

## Fertility

[Urologiia](#). 2003 Mar-Apr;(2):23-5.

### **[Etiopathogenetic basis for using magnetolaser therapy in the complex treatment of male infertility]**

[Article in Russian]

[Iurshin VV](#), [Sergienko NF](#), [Illarionov VE](#).

Up to 12-15% couples are infertile. The "responsibility" for infertility rests with the husband in 40-45% cases. The effects of routine drug therapy (n = 95) on a generative function are compared to those of magnetolaser therapy (n = 93) in 188 males with excretory-inflammatory infertility suffering from chronic prostatitis. Low-intensity laser infra-red radiation was used in a permanent magnetic field produced by Azor-2K unit. The magnetolaser therapy more significantly than the routine therapy raised concentration and number of mobile forms of the spermia, reduced their degenerative forms, elevated the level of serum sexual and gonadotropic hormones. In 1 year pregnancy occurred in 41.7 and 55.4% of 83 and 87 families (groups 1 and 2), respectively. The delivery took place in 35.8 and 49.7%, respectively.

[Vopr Kurortol Fizioter Lech Fiz Kult](#). 1994 Mar-Apr;(2):24-6.

### **[The use of laser therapy for restoring the fertilizing capacity of the ejaculate in men with a chronic genital inflammation]**

[Article in Russian]

[Voronin IuT](#).

The study aimed at investigation of laser radiation effect on reproductive male function which has failed as a result of genital inflammation, versus the efficacy of routine chemotherapy. The treatment was given to 50 males of reproductive age who had been infertile for 1-12 years. 25 of them (group 1) were exposed to laser, the other 25 received standard drugs. The responses were assessed clinically and by ejaculate potency. Due to laser application clinical and ejaculate characteristics improved in the absence of side effects either on the reproductive system or the body as a whole. The author recommends laser application for treatment of ejaculate infertility in males with chronic genital inflammation.

## **The transforming role of biological acceptor in the reaction of a low-intensive laser irradiation.**

**Burlakov A B et al.**

The influence of low level laser on unfertilized oocytes and spermatozoons of fish was studied. HeNe and GaAs 862 nm was used. High quality eggs (fertilization above 70%) were not influenced by laser light. The development in eggs of mean quality (fertilization 30-60%) was boosted and the best effect was found in poor quality eggs (below 20%). The fertilization rate and the reduction of the number of abnormal developing embryos was measured. After temperatural inactivation both oocytes and spermatozoons, the irradiation not only restored the movability and fertilizing capacity, but also promoted the development of inactivated oocytes after fertilization by the irradiated sparmatozoons. Red and infrared light had different effects.

Lasers Med Sci. 2005 Apr 19; [Epub ahead of print

## **Effect of 655-nm diode laser on dog sperm motility.**

**Corral-Baques MI, Rigau T, Rivera M, Rodriguez JE, Rigau J.**

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Sperm motility depends on energy consumption. Low-level laser irradiation increases adenosin triphosphate (ATP) production and energy supply to the cell. The aim of this study is to analyse whether the irradiation affects the parameters that characterise dog sperm motility. Fresh dog sperm samples were divided into four groups and irradiated with a 655-nm continuous-wave diode laser with varying doses: 0 (control), 4, 6 and 10 J/cm<sup>2</sup>. At 0, 15 and 45 min following irradiation, pictures were taken of all the groups in order to study motility with computer-aided sperm analysis (CASA). Functional tests were also performed. Average path velocity (VAP), linear coefficient (Lin) and beat cross frequency (BCF) were statistically and significantly different when compared to the control. The functional tests also showed a significant difference. At these parameters, the 655-nm continuous-wave diode laser improves the speed and linear coefficient of the sperm.

## **Can HeNe laser improve fertility?**

**Abstracts LASERmed 97; p. 138, no 112**

The fertilizing potential of mouse spermatozoa was positively affected by HeNe laser in vitro. Cohen et al at the Bar-Ilan University, Israel found that the Ca<sup>2+</sup> uptake, mainly in the mitochondria, was improved after LLLT. The results suggest that the effect of 630 nm laser irradiation is mediated through the generation of hydrogren peroxide by the spermatozoa and that this effect plays an important role in the augmentation of the sperm cell's capacity to fertilize in vitro.

