Female Fertility

Folate
Protects genes during rapid cell division which increases likelihood of a healthy embryo (via methylation of DNA); Deficiency raises homocysteine which damages reproductive cells.[1,2,3,4]

Vitamin B_6 & B_{12}
Both are neededto convert toxic homocysteine to a benign form; Low homocysteine levels linked to a better chance of pregnancy.[5,6,7,8]

Vitamin C
Increases serum progesterone levels; Induces ovulation in some women; Enhances effect of the fertility drug clomiphene.[9,10,11,12]

Minerals
Several enzymes needed to protect a woman's reproductive organs (such as superoxide dismutase) are dependent on the trace elements **zinc, copper and magnesium**.[22,30,31,32]

Vitamin D
Higher levels linked to better success rates of IVF (in vitro fertilization); Influences production of the sex hormones estradiol and progesterone.[13,14,15]

Vitamin E
Protects reproductive cells (follicles); May improve endometrial response (ability of fertilized egg to implant into uterine wall propersly) during IVF.[16,17,18,19]

Antioxidant Status
Reproductive cells, including embryos, are very susceptible to damage from oxidative stress due to the rapid rate of growth; Low antioxidant status can cause infertility or miscarriage.[19,22,28,29]

Cysteine
N-acetyl cysteine can improve ovulation and pregnancy rates in women with infertility due to PCOS (polycystic ovary syndrome) that do not respond to fertility drugs; Improves viability of endometrial cells in vitro; Precurso to glutathione .[25,26,27]

Glutathione
Protects eggs (fertilized or not) from damage by reactive oxygen species; Protective action of follicle stimulating hormone on embryonic development is due largely to glutathione synthesis.[22,23,24]

Selenium
Deficiency implicated in miscarriage and infertility; In one trial, 100% of infertile women achieved pregnancy after supplementation.[20,21]

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