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**100% Effective Natural Hormone Treatment**  
**Menopause, Andropause And Other Hormone Imbalances**  
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**Male Infertility and Glutathione**

**By Priya Shah**

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by: **Priya Shah**

Are You Half The Man Your Father Was?

It is a well-known fact that sperm counts have dropped by half in the last 50 years, and that modern men have 20 percent less semen volume than their fathers (BMJ, 1992, volume 305).

A recent report from researchers in Aberdeen presented preliminary data that suggests the sperm concentration of the men seen in their clinic had declined by 29% over the past 14 years. (British Fertility Society; 5 January 2004)

Persistent organic pollutants (POPs) and endocrine-disrupting chemicals from normal, everyday plastics are known to cause reproductive damage, as documented in Theo Colborn's book "Our Stolen Future."

Damage to sperm caused by exposure to common chemicals like alcohol, pesticides in food, has been linked to lowered intelligence and behavioral disorders in children.

Lifestyle risk factors known to decrease sperm quality include Cigarette smoking Alcohol consumption Chronic stress Nutritional deficiencies.

Other reasons for infertility include congenital factors, and health conditions like prostatitis and diabetes that can affect sperm production.

Pollution is stealing our future, and there's little anyone can do to avoid it. There may not be a lot you can do to reduce your exposure to persistent environmental toxins.

But there are definite measures you can take to reduce the impact of the environmental pollutants and toxins on your body.

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You can prevent and, to a certain extent, repair the damage they cause to your body, through a better lifestyle and nutrition.

Some nutritional therapies and antioxidants that have proven beneficial in treating male infertility and improving sperm counts, sperm morphology and motility include: Carnitine Arginine Zinc Selenium Vitamin B-12 Vitamin C Vitamin E Glutathione Coenzyme Q10

Studies show that anti-oxidant supplementation – glutathione in particular – can improve sperm quality, and possibly increase your chances of conceiving.

If you smoke, drink, are exposed to stress, chemicals, radiation, pesticides or take medication or drugs (like sulfasalazine, ketoconazole, azulfidine, anabolic steroids, marijuana) that affect fertility, you should consider taking an antioxidant supplement to reverse some of the damage.

### Why are Antioxidants Important for Sperm Quality?

Mammalian spermatozoa are coated by a membrane rich in polyunsaturated fatty acids. These fatty acids are extremely susceptible to oxidative damage by free radicals or Reactive Oxygen Species (ROS) by a process called lipid peroxidation (LPO).

Lipid peroxidation damages the sperm cell membrane. It is considered to be the key mechanism of ROS-induced sperm damage and leads to Loss of sperm motility Abnormal sperm morphology Reduced capacity for oocyte penetration Infertility

To protect sperm from damage, the body depends on powerful antioxidant enzymes in the body such as superoxide dismutase (SOD), catalase, and glutathione peroxidase/reductase (GPX/GRD).

Seminal plasma and spermatozoa have several antioxidant enzymes – glutathione peroxidase, glutathione reductase, superoxide dismutase.

Some amount of all the antioxidant enzymes, which may protect spermatozoa from oxidative attack, are also made by the epididymis during storage.

The glutathione peroxidase/reductase enzymes play a central role in the defense against oxidative damage in human sperm.

### Why is Glutathione important for Sperm Quality and Fertility?

A decrease in levels of reduced glutathione (GSH) during sperm production is known to disrupt the membrane integrity of spermatozoa due to increased oxidative stress.

Intracellular glutathione levels of spermatozoa are known to be decreased in certain populations of infertile men. Compared with a control group, the infertile men in all groups had significantly higher levels of ROS and lower levels of total antioxidants.

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There is strong clinical evidence to show that men diagnosed with infertility have high levels of oxidative stress that may impair the quality of their sperm.

In some groups, higher levels of ROS were associated with lower sperm counts and defective sperm structure, while lower antioxidant levels correlated with reduced sperm movement.

Previous evidence has also shown that oxidative stress can decrease a sperm's life span, its motility, and its ability to penetrate the oocyst, or egg cell.

Up to 40% of men with unexplained male infertility have higher levels of free radical activity in their bodies.

Because men with high levels of ROS have a seven-fold lower likelihood of inducing a pregnancy than men with lower levels, researchers recommend that treatment for infertile men should include strategies to reduce oxidative stress and improve sperm quality.

How can Glutathione help in the Treatment of Infertility?

Glutathione is not only vital to sperm antioxidant defenses, but selenium and glutathione are essential to the formation of "phospholipid hydroperoxide glutathione peroxidase" – an enzyme present in spermatids – which becomes a structural protein in the mid-piece of mature spermatozoa.

When either substance is deficient, it can lead to instability of the mid-piece of the spermatozoa, resulting in defective motility.

Free radical scavengers – such as glutathione – that restore the structure and function of poly-unsaturated fatty acids (PUFA) in the cell membrane, can be used to treat these cases.

In a double-blind cross-over study of twenty infertile men, treatment with glutathione led to a statistically significant improvement of the sperm quality.

The study concerned men in whom the sperm quality was poor due to unilateral varicocele or germ-free genital tract inflammation – two conditions in which ROS or other toxic compounds are indicated as causative factors.

Treatment with glutathione was also found to have a statistically significantly positive effect on sperm motility (in particular forward motility) and on sperm morphology.

The findings of these studies indicate that glutathione therapy could represent a possible therapeutical tool in cases where ROS or exposure to toxins is the probable cause of infertility.

Read the complete report with references on Male Infertility and Glutathione

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Priya Shah is the Editor of "The Glutathione Report" For regular updates on the health benefits of glutathione subscribe here

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### **Men Infertility: Be Open–Minded When Seeking For Help**

**By Jeanette Pollock**

Who said infertility is conventionally a woman thing? Isn't it that male infertility produces great impact to conception? Now who is at the risk of infertility? Who is to be blamed?

Infertility is not a sole problem that is faced by women. As most cultures practice, infertility is typically blamed on the part of the women. They are obviously wrong. There is nobody to be blamed for the matter. The inability to bear a child can be caused by several factors that are affecting both the couple. There is also the renowned male factor which means that the problem lies on the part of the male.

The concept of male infertility is no longer a new term these days. Medical findings have long started to point on the male reproductive system as a primary cause of infertility. But then because of men's too much pride, they find it hard to bring about acceptance for men infertility. There are no recognized symptoms or signs of men infertility. They can only be detected by the routinely health checkups. As couples, you need to be aware of your fertility status. Women are not always the ones at fault when it comes to the incapacity to bear a child. Men infertility should be accepted with an open mind.

In the available studies and reports that medical teams have further gathered, they see that men infertility comprises at least 1/3 of its overall total. In contrast with the female reproductive system, the male reproductive system is less complicated. Men infertility is usually associated with the problem in sperm count and other known sperm disorders. The fertility process commonly takes place during the intercourse when there are millions of sperm cells that get deposited into the vagina during the male ejaculation. Only a few of the semen can successfully get through the protective walls of the egg cell to enable pregnancy. Therefore, the more sperm cells that are able to go through the egg's protective walling, the more chances of allowing a successful fertilization. For a progressive fertilization, the sperm quality, sperm size and shape, sperm motility, and sperm count are great factors to consider.

Logically, any problem with any of these factors is likely to bring about a difficulty in male fertility. The explanation to this is that a great number of sperm count and an optimum quality of sperm cells are sure to give a hundred percent male fertility.

Men infertility is likewise confronted with an array of environmental and health issues which can affect the difficulty in conceiving. The age is a renowned factor. Obviously, as man ages, his capacity to reproduce lessens. Specialists say that from the age of 35, the sperm cell quality starts to diminish. One's lifestyle choices also pose an impact to men infertility. Men infertility is likely to be affected by the intense exposure to heat and by using overly tight underwear, the extreme exposure to pesticides,

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electromagnetic emissions, radioactivity and other hazardous substances. It is also to be noted that men infertility is greatly brought about by STDs, too much use of drugs, smoking, and the abuse of alcohol.

If you've got concerns or queries regarding men infertility, there are various infertility specialists from whom you can seek help. Furthermore, it pays off to be open-minded when accepting the truth regarding men infertility.

Jeanette Pollock is a freelance author and website owner of

. Visit

Jeanette's site to learn more about men infertility.

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