

Getting Healthy May Improve Men's Fertility

December 10, 2014

Semen quality was poor in men with high blood pressure, heart disease and other health problems

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(dailyRx News) Health problems that seem unrelated to men's fertility — like diabetes or high blood pressure — may damage men's sperm. And men can take steps that can both improve their overall health and make them more fertile.

A new study found that men with defects in their semen were more likely to have high blood pressure or heart disease than men with healthy semen.

Many men may see improvements in their fertility if they lose weight, a past study suggested. The authors of the current study said that a full physical exam is important for all men being treated for infertility.

Parviz K. Kavoussi, MD, of Austin Fertility & Reproductive Medicine, told dailyRx News that this study provides good supportive data, but the findings come as no surprise.

"There is a philosophy which keeps being proven to be true, which is that what is good for a man's overall health is good for his fertility health," said Dr. Kavoussi, who was not involved in this study.

"About 15 percent of all couples have fertility issues, and in half of those cases the male partner has

semen deficiencies," said lead study author Michael L. Eisenberg, MD, assistant professor at Stanford University School of Medicine in California, in a press release. "We should be paying more attention to these millions of men. Infertility is a warning: Problems with reproduction may mean problems with overall health."

According to Dr. Kavoussi, "There is a strong association with high blood pressure, heart disease, diabetes and cholesterol issues with obesity. Obesity tends to go hand in hand with these other health issues. It has been repeatedly shown that obesity is bad for a man's fertility by impacting semen parameters and sperm health. Theories to why include fat cells in the pelvis and in the scrotum elevate testicular temperatures, which is bad for sperm.

"Fat cells are where men convert testosterone into estrogen. If the ratio is off with a low testosterone to high estrogen with the accumulation of more fat cells, this may have a negative impact on semen parameters and fertility," he said. "Just like we have seen that smoking and alcohol in excess is bad for sperm and a man's fertility, the moral of this story is that what is good for a man's overall health is good for his fertility health."

Dr. Eisenberg and team studied 9,387 men between the ages of 30 and 50. The average age of the patients was 38.

All the men had been referred or sought treatment for fertility problems between 1994 and 2011. The patients had various problems that could lower fertility, such as low semen volume, low sperm counts or less active sperm. Some patients, however, had normal semen, and their infertility was caused by something else.

This allowed these researchers to compare the health status of men with and without semen problems. Past studies have found that infertile men were more likely to have serious health problems than fertile men.

In addition to their fertility issues, 44 percent of the men in the study had some other health problem. Thirty percent had two health problems that could have caused or contributed to their infertility.

Circulatory problems, such as high blood pressure, vascular disease and heart disease, were tied to poor semen quality. For instance, only 45 percent of men with high blood pressure had normal semen quality, while 56 percent of men without high blood pressure had normal semen.

One of the most important strategies to improve semen quality could be as simple as weight loss. According to a 2010 study in the *Asian Journal of Andrology*, obesity may contribute to infertility. That past study found that weight loss improved semen quality in men who were obese.

Weight loss may also improve heart health, lower high blood pressure and prevent diabetes.

In the study by Dr. Eisenberg and team, men who had chronic diseases like diabetes were more likely to have higher rates of problems with semen than healthy men. Men with poor-quality semen were also more likely to have a skin disease, such as eczema, dermatitis or a herpes infection.

Dr. Eisenberg said infertile men who had high blood pressure or heart disease should receive treatment to improve their fertility and overall health.

"A man's health is strongly correlated with his semen quality," Dr. Eisenberg said. "Given the high incidence of infertility, we need to take a broader view. As we treat men's infertility, we should also assess their overall health. That visit to a fertility clinic represents a big opportunity to improve their treatment for other conditions, which we now suspect could actually help resolve the infertility they came in for in the first place."

This study was published Dec. 10 in *Fertility and Sterility*.

The American Society of Reproductive Medicine funded the study. Dr. Eisenberg held stock in Sandstone Diagnostics, which performs fertility testing. Dr. Berry Behr is the founder of Auxogyn, which provides reproductive health services to women, and co-founder of IVIGen, which provides genetic testing.