**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.\(^{22,30,31,32}\)

**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.\(^{25,26,27}\)

**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.\(^{1,2,3,4}\)

**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.\(^{19,22,26,29}\)

**Vitamin B\(_6\) & B\(_{12}\)**
Both are needed to 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.\(^{9,10,11,12}\)

**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 properly) during IVF.\(^{16,17,18,19}\)

**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.\(^{22,23,24}\)

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**Selenium**
Deficiency implicated in miscarriage and infertility; In one trial, 100% of infertile women achieved pregnancy after supplementation.\(^{20,21}\)
REFERENCES


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