



Infertility / Preconception care

1 Chavarro JE, Rich-Edwards JW, Rosner BA, Willett WC 2007 Use of multivitamins, intake of B vitamins, and risk of ovulatory infertility *Fertil Steril.* July 9

This prospective observational cohort study aimed to examine whether multivitamins and intake of specific nutrients in multivitamins are associated with ovulatory infertility. 18555 pre-menopausal women without a history of infertility were followed up over an 8 year period, of whom 438 reported infertility caused by ovulatory disorder. There was an inverse association between frequency of multivitamin use and ovulatory infertility. Folic acid appeared to explain part of the association between multivitamin supplement use and risk of ovulatory infertility. It was concluded that regular use of multivitamin supplements may decrease the risk of ovulatory infertility.

2 Smith C, Coyle M, Norman RJ 2006 Influence of acupuncture stimulation on pregnancy rates for women undergoing embryo transfer *Fertil Steril.* 85(5):1352-8

This single-blind, randomised controlled trial aimed to evaluate the effects of acupuncture on pregnancy rates in 228 women undergoing embryo transfer. Women were randomly allocated to acupuncture or non-invasive sham acupuncture with a placebo needle. All women received three sessions, the first undertaken on day 9 of hormone-stimulating injections, the second before ET, and the third immediately after ET. The pregnancy rate was 31% in the acupuncture group and 23% in the control group but the difference did not reach statistical significance. The ongoing pregnancy rate at 18 weeks was higher in the treatment group (28% vs. 18%), but not statistically significant. It was concluded that although there was no significant difference in the pregnancy rate between groups, a treatment effect can not be excluded; and the results suggest that acupuncture is safe for women undergoing ET.

3 Stankiewicz M, Smith C, Alvino H, Norman R 2007 The use of complementary medicine and therapies by patients attending a reproductive medicine unit in South Australia: a prospective survey Aust N Z J Obstet Gynaecol. 47(2):145-9

This prospective survey of 100 consecutive patients presenting for the first time to an infertility clinic aimed to examine their use of complementary medicine (CAM); to examine men's and women's views on the effectiveness and safety of CAM; and to examine the documentation of the use of CAM and therapies in clinical records. Subjects were asked to complete a self-administered questionnaire at their first visit and six months later. A retrospective audit of 200 patient records was also undertaken. A response rate of 72% was obtained. 66% of patients attending the infertility clinic used CAM (multivitamins, herbs, mineral supplements, and consultations with naturopaths, chiropractors and acupuncturists) but 6 months after initial consultation, CAM use had declined. The use of CAM was poorly documented by staff. It was concluded that CAM is widely used by infertility patients and that healthcare practitioners and fertility specialists need to enquire about and document patients' use of CAM. There is a need to provide further information to patients on CAM use and further research investigating the reasons for use of CAM is needed.

4 Goyal A, Chopra M, Lwaleed BA, Birch B, Cooper AJ 2007 The effects of dietary lycopene supplementation on human seminal plasma BJU Int. 99(6):1456-60

Lycopene, a red carotenoid pigment, is a phytochemical found in tomatoes and other red fruits. Lycopene is the most common carotenoid in the human body and is one of the most potent carotenoid antioxidants. The aim of this study was to investigate whether lycopene levels in blood and seminal plasma increase after dietary supplementation, and whether any potential increase of lycopene levels in semen translates into increased free-radical trapping capacity in the seminal plasma. It is known that reactive oxygen species are detrimental to health and function of spermatozoa, and that semen contains enzymatic and non-enzymatic defence mechanisms to combat such species. Immuno-infertile men are known to have significantly lower levels of lycopene in their semen. Blood and seminal lycopene levels were measured in healthy volunteers, using high-performance liquid chromatography, before and after a period of dietary supplementation. The antioxidant capacity of seminal plasma was also assessed to determine if supplementation results in a measurable increase in seminal radical scavenging ability. Statistically significant increases in blood and seminal

plasma lycopene levels after dietary supplementation were shown. There was no measurable increase in the total radical scavenging capacity of semen. This study confirms the presence of lycopene in human semen, the levels of which can be significantly increased after dietary supplementation with a natural source of lycopene. Further studies to establish whether this would also be the case in infertile men, with possible associated improvements in their seminal quality, are warranted.

5 Dieterle S, Ying G, Hatzmann W, Neuer A 2006 Effect of acupuncture on the outcome of in vitro fertilization and intracytoplasmic sperm injection: a randomized, prospective, controlled clinical study Fertil Steril. 85(5):1347-51

This randomized, prospective, controlled clinical study aimed to determine the effect of luteal-phase acupuncture in 225 infertile patients undergoing IVF/ICSI. In group I, 116 patients received luteal-phase acupuncture according to the principles of traditional Chinese medicine while a placebo group of 109 received sham acupuncture. In group I, the clinical pregnancy rate and ongoing pregnancy rate (33.6% and 28.4%, respectively) were significantly higher than in the placebo group (15.6% and 13.8%). It was concluded that luteal-phase acupuncture has a positive effect on the outcome of IVF/ICSI