

## Metabolic Syndrome and Male Infertility Blog

David Shin, MD

Are you overweight, suffer from diabetes or have high blood pressure? Then you might be at risk for having the metabolic syndrome. This syndrome represents many abnormalities that include abdominal obesity, diabetes, low HDL cholesterol levels, high triglyceride levels and elevated blood pressure. This medical condition is considered to be one of the main public health threats in the United States affecting over 47 million adults. It is associated with an increased risk of heart disease and diabetes. Because of this increased risk, it is very important to find these clusters of medical conditions in order for both doctors and patients to aggressively make lifestyle changes to improve overall health.

How does the metabolic syndrome affect a man's fertility?

The main thing that is seen with metabolic syndrome is obesity. In the United States from 2009 to 2010, the national average of obese adults (20 years or older) defined as having a body mass index or BMI of greater than 30 is 35.7%. Therefore, the chances are high that a man who is obese is also trying to achieve pregnancy with his partner.

In fact, a recent review of published studies showed that obese men had a higher risk of having azoospermia (no sperm in the ejaculate) or oligospermia (low sperm count). This is defined as having 40 million sperm or less per ejaculate. Furthermore, a new study from Australia showed for the first time that as the BMI increased in men, there was an increase in miscarriage rates and a decrease in live birth rates. Men now need to realize that losing weight can potentially improve their chances of having children.

What is the best way to lose weight? Simply, diet and exercise.

Two diets which have been shown to reduce the risk of the metabolic syndrome are the DASH (Dietary Approaches to Stop Hypertension) diet and the Mediterranean diet. The DASH diet is a diet low in salt and saturated fats and focuses on fruits, vegetables, whole grains and low fat dairy products (such as milk, cheese, and yogurt). Sweets and red meats are allowed but should be limited. This diet was developed in research sponsored by the National Institute of Health and has been shown to lower blood pressure, increase the good HDL cholesterol and lower the bad LDL cholesterol and triglyceride levels. The Mediterranean diet is a diet based on the common eating habits of the population near the Mediterranean Sea (south Italy, Greece and Crete) and is characterized by a high intake of olive oil, fruits, vegetables, nuts and whole grains; moderate intake of fish and poultry and a low intake of red meat, dairy products and sweets with the allowance of red wine in moderation. Previous published studies have shown the benefit of adherence to the diet with improvement in weight loss, blood pressure, lipid profiles, and insulin resistance.

In addition to a healthy diet, exercise is another key component to the treatment of the metabolic syndrome. The most effective regimen is a daily 30 minute workout of moderate intensity such as brisk walking, running or swimming. However, there are no effective shortcuts to weight loss. Procedures such as liposuction and surgery for

obesity can improve a person's outward appearance but they have not been shown to be effective in the treatment of the metabolic syndrome.

Weight loss is only first step of the process. It is very important for men to take care of their bodies by controlling their blood sugars if they have diabetes or improving their cholesterol or triglyceride levels as well as controlling their blood pressure if it is elevated. Several studies have suggested a link between these medical conditions with male infertility. The best way to treat these medical conditions is being proactive and working closely with a primary care physician to monitor your health risks. Because the infertility evaluation might be the first time a man seeks medical examination of any kind, it is important for both the health care provider and patient to recognize the components of the metabolic syndrome, be aware of its potential link to male infertility and be able to make the necessary lifestyle modifications in order for men to lead longer, healthier lives with the new families they will help to create.

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