin is the hormone responsible for getting energy, in the form of glucose, or blood sugar, into our cells. A woman who is insulin-resistant has cells that respond sluggishly to the action of insulin. Following a meal, this woman will have elevated glucose circulating in the blood, signaling yet more insulin to be released from the pancreas until the glucose is taken up by the cells.

When insulin resistance, or reduced insulin sensitivity, exists, the body attempts to overcome this resistance by secreting more insulin from the pancreas. This compensatory state of hyperinsulinemia (high insulin levels in the blood) is felt to be a marker for the syndrome. The development of Type II, or non-insulin dependent, diabetes occurs when the pancreas fails to sustain this increase insulin secretion. It is not clear how insulin resistance contributes to the presence of high blood pressure, but it is clear that the high insulin levels resulting from insulin resistance contribute to abnormalities in blood lipids—cholesterol and triglycerides.

The syndrome is typically characterized by varying degrees of glucose intolerance, abnormal cholesterol and/or triglyceride levels, high blood pressure, and upper body obesity, all independent risk factors for cardiac disease. If one includes along with the classic four features the commonly associated conditions of aging, sedentary lifestyle, stress, smoking, and a dose of genetic susceptibility, then a deadly web of increased cardiovascular (heart and blood vessels) disease risk is woven

Treatment for the described metabolic syndrome therefore aims at treating all of: the features of the syndrome that exist in a given woman.

The first step, then, is to identify the risk for the insulin resistance syndrome—women who are overweight, those who have a parent or sibling with Type II diabetes, women who had diabetes which occurred during pregnancy are more susceptible.

General recommendations :

## Obesity and the Metabolic Syndrome

Because these conditions occur in a cluster, the steps you take to bring one of the conditions into a healthy range will likely improve the others.

1. If you're overweight, try to lose some extra kilos. Losing up to 10 or 15 percent of your current body weight can bring blood pressure down and increase your cells' sensitivity to insulin.
2. If you are sedentary, engage in some vigorous physical activity for 30 minutes or more a day, 3–5 times a week. Exercise is an important component of weight loss. It also raises HDL blood levels, even without weight loss. A sedentary lifestyle is responsible for about 25 percent of the effect of syndrome X.
3. Aim for a diet moderately low in fat and concentrated sweets or one that has 20% calories as fat, if not more. The Dietary Guidelines recommend to eat 55 percent of total calories from carbohydrates, primarily complex carbohydrates. The key words here are "complex carbohydrates," such as grains, beans and vegetables, rather than sweets and desserts, and the total number of calories being consumed—just enough to maintain or achieve desirable weight.
4. In case if pharmacological intervention is required your doctor might prescribe blood pressure medications which will improve insulin sensitivity and have no adverse effects on blood lipids, blood sugar medicines which improve insulin sensitivity and blood lipid levels, blood pressure treatments may be particularly beneficial for the kidneys of women with diabetes
5. Other factors include cessation of smoking, and moderation of alcohol intake.

This approach to caring for women with the insulin resistance syndrome, that of comprehensive evaluation and risk factor management, is essential if we are to meet and overcome the real health danger which accompanies this constellation of metabolic abnormalities—cardiovascular disease.

Namita Nayyar is a President & fitness trainer, Women Fitness(<http://www.womenfitness.net>) with a sound background of Normal & therapeutic Nutrition



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