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Astashine silver capsules: an excellent choice to boost male fertility

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ABSTRACT

A couple is considered infertile if they are unable to get pregnant for more than one year. About one third of infertility cases are attributed to the man. In fertility is caused by many different factors, including irregular development of the testicles, low mobility of the sperm, irregular growth of veins around the testicles, and lack of sperm development among others. In 2010, an estimated 48.5 million couples worldwide were infertile according to the World Health Organization (WHO). Infertility is defined as the inability of a sexually active, non-contracepting couple to achieve spontaneous pregnancy within one year. Other surveys have shown that 15% of couples do not achieve pregnancy within one year and seek medical treatment for infertility. Eventually close to 5% will remain unwillingly childless. One in eight couples encounters problems when attempting to conceive a first child and one in six when attempting to conceive a subsequent child. Astashine silver capsules have most widely studied for enhancing sperm health. Recently, clinical trials have been conducted to learn the relationship between astashine silver capsules and sperm health. Several studies shown that Astaxanthin & L-Carnitine combination, is supportive of sperm health and in particular sperm count, concentration & motility. Based on these facts A Super Antioxidant ASTASHINE SILVER Capsules has been Developed by R&D Centre, Lactonova Nutripharm (P) Ltd, HYDERABAD. The present paper Reviews the Role of ASTASHINE SILVER CAPSULES in male fertility.

Keywords: Astashine silver capsules, Sperm count, Concentration & motility.

INTRODUCTION

Infertility affects many couples of child-bearing age. A couple is considered infertile if they are unable to get pregnant for more than one year. About one third of infertility cases are attributed to the man. Infertility is caused by many different factors, including irregular development of the testicles, low mobility of the sperm, irregular growth of veins around the testicles, and lack of sperm development among others. However, research suggests a potential new factor affecting male fertility. Damage caused by reactive oxygen species, could play a very large factors in male fertility. When ROS levels exceed your body's normal antioxidant levels it may lead to increased cellular damage. Oxygen species, free radicals, and peroxides are grouped together under the general term reactive oxygen species. And, over half of the infertile men, according to research, showed higher than normal levels of ROS [1-5].

Table 1 : Semen analysis : normal values for men	
Parameter	**Normal Values**
Ejaculate (semen) volume	≥ 1.5 ml
Sperm Concentration	≥ 20 million/ml
Total sperm count	≥ 40 million
Sperm motility	≥ 50% with forward progression
Sperm with rapid progression	≥ 25%
Morphology (Shape)	> 30% normal form

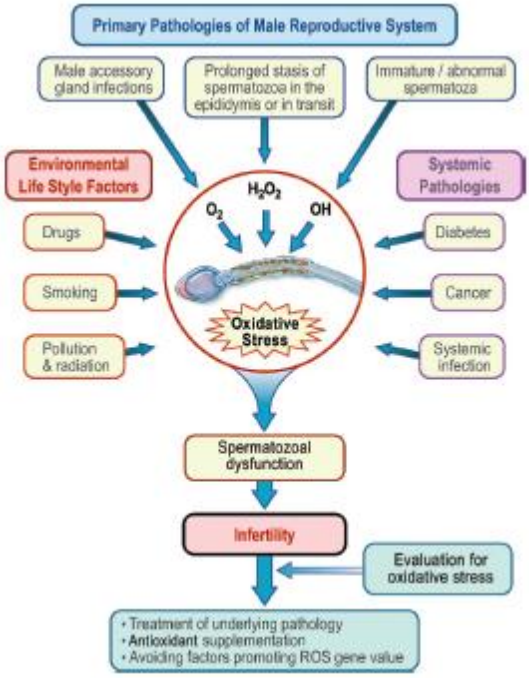
Male factor infertility accounts for up to half of all cases of infertility

Infertility affects both men and women. A WHO survey of 7,273 couples with infertility revealed that in 24% of the cases the infertility was attributable to male factors alone. A further 24% was attributable to both male and female factors. Therefore, the male factor is at least partly responsible in about 50% of infertile couples. Another study indicates infertility affects one man in 20 in the general population

Oxidative stress contributes to male infertility

Though about half of all infertility cases are at least partially attributable to men, most of the established therapies, such as artificial insemination or in vitro fertilization, are aimed at women. Recently, there has been a spate of study results which indicate the possibility that intra testicular oxidative stress may contribute to male infertility. Supporting this theory is a study which reported that men who showed evidence of oxidative stress in their semen also had poor results in tests of basic semen quality and low pregnancy rates. Other evidence suggests that damage from oxidative stress exists in between30 to 80 % of male infertility patients [6-8].

Oxidative stress and infertility



Oxidative stress affects the sperm of men in two different ways

1. Oxidative stress damages the cell membrane of sperm, which could decrease sperm motility and its ability to connect with an oocyte.
2. Oxidative stress causes damage to the DNA of sperm. This could increase the chance of passing along damaged DNA from the man.
3. According to clinical research, albumin found in sperm has the potential to block free radicals,

which prevents them from reaching the sperm. Also, sperm DNA is tightly covered by a protective protein. And this layer can protect the DNA in your sperm, suggests research, which could prevent damage from occurring to your sperms DNA. However, infertile men could be deficient in this protein, possibly leaving the DNA exposed to reactive oxygen species.

Composition of astashine silver capsules

Astaxanthin - 2mg (Naturally derived from Haematococcus pulvialis algae extract, which is microencapsulated) & L-Carnitine L-Tartarate 368 mg.

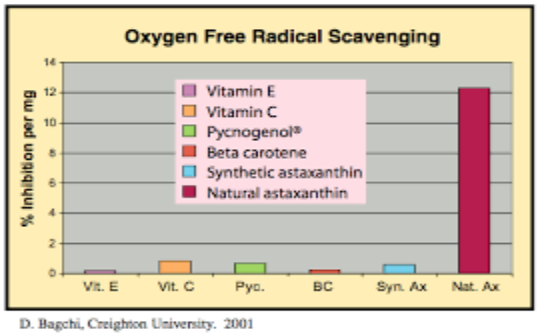
CLINICAL STUDY REORTS ON ASTAXANTHIN IN ASTASHINE SILVER CASULES

Astashine silver capsules and fertility

However, when levels of reactive oxygen species are too great, and there are not enough antioxidants, this could potentially lead to damage to cells, Research suggests that powerful antioxidants could reduce damage associated with ROS's by destroying them. One powerful antioxidant, Astaxanthin, has been shown in research to reduce free radical damage associated with male infertility and could help improve sperm motility.

In a clinical study it has been shown that Astaxanthin has the ability to reduce damage associated with free radicals. Thirty infertile men who had suffered infertility for 12 or more months. They administered 16mg/day of Astaxanthin for three months. The researchers noted, the Astaxanthin group showed a significant reduction in reactive oxygen species. Also noted in the Astaxanthin group, was a significant increase in sperm velocity which was different than the placebo group.

Total pregnancies and pregnancies per cycle increased in the Astaxanthin group (54.3% and 23.17%) than in the placebo group (10.5% and 3.6%). The researchers concluded that the Astaxanthin could potentially be a new method of treatment for male infertility. The latest research shows damage from reactive oxygen species could be a cause of male infertility. And, according to research, increasing total antioxidant levels could reduce damage to sperm membranes and its DNA. Powerful antioxidants like Astaxanthin could be apotent nutrients that could reduce reactive oxygen species, and research suggests, this could improve the function of male sperm count and motility.Astashine silver capsules for sperm health



D. Bagchi, Creighton University. 2001

Around 40% of infertile men have high levels of free radicals in their semen. This may be due to exposure to environmental toxins, poor diet and unhealthy lifestyle habits such as smoking cigarettes. Sperm also produce high quantities of free radicals as they work hard to traverse the many challenges along their journey to the awaiting egg. These challenges can be anything from simply having to move through the uterus itself, cervical mucus and the thick gelatinous outer layer that surrounds an egg called the cumulus oophorus (it takes a lot of energy to break through this layer of cells).

In one double-blind randomized controlled trial to evaluate astaxanthin's use in protecting sperm function and male fertility, thirty men from infertile couples (where the female partner had no fertility issues) received either astaxanthin (16 mg/day) or a placebo for three months. The men provided semen for IUI during the three months and the occurrence of pregnancy was recorded. By the end of three months, sperm motility was significantly increased and semen free radical production was decreased in the astaxanthin group, versus the placebo group. Most noted in this study was the pregnancy rate, which was 54.5 percent for the astaxanthin group compared to 10.5 percent for the placebo group.

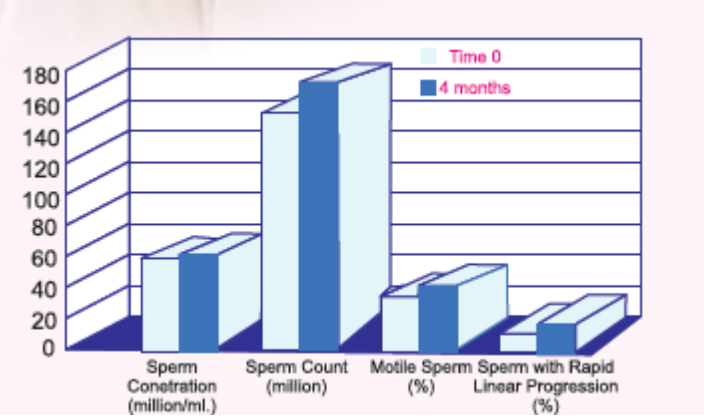
Because of the powerful antioxidant actions astaxanthin provides, potential fertility benefits to

- Enhance reproductive health
- Stabilize blood sugar
- Boost immune system function
- Reduce inflammation of all causes; it is a powerful anti-inflammatory agent
- Improve male fertility by increasing sperm strength, quality, motility and sperm count
- Improve endurance
- Reduce oxidative damage to DNA
- Reduce pain – astaxanthin blocks COX 2 enzymes, which may be potentially supportive for reproductive organ pain

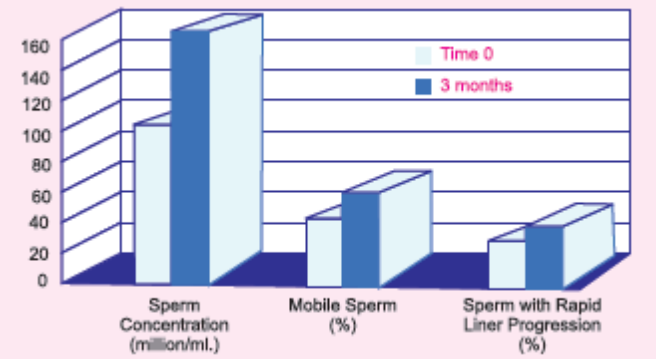
CLINICAL STUDY REORTS ON L-CARNITINE IN ASTASHINE SILVER CASULES

Male infertility

Oral administration of L-carnitine (3 g daily for four months) resulted in significant improvements in sperm number, quality, and motility in patients with inadequate sperm [9, 10].



In another double-blind, crossover trial, 100 infertile males were supplemented with 2 g L-carnitine daily or placebo for two months, followed by a two-month washout period, and finally two months on the opposite treatment. Statistically significant improvements in sperm count and motility were observed in the L-carnitine group [11, 12].



In Another Clinical research researchers conducted a second study on 56 infertile males and found the combination of L-carnitine (2 g daily) and acetyl-L-carnitine (1 g daily) led to significant improvement in sperm motility [12].

SAFETY OF ASTASHINE SILVER CAPSULES

Astaxanthin has demonstrated safety in numerous human clinical trials. In one open-label clinical study on subjects with metabolic syndrome (n=17). Astaxanthin (16 mg/day, for three months) significantly raised blood bilirubin ($p \leq 0.05$), potassium ($p \leq 0.05$), and creatine kinase ($p \leq 0.01$), although all three values remained within normal range. Also, astaxanthin significantly lowered the liver enzyme gamma-glutamyl trans peptidase (GGTP; $p \leq 0.05$). Since the researchers noted this enzyme was abnormally elevated in 11 of the 17 subjects at baseline, this astaxanthin effect may have been beneficial. Animal experiments have investigated astaxanthin at levels well over 120 mg/day in human equivalents, without causing apparent harm. Hoffman-La Roche confirmed its safety with extensive tests, including acute toxicity, mutagenicity, teratogenicity, embryo toxicity, and reproductive toxicity. L-carnitine is listed as pregnancy category B, indicating animal studies have revealed no harm to the fetus but that no adequate studies in pregnant women have been conducted. L-carnitine has been given to pregnant women late in pregnancy with resulting positive outcomes. The racemic mixture (D, L-carnitine) should be avoided. D-carnitine is not biologically active and might interfere with the proper utilization of the L isomer. In uremic patients, use of the racemic mixture has been correlated with myasthenia-like symptoms in some individuals.

SUPPLEMENT FACTS

Presentation

60 capsules

Usage

As a food supplement combination of antioxidants to improve health and vitality.

Contra-indications

Product is contra-indicated in persons with Known hypersensitivity to any component of the product hypersensitivity to any component of the product.

Recommended usage

Adults

- Two capsules per day along with food.
- "Do not exceed the recommended daily dose"

Administration

Taken by oral route at any time with food.

Precautions

Food Supplements must not be used as a substitute for a varied and balanced diet and a healthy lifestyle. This Product is not intended to diagnose, treat, cure or prevent any diseases. Do not exceed the recommended daily dose.

Warnings

If you are taking any prescribed medication or has any medical conditions or have any medical conditions (seizures) under age group 17 year always consults doctor or healthcare practitioner before taking supplements.

Side Effects

Mild side effects like nausea, headache and vomiting in some individuals have been reported.

Storage

- Store in a cool, dry and dark place
- Keep out of reach of children.

SUMMARY AND CONCLUSION

For a nutritional supplement to be considered effective, it should improve sperm parameters and pregnancy rates in at least one blind, prospective, placebo-controlled trial. The existing evidence supports the use of potent antioxidants like astashine silver capsules for the management of male infertility. It is now concluded that reducing oxidative stress through increased intake of antioxidants might be an effective self-care method for male infertility. Astashine silver capsules are the most important defense against infertility.

REFERENCES

[1]. Ashok Agarwal & Lucky H. Sekhon. The role of antioxidant therapy in the treatment of male infertility. Human Fertility, 13(4), 2010, 217–225.
[2]. Comhaire, F.H, Garem, Y. El., Mahmoud, A., Combined conventional/antioxidant "Astaxanthin" treatment for male infertility: a double blind, randomized trial. Asian J Androl. 7(3), 2005, 25762.
[3]. Dr. Joe Mercola. Help Make Your Body 62% Stronger, Flood it With Astaxanthin. http://articles.mercola.com/sites/articles/archive/2011/06/15/benefitsofastaxanthintoyourhealth.aspx
[4]. EBSCO CAM Review Board. Astaxanthin. NYU Langone Medical Center. 2014.
[5]. Guerin, M., Huntley, M.E., and Olaizola, M. Haematococcus Astaxanthin: applications for human health and nutrition. TRENDS in Biotechnology, 21(5), 2003.
[6]. Michael Murray & Joseph Pizzorno. Encyclopedia of Natural Medicine. Revised 2nd Edition. Male Infertility; Nutritional Considerations. 1998, 581583.
[7]. Parris Kidd, Ph.D. Monograph. Astaxanthin, Cell Membrane Nutrient with Diverse Clinical Benefits and Anti-Aging Potential.
[8]. Ross, C., Morriss, A., Khairy, M. A systematic review of the effect of oral antioxidants on male infertility, 2009. http://www.rbmojournal.com/article/S1472648.
[9]. Costa M, Canale D, Filicori M, L-carnitine in idiopathic asthenozoospermia: a multicenter study. Italian Study Group on Carnitine and Male Infertility. Andrologia, 26, 1994, 155-159.
[10]. Vitali G, Parente R, Melotti C. Carnitine supplementation in human idiopathic asthenospermia: clinical results. Drugs Exp Clin Res, 21, 1995, 157-159.
[11]. Lenzi A, Lombardo F, Sgro P, Use of carnitine therapy in selected cases of male factor infertility: a double-blind crossover trial. Fertil Steril, 79, 2003, 292-300.
[12]. Lenzi A, Sgro P, Salacone P, A placebo-controlled double-blind randomized trial of the use of combined L-carnitine and L-acetyl-carnitine treatment in men with asthenozoospermia. Fertil Steril, 81, 2004, 1578-1584.