

GUIDE TO UNDERSTANDING

METABOLIC SYNDROME

*Are you at risk
of developing
metabolic syndrome?*



Metabolic syndrome is a cluster of conditions that increases your risk of heart disease, stroke and diabetes.

Metabolic Syndrome

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Disclaimer

We hope you enjoy reading this publication, however we do suggest you read our disclaimer.

All the material written in this document is provided for informational purposes only and is general in nature.

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Introduction

Metabolic syndrome is an enigma – it is not a disease in itself, but is a medical ‘condition’ which is determined if a grouping of specific underlying conditions are present.

Metabolic syndrome (MetS), equally known as insulin resistance syndrome, is a cluster of conditions characterized by excessive weight, high blood sugar, high triglyceride levels, high blood pressure, and low HDL cholesterol (also known as 'the good cholesterol').

A medically confirmed combination of three of these health conditions happening simultaneously will result in a diagnosis of metabolic syndrome.

Metabolic syndrome puts a person at a greater risk of developing dreadful cardiovascular sickness like heart disease and stroke, as well as type 2 diabetes and some cancers.

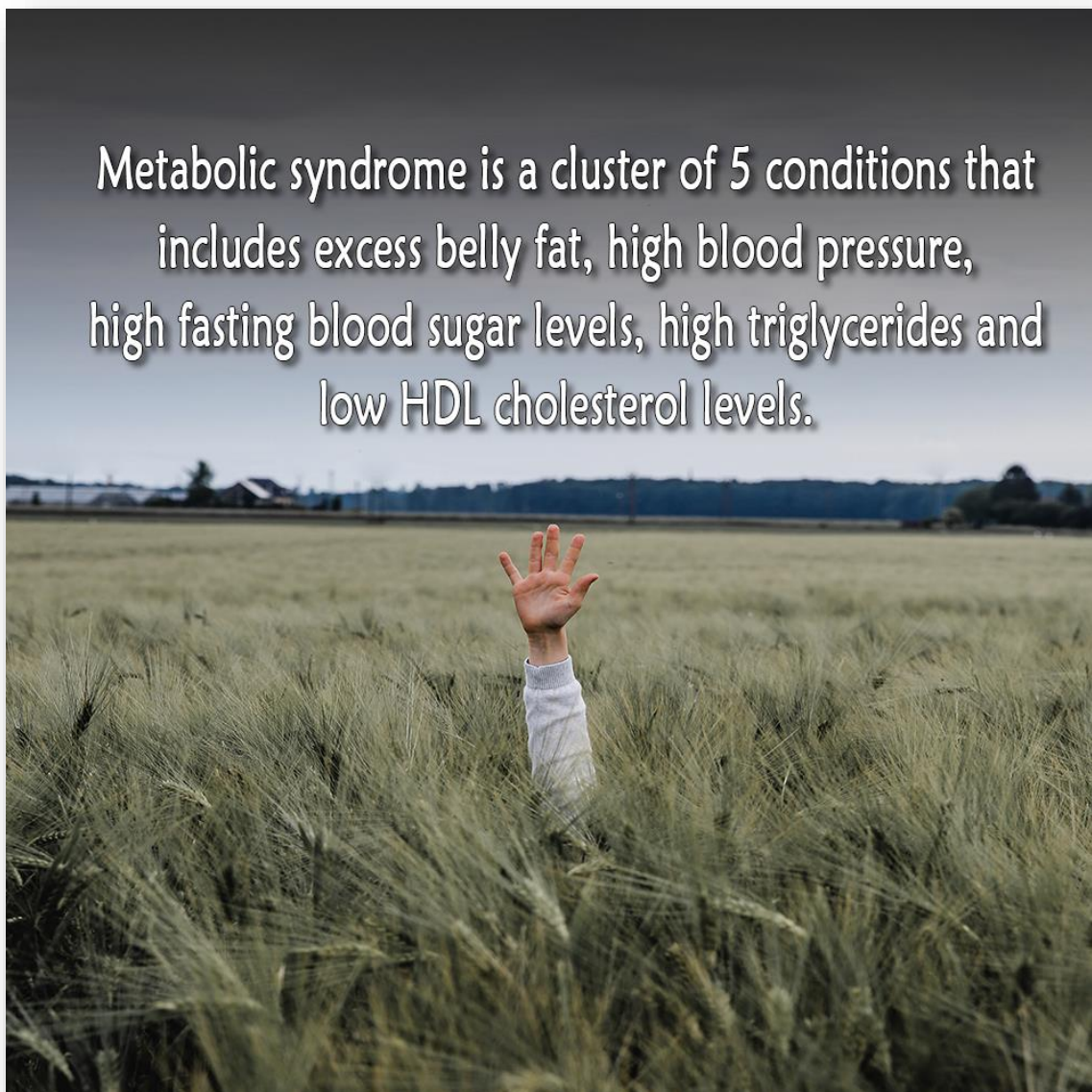
It should be readily apparent that all of the contributing conditions have a common cause. They are all the result of what has come to be termed ‘lifestyle disease’.

That is, they have all come about through excessive consumption of foods and food types that are not conducive to our health. Combined with lifestyles that include insufficient exercise, our bodies develop multiple issues of ill-health and dis-ease, including those that contribute to a diagnosis of metabolic syndrome.

Being diagnosed with metabolic syndrome means a person has checked too many boxes of lifestyle diseases. This is a cluster of conditions that are each dangerous in themselves, and collectively, much, much worse.

This eBook explains what metabolic syndrome is, why it is so dangerous, and thankfully, how it can be naturally prevented and even reversed.

Metabolic Syndrome – A Cluster of Conditions



Metabolic syndrome is a cluster of 5 conditions that includes excess belly fat, high blood pressure, high fasting blood sugar levels, high triglycerides and low HDL cholesterol levels.

Metabolic syndrome is a cluster of conditions occurring simultaneously. These conditions put you at a greater risk of developing heart disease, stroke, and type 2 diabetes.

The cluster of conditions includes excess belly fat, high blood pressure, high fasting blood sugar levels, high triglycerides, and low HDL cholesterol levels, which is the good cholesterol you need for health.

The presence of just one of the conditions mentioned is serious enough, but having only one doesn't cause a diagnosis of metabolic syndrome. However, if a person has at least three of these five conditions simultaneously, that person may be diagnosed with metabolic syndrome and has a greater risk of developing cardiovascular diseases, like heart disease and stroke.

Laboratory tests are used to diagnose metabolic syndrome. It is not something anybody can self-diagnose or conclude in the lack of these necessary tests.

Metabolic syndrome is also known as Syndrome X, insulin resistance syndrome, or dysmetabolic syndrome.

It is defined by the World Health Organization as *'a pathologic condition characterized by abdominal obesity, insulin resistance, hypertension, and hyperlipidemia.'*

Considered a major health hazard today, a large percentage of adults are considered to have metabolic syndrome in many western countries, and the majority of them are aged 60-70 years of age. As people age, the risk of developing metabolic syndrome rises.

Developing any of the abovementioned health-related conditions puts a person at a greater risk of metabolic syndrome. These are typically the five major factors to look out for, and developing at least three of these conditions together can lead to a diagnosis of metabolic syndrome.

Having Excess Belly Fat

Being overweight or obese increases the risk of metabolic syndrome. An increased amount of fat around the waist or the abdomen area can be the most noticeable sign of this. A waist circumference of 35 inches for women and 40 inches for men can mean serious health consequences.

The fat itself is not the problem, but the location of the fat in the abdominal cavity signifies that it is wrapped closely around the vital organs. Fat around the waist is especially dangerous to heart health.

High Triglycerides

The conditions underlying metabolic syndrome are something that most people develop due to, or exacerbated by being overweight, obese, or lacking physical activity. Triglycerides are a type of fat contained in the blood, and perhaps you have heard of this term when having a cholesterol test.

The body creates triglycerides out of extra calories. If you've gained weight, especially, it's important to know your triglyceride levels. Normal levels are below 150 mg/dL; borderline is within 150 to 199 mg/dL; and high triglyceride levels begin at 200 mg/dL above.

Try to keep your triglyceride levels below 150 mg/dL. If you can't keep your triglyceride levels within a healthy range, then you are at a higher risk of developing metabolic syndrome, as well as type 2 diabetes.

Treatments are available for lowering triglyceride levels, but the healthiest and most sustainable way is to watch your diet, lose weight (bodyfat), and get plenty of exercise.

Low HDL Cholesterol (The Good Cholesterol)

HDL cholesterol is the good cholesterol. LDL cholesterol is the bad cholesterol (in excess) that you want to keep at a healthy, lower level. Having high HDL cholesterol helps to remove the bad cholesterol from the arteries, helping avoid the risk of cardiovascular illness or heart disease.

It's important to have adequate HDL cholesterol, which is why a person may be diagnosed with metabolic syndrome if these levels are too low and their LDL is too high.

This also makes them more prone to heart disease. Losing weight and incorporating healthy lifestyle changes can help you increase your HDL cholesterol levels.

High Fasting Blood Sugar

Fasting blood sugar indicates how the body is managing blood sugar levels. Right after every meal, a person's blood sugar level typically goes up. Depending on the diet, factors that lead to a spike in blood sugar are things like consuming large amounts of food, especially sugary foods or drinks, and foods that are full of simple carbohydrates, like bread or rice.

As blood sugar rises, the body's pancreas releases the hormone insulin to lower the blood sugar. It breaks it down and stores it for later use. In a healthy body, insulin regulates your blood sugar levels and keeps them at a healthy range. In some instances, it fails to do this process successfully, leaving your body with consistently high blood sugar.

High fasting blood sugar or anything beyond 100 mg/dL can lead to metabolic syndrome.

High Blood Pressure

The force of blood pushing through your arteries while your heart pumps is known as blood pressure. High blood pressure can result from a buildup of plaques in the arteries, which narrows and hardens the arteries, putting you at more serious risk of heart attack or stroke.

A blood pressure reading that is higher than 130/85 could lead to metabolic syndrome. To naturally lower blood pressure levels, maintain a healthy weight, exercise regularly, stop smoking, and maintain a low-sodium diet.

Metabolic syndrome is preventable, and its prevention involves focusing on not developing or worsening any of the conditions that contribute to it.

Causes and Risk Factors of Metabolic Syndrome



Metabolic syndrome is caused by lifestyle conditions and habits that create serious health problems, such as obesity, high blood pressure, and blood sugar problems.

If we eat too much of the wrong foods and don't exercise, we gain weight. If we smoke and drink, we put ourselves at risk of developing health problems.

All these things can contribute to metabolic syndrome.

Therefore, metabolic syndrome has been defined as being a modern lifestyle condition, caused by modern lifestyle living. The main factors that can put anyone at risk of metabolic syndrome include the following.

Unhealthy Lifestyle

Metabolic syndrome is seen as a health problem resulting from an unbalanced, unhealthy lifestyle. It is closely related to obesity and a lack of physical activity. The convenience of modern life and consistency of stress leaves us with a diminished capacity to prioritize our health. Too often we succumb to unwise decisions in terms of our choices of food, habits, and activities.

Lack of Physical Activity

A lack of physical activity or exercise is a major cause of metabolic syndrome. Lack of exercise can cause the storage of unwanted fat that leads to metabolic syndrome and a variety of other health conditions.

As a rule of thumb, a minimum of 30-minutes exercise at least 5 days a week can reduce your chances of developing this condition. The more you exert yourself to move and stay active, the better off your health will be.

Being Overweight or Obese

The leading cause of metabolic syndrome is being overweight or obese. The presence of other conditions is needed for a positive diagnosis, but these conditions all stem from or relate to the same inputs that cause obesity.

Unhealthy eating habits and a lack of physical activity will further exacerbate obesity and the other health problems that contribute to metabolic syndrome.

No matter what your lifestyle is, it's important to stay health-conscious and mindful of your diet and weight. If you feel your weight is starting to go up, start being more mindful of your diet and exercise.

Putting on extra weight and excess body fat is a breeding ground for many diseases, including metabolic syndrome, and the likelihood of developing cardiovascular sickness that can be life-threatening. Watch for the build-up of fat especially around the abdomen area. If you start seeing a belly bulge it's time to make aggressive lifestyle changes, to reverse and prevent metabolic syndrome.

Aging

The chances of developing metabolic syndrome also increase as a person ages. More than 40% of people diagnosed with metabolic syndrome are aged between 60 and 70. The prevalence of metabolic syndrome among this group of patients can be attributed to changes in body composition. This is due largely to the compounding effects of increasingly reduced movement and poor dietary choices.

Gradual deterioration of homeostatic maintenance processes and physiological decline in growth hormones are noticeably noted in senior citizens, which makes this group of people more susceptible to various cardiovascular and metabolic risk factors.

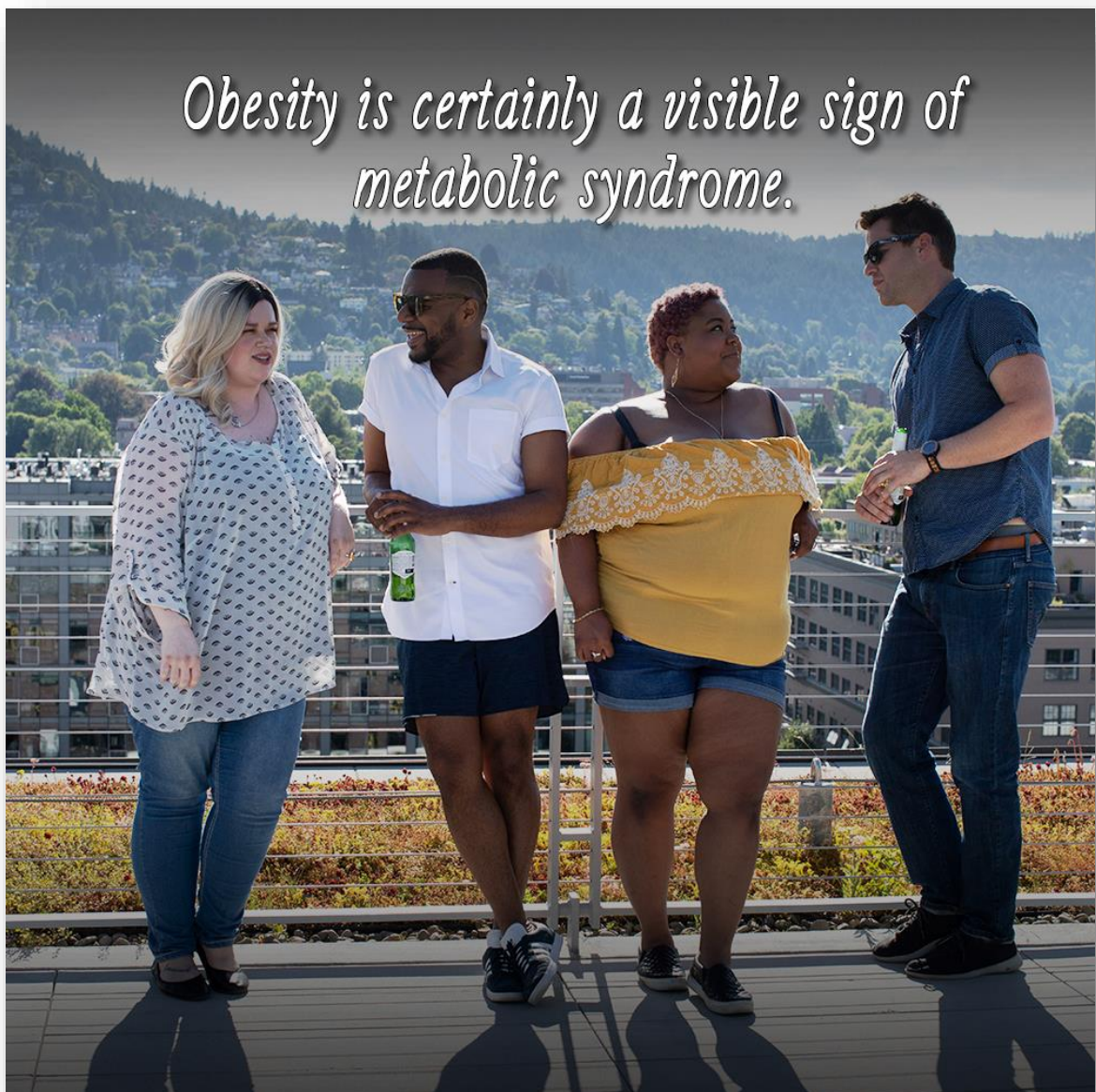
Although metabolic syndrome is more common in elderly people, cultivating a healthy lifestyle and diet still plays a huge role in slowing down the potential adverse effects of metabolic syndrome.

Genetic Factors

Genetic factors appear to contribute an added risk in the development of metabolic syndrome. The nature of a person's genes can definitely raise the odds as it does in many health-related instances. A doctor who diagnoses metabolic syndrome often takes into consideration the medical history of their patient's family, as genetics cannot be over-ruled.

There are also certain health conditions that can put a person at a greater risk of developing metabolic syndrome. If you've ever had nonalcoholic fatty liver disease (NAFLD), polycystic ovary syndrome (PCOS), sleep apnea, or gallstones, for example, the chances of developing metabolic syndrome are greater.

Are There Visible Signs of Metabolic Syndrome?



We know of many visible signs for certain health conditions. For example, it's easy to spot someone with a cold or the flu. However, it's not every day you hear someone say, 'Oh look, that person has metabolic syndrome.'

Rarely do people get 'health-alarmed' by their increasing weight and enlarged waistline and abdomen, either. You don't hear anyone saying, 'Oh no! I could get metabolic syndrome if I am not careful!'

You're more likely to hear them complain about their clothes getting too tight or their appearance.

Many of us think that being fat is just that, being fat. However, being fat is not just that. There are serious health consequences that can develop, including metabolic syndrome. Obesity is certainly a visible sign of metabolic syndrome.

Abdominal obesity is now considered to be a real health hazard, especially because it is one of the main conditions of metabolic syndrome (MetS).

The sooner each of the metabolic syndrome symptoms, or risk factors, are detected and addressed, the greater chance you have of living healthier and longer.

Visible Signs of Metabolic Syndrome

This is tricky, as quite often the signs of metabolic syndrome are not visible. The co-occurrence of at least three or more of the following conditions may give the diagnosis of metabolic syndrome.

It takes a medical doctor to go through a series of physical examinations and tests for a correct diagnosis; however, if you are looking for visible signs, we are going to try and address each condition.

- ***Abdominal Obesity***

This one is an easy one, as it is certainly visible! Abdominal obesity is the only physical and visible sign of metabolic syndrome. Do not underestimate the possible health consequences that usually come along with excess body fat, particularly a large waistline and enlarged abdomen.

As a rule of thumb, women with a waist circumference of 35 inches or more, and men with a waist circumference of 40 inches or more need to be more vigilant of their health and weight.

Generally, when you put on more weight than you should, and you begin to develop an apple or pear-shaped abdomen, that's an alarm for you to start losing excess pounds before anything more serious develops.

- ***High Triglyceride Levels***

Triglycerides are a type of fat that's within the blood created by the body. It's all part of your cholesterol count too. The more overweight a person is, the higher their triglyceride levels become.

This is bad news for your health because it can lead to metabolic syndrome. A triglyceride level of 150 mg/dL and above, together with abdominal obesity, poses serious health risks.

High triglyceride levels are a sign of metabolic syndrome. However, there are no visible signs of having high triglyceride levels.

- ***Low HDL (Good) Cholesterol Levels***

Cholesterol is not all bad; we actually need adequate HDL cholesterol for health. Unfortunately, most people who have never had to deal with their cholesterol assume that it's all bad, so don't do anything about looking after their good cholesterol.

To stay healthy, you'll need high, healthy levels of HDL cholesterol to remove the bad LDL cholesterol from your arteries.

Therefore, if you have low levels of HDL cholesterol, it is a sign that you are at a higher risk of developing metabolic syndrome, especially if you show any of the other signs or symptoms we are discussing now.

Again, there are no visible signs to detect insufficient HDL cholesterol. However, you can start eating the right foods to increase your HDL cholesterol, such as avocado, fatty fish and nuts.

- ***High Blood Sugar***

The presence of sufficient insulin hormones in the body is necessary for regulating blood sugar levels. However, in cases of insulin resistance, the cells do not respond the way they should, which causes persistently high levels of blood sugar.

If the pancreas continually produces insulin to attempt to regulate and manage blood sugar, then this is another sign of the presence of metabolic syndrome, especially if it occurs simultaneously with the other risk factors.

People exhibiting clinical features of insulin resistance include darkening of the skin in certain areas and the presence of skin tags. These are possible physical signs to look for.

- ***High Blood Pressure***

Blood pressure levels higher than 130/85 become another sign or risk factor of metabolic syndrome. High blood pressure is also a serious health risk on its own.

High blood pressure increases the risk of stroke and heart attack. It is very important to manage healthy blood pressure levels by dramatically changing your lifestyle by quitting smoking, managing stress levels, and maintaining a healthy diet.

The visible signs are hard to detect, as quite often, there aren't any. However, many people do have headaches or feel dizzy and light-headed.

If you are trying to determine whether you have metabolic syndrome by viewing what the possible physical symptoms are, stop looking or trying to self-diagnose. You can't and shouldn't. Please visit your doctor to determine the answer.

Complications of Metabolic Syndrome



Metabolic syndrome is a constellation of complications. By its sheer nature, it is a cluster of health conditions that occur simultaneously, and as such, complicates your health in many other ways.

If you have three or more of the following conditions, abdominal obesity, high triglyceride levels, low HDL cholesterol, high blood sugar (resulting from insulin resistance), and high blood pressure, you may be diagnosed with metabolic syndrome.

Now, each of these has its own set of complications! By adding three or more to the mix you can develop even more serious complications. The presence of any one of the five conditions does not immediately signify metabolic syndrome, so your doctor will conduct a series of tests.

However, the presence of at least three can lead to metabolic syndrome and increase your risk of developing grave health problems that can ultimately be life-threatening. Here are some of the health complications that can occur with, or as a result of metabolic syndrome.

Nonalcoholic Fatty Liver Disease (Steatosis)

Nonalcoholic fatty liver disease (NAFLD) results from the buildup of extra fat in the liver cells. NAFLD is not caused by alcohol, but by the presence of too much fat in the liver. It is typically normal for the liver to contain fat, but in excess amounts, it becomes a serious condition known as steatosis or fatty liver.

Fatty liver is closely linked to obesity, diabetes, high blood pressure, and high cholesterol. This condition poses serious health risks and can be one of the complications resulting from metabolic syndrome.

Hardening of the Arteries (Atherosclerosis)

Arteries carry blood to many other parts of the body. However, arteries can become hardened and grow narrow as a result of high cholesterol causing plaque to build up. When the arteries are hardened and blocked by plaque, this disease is known as atherosclerosis. This condition limits the flow of oxygen-rich blood to the heart, the organs, and several parts of the body causing a blockage that can lead to heart attack, stroke, and possibly even death.

Chronic Kidney Disease (CKD)

According to a study from the Clinical Journal of the American Society Nephrology, people with metabolic syndrome have a 55% chance of developing chronic kidney disease, particularly lowered kidney function.

Kidney disease is one of several health complications caused by metabolic syndrome.

Polycystic Ovary Syndrome (PCOS)

Polycystic ovary syndrome or PCOS symptoms include irregularities in the menstrual cycle, fertility issues, hyperandrogenism (which is when the female has high levels of androgen), and hirsutism (a problem with hair growing on the back and face, etc., similar to a man's hair growth pattern.)

Many women diagnosed with PCOS also exhibit features of metabolic syndrome, such as visceral obesity, insulin resistance, and hyper-insulinaemia. This puts PCOS diagnosed women at an equally greater risk of developing cardiovascular diseases and type 2 diabetes mellitus.

This doesn't mean that if you have metabolic syndrome you will get PCOS, but if you do have PCOS you have to take preventative measures to avoid the complication of developing metabolic syndrome.

Diabetes Mellitus (DM)

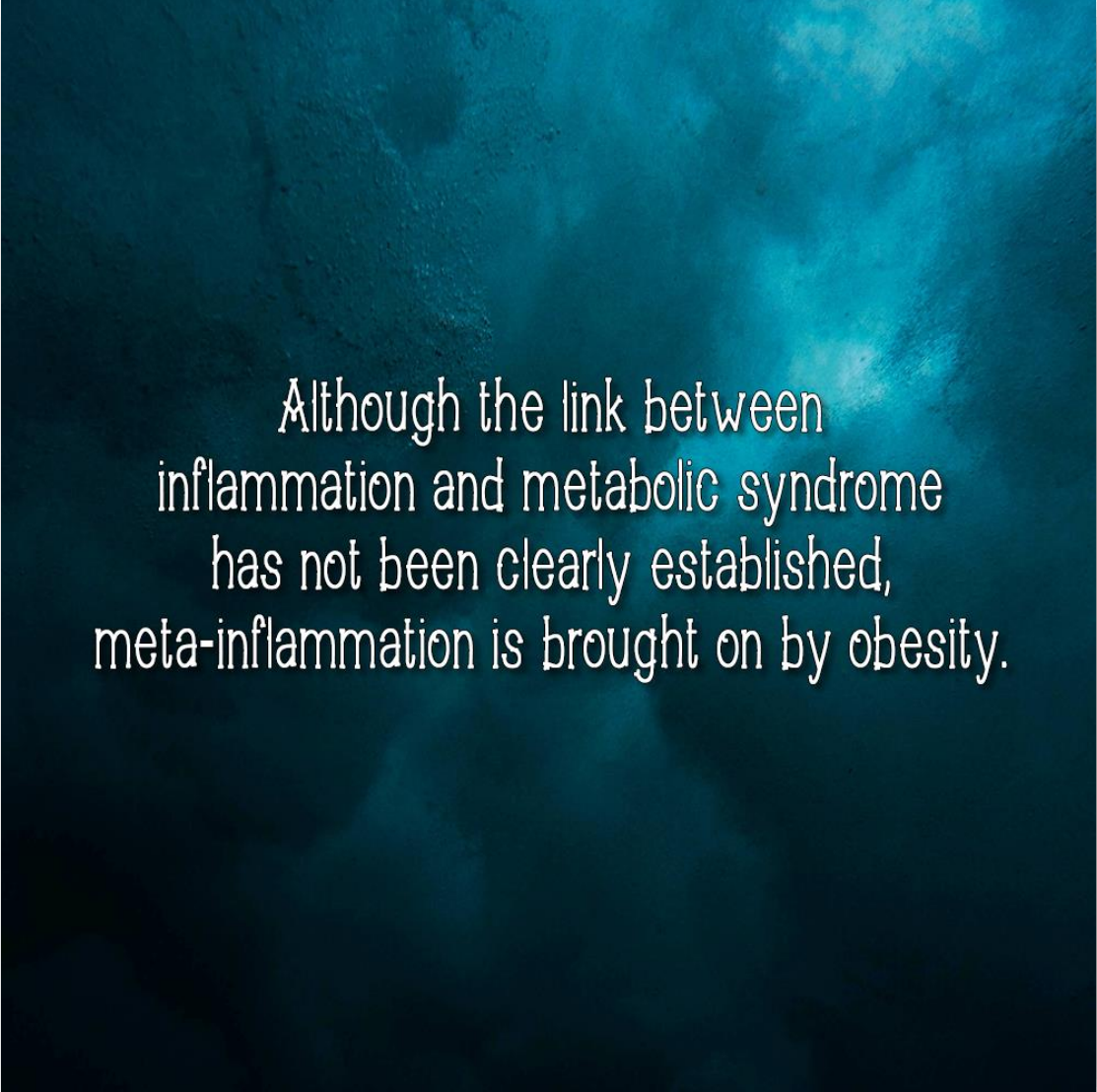
Metabolic syndrome can lead to the diagnosis of type 2 diabetes mellitus. In fact, type-2 diabetes mellitus, metabolic syndrome, and obesity are closely linked conditions that all often lead to cardiovascular complications.

Insulin resistance precedes type 2 diabetes. It may be affected by genetics and aging factors, but the main driving force behind insulin resistance is really from eating a poor, unhealthy diet, lack of exercise, and related bad lifestyle habits.

If you don't aggressively change your unhealthy habits and lifestyle, insulin resistance can progress into type 2 diabetes mellitus. At the onset of diabetes, further health complications can develop. It can become a vicious circle of health complications.

As you can see, having three or more conditions that make up metabolic syndrome is bad enough, but to develop further complications can be extremely debilitating.

Metabolic Syndrome and Inflammation – Are They Linked?



Although the link between inflammation and metabolic syndrome has not been clearly established, meta-inflammation is brought on by obesity.

Metabolic syndrome is a cluster of conditions, one of which is obesity. Obesity has been noted as one of the highest risk factors. Abdominal obesity is as it sounds, the excessive accumulation of fat within the abdominal cavity.

This massive burden that obesity causes to people's health and lives go beyond its effect on several body organs.

Obesity can also cause ‘meta-inflammation,’ which is metabolically-triggered inflammation. Inflammation is the body’s natural defense process. It is how the body’s white blood cells naturally protect itself from harmful pathogens, infections, viruses, and toxins. It is a coordinated body response to harmful stimuli, to ultimately restore the body to a healthy state.

The immune system perceives toxins resulting from poor diet in the same way as a viral attack, and inflammation results. Unfortunately, the resultant inflammation does not help resolve the problem and generally makes it worse.

Meta-inflammation is a low-grade, chronic inflammatory response by the immune system that disrupts the metabolic homeostasis in the body over time. Obese children are at risk of meta-inflammation throughout their lives.

Although the link between inflammation and metabolic syndrome has not been clearly established, meta-inflammation in the body is a certain outcome brought on by obesity.

Here are other potential triggers of inflammation in the body that are all linked to metabolic syndrome.

Fatty Liver

A fatty liver results from having too much fat in the liver caused by high triglyceride levels. The liver is the second largest body organ, which mainly helps filter toxins from your blood, as well as process nutrients from the food you consume.

High triglyceride levels are a contributor to metabolic syndrome, which likewise can cause fatty liver disease. A fatty liver goes through 4 stages, with cirrhosis of the liver being the most advanced stage.

This stage can lead to liver failure. Liver failure causes irreversible organ damage. The scarring which occurs is caused by inflammation, a by-product of excessive fats in the liver cells, which can be a symptom of metabolic syndrome.

Polycystic Ovarian Syndrome (PCOS)

Polycystic ovarian syndrome / PCOS is a hormonal disorder among some women, characterized by irregular menstruation, excess androgen hormones, and the ovaries failing to release eggs on time.

PCOS causes a low-grade, chronic inflammation that stimulates the polycystic ovaries to produce excess male hormones known as androgen.

This condition may further trigger cardiovascular problems such as heart disease and stroke. Metabolic syndrome and obesity are closely linked to PCOS, also a likely complication of the condition.

Excess Belly Fat

You may think that excess belly fat is just flab. You may even laugh about it. However, it is no laughing matter because belly fat has dangerous fat cells that are in close proximity to the organs, such as the liver and the pancreas.

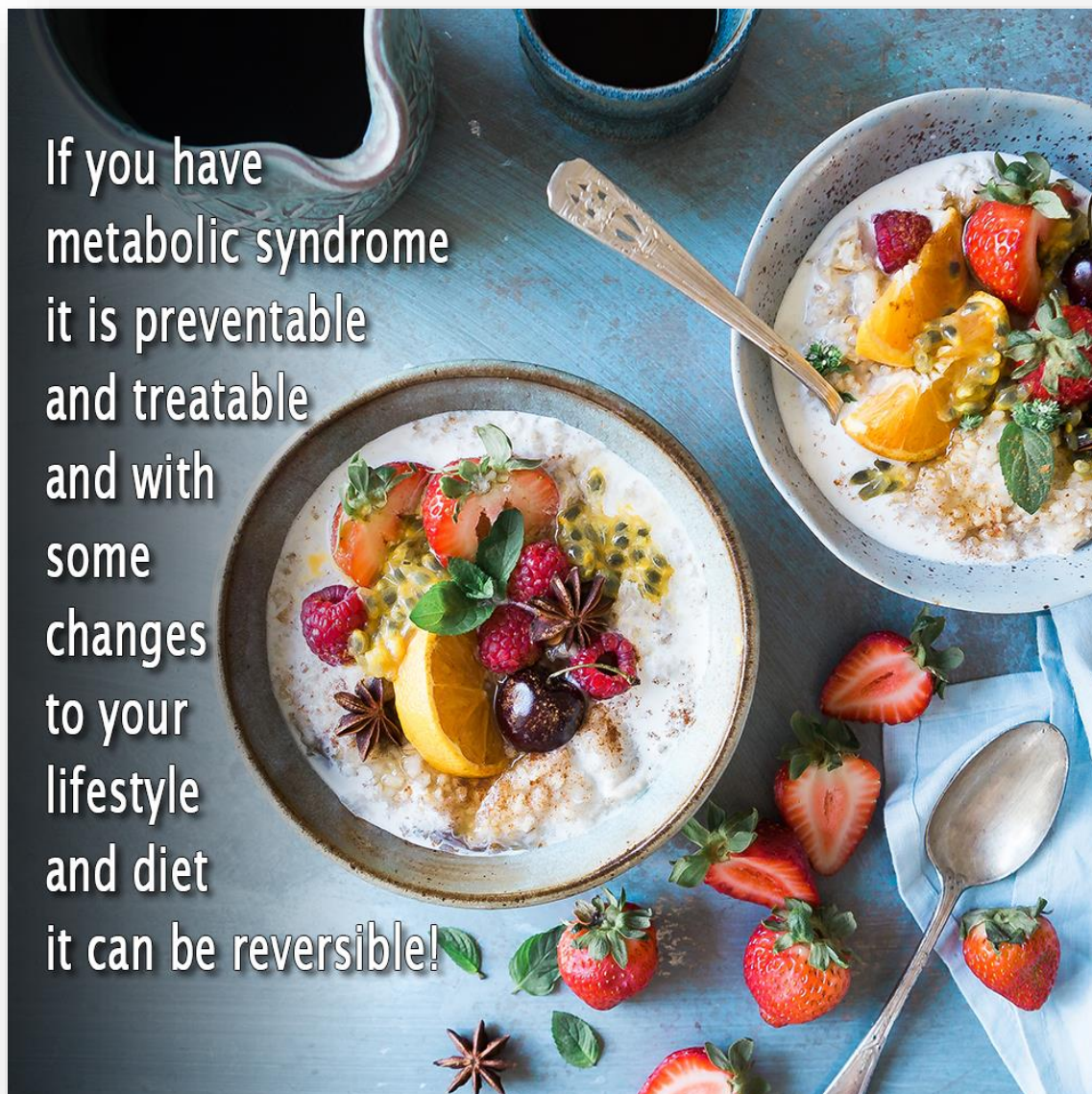
The presence of excess belly fat (or abdominal obesity) is a huge risk for developing metabolic syndrome. The fat cells are highly active, and they secrete hormones and chemicals that cause other metabolic syndrome symptoms, such as high blood pressure, high cholesterol, insulin insensitivity, and inflammation throughout the body.

High Triglyceride Levels

Very high levels of triglycerides are known to cause acute inflammation within the pancreas, a condition known as pancreatitis. A serum triglyceride level beyond 1000 to 2000 mg/dl is a risk factor for pancreatitis.

Are metabolic syndrome and inflammation linked? They certainly appear to be.

Helping Yourself If You Have Metabolic Syndrome



If you have
metabolic syndrome
it is preventable
and treatable
and with
some
changes
to your
lifestyle
and diet
it can be reversible!

Metabolic syndrome is the collective group of risk factors that can put you at a greater risk of developing many cardiovascular health problems, such as heart disease, stroke, and type 2 diabetes.

If you have been diagnosed with metabolic syndrome you will certainly want to know what you can do to start taking better care of yourself.

Metabolic syndrome on its own is preventable, even though age and genetics can play a role in its likely development. These factors are beyond your control, of course.

However, many of the individual risk factors of metabolic syndrome are reversible, and you can greatly help yourself by managing your lifestyle.

If you have metabolic syndrome, it is preventable and treatable. However, with sufficient commitment to making some dramatic tweaks in your lifestyle and diet, metabolic syndrome can be reversible.

Here are ways you can start to help prevent and treat metabolic syndrome.

Lose the Excess Weight and Belly Fat

Metabolic syndrome is largely due to the presence of excess body fat. Now fat on its own is not life-threatening. However, fat can be hazardous to your health, especially if it settles in the abdominal part of the body, the dreaded belly fat. This is because your vital organs are being encased in unhealthy fat.

Losing belly fat can feel considerably harder to do than simply shedding off a few pounds, but it is not impossible. Perhaps you have tried to lose your belly fat, only to lose it from your face and arms. This is natural.

Body fat is laid down first in areas that don't affect our mobility first, such as the abdomen. It is also the last place to let the fat go.

With the right diet and consistent physical activity, you can lose the excess belly fat. It just takes determination and time.

Commit to Being Physically Active

If you're not athletically minded and hate the thought of pounding the pavement, committing to being physically active can be rather daunting and a huge sacrifice.

However, it's time to stop being a couch potato and time to look for a physical activity you can enjoy. Swimming is one that comes to mind. It does not have the harsh impacts that some other exercise regimes do, but provides both strength and aerobic benefits.

That can boost your mindset too!

If you approach exercise in a positive way, you will reap the benefits. You get out what you put in, so invest in yourself and your health.

Be Health Conscious and Mindful of Your Weight

If you are aware of 'you,' you become more aware of your health and also your weight loss or weight gain, and you begin to take control. If you truly have the desire to become healthier and live longer by becoming weight-conscious, good for you!

It can take a lot of dedication and effort on your part, but making the decision to do so is the best first step.

Just remember not to be too hard on yourself. Learn to manage the stress that comes along with putting immense pressure on your ability to lose weight. Take it one day at a time. With dedication and commitment, you will have positive results.

Being more health-conscious and mindful of your weight starts with you. When you are mindful, eating healthy and being more physically active becomes a natural and easier part of your life.

Stop Bad Habits and Create Good habits

Stress in your life can cause health problems. Stressed people smoke too much, drink too much and eat too much of the wrong foods. Plus, if you are stressed you are less likely to exercise, so you are not boosting your happy hormones either.

Restore balance in your life by better managing your stress and bad habits and start creating better ones.

Let Your Food Be Your Medicine

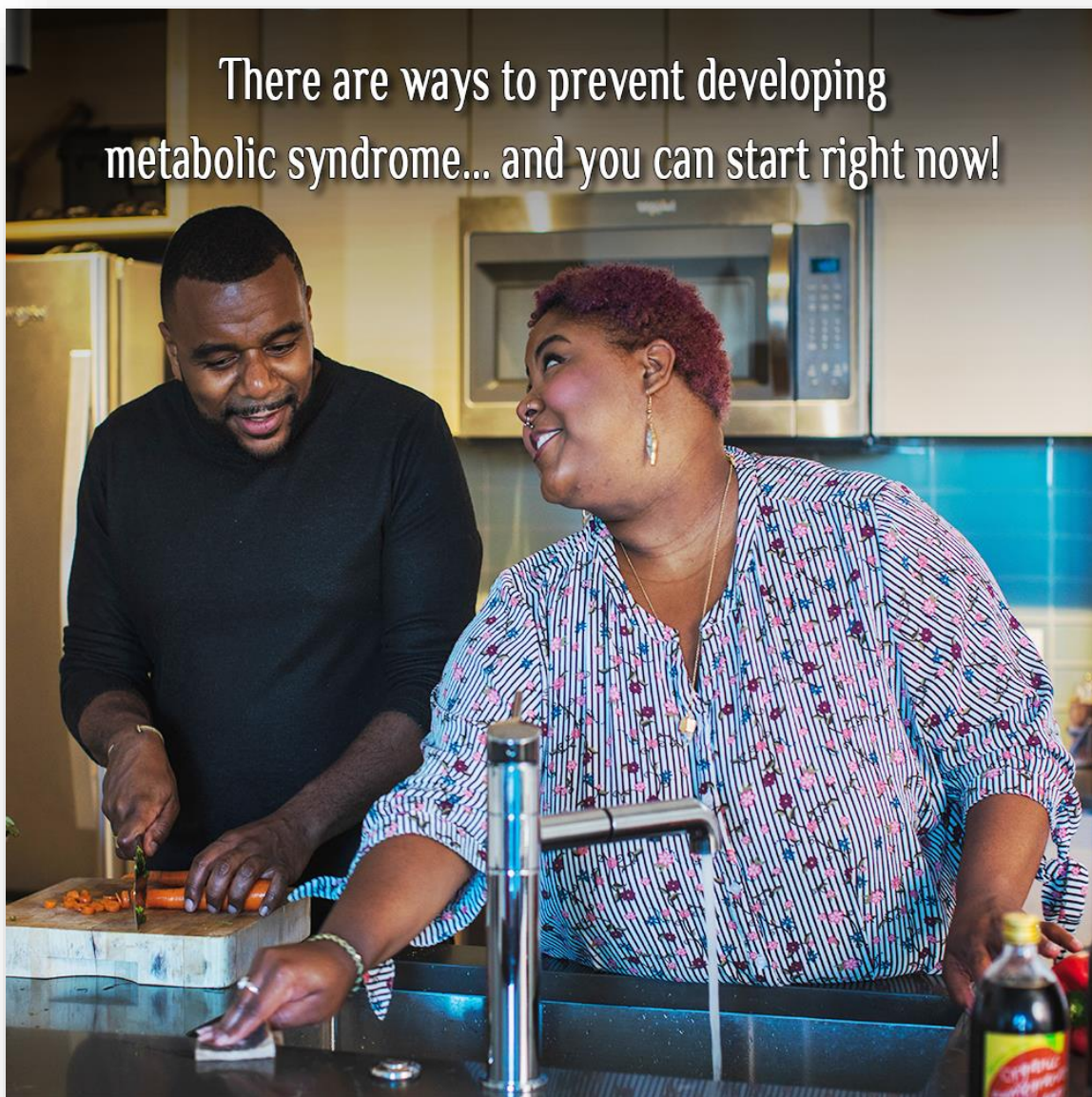
Be mindful of what you are eating at all times. Eat your food as if it is your metabolic syndrome medicinal treatment. The main carrier of nutrients that your body needs and takes in daily is food. It is healthy foods that ultimately make you healthy and help you lose weight.

Avoid sugars, processed foods, refined carbohydrates, and inflammation-causing foods. Instead, nourish your body with good, nutritious foods that will help you keep the unwanted pounds off and make you stronger and healthier.

If you really want to help yourself and reverse metabolic syndrome, you'll need to commit to doing the things suggested above.

If you care about your health, it's certainly worth it.

Ways to Prevent Metabolic Syndrome



Being aware of ways to proactively prevent metabolic syndrome (MetS) and its related chronic illnesses can help save your life.

Knowing what you can do to improve your health is a great way to prevent health problems from arising, and overcome them if present.

If you're keen on caring for your health and finding ways to prevent developing metabolic syndrome, here's what you can start doing today.

Check Your BMI to Determine If You Are Overweight

There are a number of ways you can determine if you are overweight, aside from looking in the mirror. You can calculate your BMI, or you can measure your waist to make sure your waist circumference is not in the unhealthy size bracket.

BMI stands for Body Mass Index. It is one of the common ways to determine whether you have normal body weight, or if you are overweight or obese. A high BMI indicates excess weight.

Normal BMI ranges within 18.5 - 24.9. If you are overweight, the BMI ranges between 25.0 - 29.9. At the other end of the scale, obesity starts at 30 and rises.

The next option is to measure your waist circumference. For women, a waistline of 35 inches and above can put you at risk, and for men, a waist circumference of 40 inches and above.

Abdominal obesity is the only visible and obvious sign of metabolic syndrome, although excess weight does not automatically mean you have this condition. So you should prevent being overweight to start with!

Lose Excess Body Fat

Being overweight or obese poses serious health risks. That's a given. Research has shown that being overweight dramatically increases the immune response, which in turn causes inflammation.

Excessive inflammation in the body can develop into serious chronic diseases, which can then develop into metabolic syndrome.

If you have determined that you are overweight or obese, now is the time to lose the excess body fat, and especially the dangerous belly fat, immediately. This can dramatically prevent your risk of developing metabolic syndrome, and the formation of many chronic diseases later. A normal body weight is not only ideal but the best option for preventing any MetS problems.

Eat a Healthy, Nutritious Diet

Metabolic syndrome is mainly a result of being overweight, from eating an unhealthy diet. To effectively reverse or prevent metabolic syndrome, start eating healthy. If you tend to be an emotional eater (especially due to stress), remove the stress in your life and change your food-buying and eating habits.

There's no one great method of effectively changing a bad diet, and it doesn't happen overnight. You really need to be patient with yourself.

Avoid foods that cause inflammation such as sugary foods and drinks, processed foods, and refined carbohydrates. Eat more fruits and vegetables, and nourish your body with healthy, nutritious food. It's never easy at first, but like most changes, it will get easier as you practice.

Visit Your Doctor for Checkups

If you are at risk of developing metabolic syndrome, due to already having one or two of the five conditions that make up metabolic syndrome, it will be wise to visit your doctor for regular checkups. Most of the conditions that make up MetS can only be detected by seeing a doctor, so they need to be monitored closely.

While being overweight is easy to spot, determining your triglyceride levels, LDL cholesterol levels, blood sugar, and blood pressure needs medical testing.

Stay Physically Active

If you do already have some of the conditions, find ways to reverse them! If you can't commit to any form of exercise due to a busy schedule or for whatever your reason, make sure you take a walk every day.

Whatever form of exercise you intend to do, the important thing is to stay physically active. Remember that little tweaks and changes over time to your diet and lifestyle can impact your life in major ways.

Metabolic Syndrome Dietary Tips



Many of today's chronic illnesses are caused by our diet and lifestyle choices. You are after all, what you eat - if you put the good foods in, better health results.

If you have been diagnosed or are at risk of developing metabolic syndrome, here are a few diet and nutrition tips that you can start implementing.

Get Your Daily Dose of Fiber

It's not easy to lose belly fat, but with the right diet and nutrition, there are effective ways to do so. One important element in your diet is fiber. Fiber, specifically soluble fiber, is crucial in helping you lose unwanted and dangerous belly fat. It also helps lower your blood sugar and bad LDL cholesterol.

According to one study, a 10 gram increase of daily soluble fiber can lower your risk of gaining more belly fat by 3.7%. Great sources of soluble fiber are oatmeal, rice bran, barley, beans, lentils, carrots, sweet potato, broccoli, citrus fruits, apple, avocado, and strawberries.

Eat a High Protein Diet

Many studies show that a sustained high protein diet can effectively help with weight management and even alter the symptoms of metabolic syndrome. Just make sure to eat lean sources of protein such as beef, lamb, chicken, yogurt, tofu, nuts, fish, pork, and eggs. Limit processed meat intake. The ketogenic diet is a diet that is based on eating plenty of protein-rich foods and is also a diet followed for impressive weight loss.

Regulate Dietary Cholesterol

Dietary cholesterol is not the biggest culprit when it comes to cardiovascular disease (heart disease, atherosclerosis, etc.) as we were once told. Studies have shown that only 30% of people are vulnerable to the negative effects of dietary cholesterol in foods.

The AHA (American Heart Association) still recommends limiting daily intake of dietary cholesterol to less than 300 mg/day. One egg contains at least 200 mg of dietary cholesterol. To stay within guidelines, you can limit your daily intake of eggs, shrimp, shellfish, liver, and other organ meats.

However, you can also boost your good cholesterol (which balances the bad cholesterol) by eating delicious good cholesterol boosting foods! They include foods such as nuts and avocados.

Eat Healthy Fats and Avoid the Bad Fats

We all need fats for our bodies to be healthy! You need to eat healthy fats and avoid bad ones, so limit your intake of foods that are high in trans fats, which are mostly found in highly processed foods. If you base your diet on a keto or Mediterranean style diet, this won't be a problem.

Limit Sodium Intake

Many packaged and fast foods contain much more than the body needs. Sodium is needed by the body, but excessive amounts can raise blood pressure levels. Salty foods generally contain sodium, but it's also important to know that there are high-sodium foods that are not necessarily salty to taste. Less than ¼ tsp of salt is all you need in a day.

Here are some foods that are notably high in sodium and should be limited or avoided - junk foods, smoked and cured meats, salted butter or margarine, canned vegetables or soups, pasta sauces, salad dressings, sauces or ketchup, instant noodles, cake mixes, and breakfast cereals.

If You Drink Alcohol, Limit Yourself

High alcohol consumption is closely linked to metabolic syndrome. It causes lower HDL (good) cholesterol levels, a higher waist circumference, and elevated levels of triglycerides. These are all known risk factors for developing metabolic syndrome.

Alcohol is particularly associated with a beer belly. A beer typically has 150 calories, so drinking several beers at a time will cause your calorie count to escalate. Limit alcohol consumption to just 1-2 per day. This includes beer and all other alcoholic beverages.

As you can see, you really just need to cut out all sugary, processed foods, and eat a healthier diet filled with nutritious foods. As they say, 'It's not rocket science.'

Metabolic Syndrome and The Ketogenic Diet



Metabolic syndrome often starts with insulin resistance, a condition wherein the body's cells become immune to the effects of insulin. It's another reason why this disease gets called 'Insulin Resistance Syndrome.'

The body utilizes insulin to turn the sugar and starches from carbohydrates that we eat into glucose, and insulin ushers the glucose into the body's cells to be converted to energy. With insulin resistance, the glucose levels rise as the pancreas keeps producing insulin, but less of it is converted into energy.

Instead, the excess glucose gets stored as fat. Over time this continual process leads to type 2 diabetes, as insulin resistance is the main cause of type 2 diabetes mellitus.

It is imperative for people who have metabolic syndrome or insulin resistance to lose weight. Even just 5% of lost body weight can help enhance insulin sensitivity. There are a multitude of ways you can lose weight and help restore insulin sensitivity, so as to regulate healthy blood sugar levels. These include regular exercise, healthy eating, and following a weight loss diet such as the ketogenic diet.

The Ketogenic Diet

A ketogenic diet is a low carbohydrate, high fat and protein diet plan. The keto diet is very effective at lowering blood sugar in the body, causing it to burn fat and turn it into 'ketones,' for energy supply.

In a high carb diet, especially simple carbs, the body breaks carbohydrates down into glucose and uses that for energy. With insulin resistance, the normal process is thwarted, and so the body, though high in glucose, lacks usable energy.

When carbohydrate intake is restricted and blood sugar levels drop, the body turns to fat stores for its needed energy supply. This is ketosis – the breaking down of fat stores, which the body happily uses for energy instead of the more easily obtained glucose from carbs.

This is when you are said to be in a state of ketosis. It is at this time that you will lose weight, or more correctly, body fat.

Ketones cannot be produced from sugars, starches, or carbohydrates from the food we eat. It can only come from the breaking down of stored body fat, which is why the keto diet is a very effective and popular way to lose weight.

The keto diet reduces HbA1c and blood glucose in people with diabetes, addresses insulin resistance, and improves overall insulin sensitivity.

Prolonged insulin resistance will inevitably lead to type 2 diabetes. According to one study, a ketogenic diet followed for at least 3 months effectively lowered blood glucose levels and HbA1c levels in diabetic patients.

In a similar result, it also helped address insulin sensitivity issues by reducing insulin resistance amongst those experiencing pre-diabetic symptoms. Overall, the ketogenic diet is a remarkable solution for addressing diabetes and pre-diabetic conditions that are all closely linked to metabolic syndrome.

Can the Keto Diet Reverse Metabolic Syndrome?

Being overweight is the first visible sign of metabolic syndrome. The presence of too much body fat often causes other metabolic syndrome symptoms to appear as well (high blood pressure, high triglyceride levels, and bad cholesterol values). A keto diet can help people lose as much as 14% body fat or lose 50% triglycerides in as quickly as 12 weeks.

The keto diet can possibly reverse metabolic syndrome by addressing most of the five contributing conditions.

Keto Diet May Lower Risk of Cardiovascular Disease

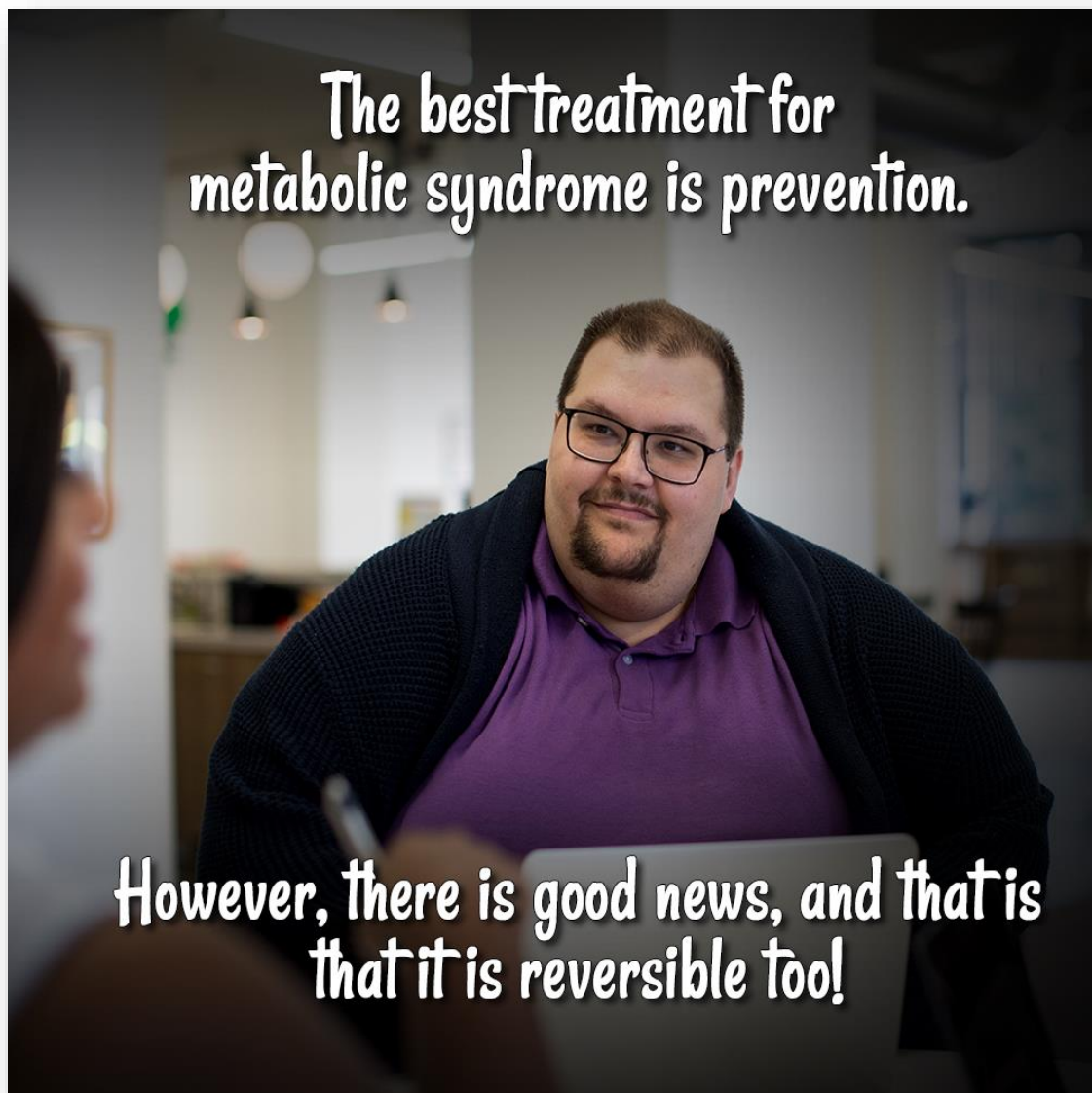
A few other studies have suggested that the keto diet may lower the risk of cardiovascular disease. Additionally, it may help reduce inflammation in the brain after a stroke or injury.

Stroke survivors remain at risk of another stroke within five years of their last attack. Due to the amount of inflammation in the brain, finding ways to suppress or reduce inflammation has been a pressing issue. Being in a state of ketosis is one way help address it.

The keto diet has an outstanding potential for improving our health with all of these benefits - reversing metabolic syndrome, aiding with weight loss and alleviating the impact of cardiovascular diseases. Several studies have also proven its positive benefits on patients diagnosed with epilepsy and autism.

It certainly is a diet not to dismiss lightly, for many health reasons.

Treatment Options for Metabolic Syndrome



Anyone who is diagnosed with a serious illness or disease may wonder “why me”? It is also normal to react with denial, fear, sadness, or even anger.

Even though there are factors beyond our control that may automatically put us at high risk of developing a serious illness, there are still many more that we can influence by our actions and lifestyle.

Doing so means many lifestyle diseases in particular can be prevented or delayed. Metabolic syndrome falls under this category.

Even if the risk of metabolic syndrome grows with age, (which is something you can't change), living a healthy lifestyle can still delay or prevent the condition.

The best treatment for metabolic syndrome is prevention. However, if you've been diagnosed with metabolic syndrome already, or you feel you are at risk of developing it, there is much hope for you.

Metabolic syndrome is highly preventable and reversible, if you take action and help yourself by following a healthy lifestyle, are mindful of your diet, and prioritize your health.

Here are some treatment options for Metabolic Syndrome.

Natural Lifestyle Changes

- ***A Healthy Diet***

A healthy, balanced diet is key to maintaining a healthy weight range, keeping excess fat off, and limiting risks of metabolic syndrome. The right foods are crucial to our well-being, and can dramatically ease inflammation, and facilitate the body's metabolism.

A good diet is the foundation of treatment and reversal of metabolic syndrome.

- ***Regular Exercise***

A nutritious diet can further enhance the treatment of metabolic syndrome if paired with regular exercise. In fact, both diet changes and exercise will be the first two things any doctor will recommend.

Exercise can help you lose weight, help lower blood pressure levels, lower triglyceride levels, and increase HDL cholesterol levels.

Indeed, it can positively address all the symptoms of metabolic syndrome. Being religious with your exercise regime, coupled with good nutrition, may certainly help reverse metabolic syndrome.

- ***Lose Weight***

Obesity is considered the biggest issue that needs to be addressed. It is considered to be a better predictor of metabolic syndrome than glucose intolerance. Lose at least 5% of your body weight, and you can positively enhance insulin sensitivity.

- ***Stress Management***

Treatment of metabolic syndrome is not complete without considering the nature of stress in your life. Subjecting yourself to chronic stress causes the body many harmful effects.

Stress triggers inflammation, causes hormonal imbalances that physically affect you in many ways, including gaining weight. Being able to reduce and manage stress is an important factor that must not be overlooked.

- ***Quit Smoking***

Smoking can put you at a greater risk of developing heart disease, stroke, and cancer. This is a known fact. So stop while you have a choice.

Medical Treatments

There is no single treatment for metabolic syndrome. A doctor cannot write a prescription for it, as its very nature consists of a cluster of health conditions, which means an effective treatment should focus on addressing each of the individual conditions.

- ***For Individual Conditions***

Seeing a doctor is a must, as they may need to prescribe medications for some of the conditions, such as high blood pressure, blood sugar levels, and cholesterol issues.

- ***For Obesity***

Decide to make healthy lifestyle changes needed to overcome obesity effectively. At best, these involve engaging in daily physical exercise, losing weight, avoiding sugar, avoiding refined carbohydrates, and eating healthy fats.

The keto diet and intermittent fasting are proven diets that effectively help many obese people lose weight. You can even follow these two diets at the same time for even faster weight loss.

You are not destined to develop a serious condition or any chronic illness. To prevent any likelihood of developing any disease, choose to live a healthy life by being more mindful of your diet and lifestyle choices.

Your choices impact your life in more ways than you may possibly imagine.

Are your choices the right ones?

Conclusion

Do you know what the leading cause of death is in the world? According to the World Health Organization, the two leading causes of death are heart disease and stroke.

These two issues combined account for 26.6% of total death cases worldwide. Meanwhile, respiratory infections, cancers, diabetes mellitus, dementia, and other causes follow closely.

Without implementing any lifestyle changes, around 15% to 30% of those with a pre-diabetic condition eventually develop type 2 diabetes mellitus within five years. Stroke survivors have a lingering risk of stroke for the next five years since their last attack.

A surefire way to fast track our health into the danger zone is through developing metabolic syndrome.

Metabolic syndrome is a cluster of conditions that puts a person at a greater risk of developing cardiovascular disease, and/or type 2 diabetes. Lifestyle choices, especially diet, play a major role as to how metabolic syndrome gets triggered in our bodies.

Early detection of metabolic syndrome may help break its eventual progression into a more serious and complicated, life-threatening disease. You can help prevent this, and help reverse its effects, by following the recommendations given in this eBook.