

Infertility

Infertility is becoming more common with one in six couples having problems. Worldwide 8-12% of couples are infertile. Sperm counts have dropped by 60% in 50 years. Study from Hebrew university of Jerusalem looked at men from Europe, America, Australasia and found sperm counts dropped 1.2% from 1973 to 2018 with a 2.6% annual reduction since 2000.

One of the reasons for this is thought to be oestrogen-like substances (gender-bender chemicals) in the environment. This is causing fish, sea-birds and even alligators to change sex. Fertility is declining in wildlife as well as humans. These oestrogen-like chemicals come from pesticides, plastics, industrial compounds like PCBs & dioxins and drugs, (especially synthetic oestrogens like the pill). We also know that nutrient levels in meat, fruit and vegetables are declining and this also impacts on fertility.

Nutritional Treatment

Nutrients are important for two reasons: to replace deficient nutrients and because nutrients are needed to remove toxic substances.

GENERAL:

Smoking reduces fertility, especially in females.

Alcohol reduces fertility, especially in males.

More than 5 cups of coffee reduces fertility by 50%.

On third of infertility is due to the male.

Metabolic syndrome and insulin resistance worsen fertility (see separate leaflet).

For women increasing insulin sensitivity (by weight loss, low carbohydrate diets or fasting) increases natural ovulation.

Sunlight has numerous beneficial effects, some of which we are only beginning to understand. These include the production of vitamin D, but also increases in α -MSH (alpha melanocyte-stimulating hormone) – through UV light and the production of nitric oxide and melatonin from infrared light. For these reasons a beach holiday will often boost fertility.

SUPPLEMENTS:

Numerous supplements have been shown to be beneficial.

95% of infertile couples are low in **Zinc** and 90% are low in **Magnesium** so it makes sense to take these supplements.

Low concentrations of Vitamin A and E have been linked to lack of ovulation in women and to low sperm counts in men.

In another study women who had been infertile for 6 months to three years had an increase in pregnancy rates after using supplements of zinc, selenium, vitamin E and iron.

A trial of the B vitamin PABA (100mg four times daily) in 1942 found that 12 out of 16 women who had been infertile for over 5 years became pregnant within 3-7 months. This was a small study and there have been no other studies since workers in the nutritional field have found this is helpful in up to 50% of cases.

VITAMIN D: A study by Tartagni in 2015 found a 300% higher pregnancy rates when the men had normal Vitamin D levels (>30ng/ml or 75nmol/l) compared to low Vitamin D levels (<30ng/ml or 75nmol/l) despite a lack of significant difference in sperm between those with normal and low Vitamin D levels.

A study by Jukic in 2019 looked at levels of Vitamin D before conception. There was a 10% higher conception rate with each 10ng/ml (25nmol/l) increase in Vitamin D. **Women with levels below 20ng/ml (50nmol/l) had a 45% lower chance of pregnancy** compared to those with 30-40ng/ml (75-100 nmol/l). Those who had levels above 50ng/ml (125 nmol/l) had an estimated 35% greater chance of pregnancy than those with 30-40ng/ml.

A study in women with polycystic ovary Syndrome (PCOS) by Pal in 2016 found the chance of a live birth was reduced by 44% if vitamin D levels was under <30ng/ml (75nmol/l).and there was a progressive increase in live births with each rise in Vitamin D levels.

Consider a good quality multi-mineral, multi-vitamin supplement plus zinc and magnesium and Vitamin E (alpha d tocopherol not alpha dl tocopherol). B Vitamins are also important.

The commonest nutrient deficiency in the population is essential fatty acids and this can contribute to infertility. Make sure you have a good supply of these – (see separate leaflet Fats: The Good and the Bad).

One study has shown IVF was much more successful after supplementing Vitamin E. (Went from 10% to 29% success).

FOODS:

Fertility is often increased by **stopping milk and cheese**. Dr Patrick Kingsley recommended infertile couples to stop milk products and he found this frequently produced results. **Undiagnosed coeliac disease** is another known cause of infertility: <https://pubmed.ncbi.nlm.nih.gov/12416015/>

STRESS:

Stress can be a factor, including the stress of trying to get pregnant. This may be one of the reasons why many women get pregnant while waiting for an infertility appointment. A weekend away may help as well.

Undiagnosed hypothyroidism can be a cause of infertility:
<https://pubmed.ncbi.nlm.nih.gov/pmc/articles/PMC3603072/#>

FOR LOW SPERM COUNTS:

Vitamin C at 1 gram daily was shown to lead to conception in 20 out of 20 patients after 3 months in one study. **It increases sperm count and motility.**

Vitamin E (150 -200mg daily) led to **a large increase in sperm count with conception occurring in one third.**

Selenium has been shown to increase sperm motility by 40 -50%.

Arginine at 8 grams daily has been shown to improve sperm counts.

Carnitine can improve sperm counts and increase sperm motility. Carnitine is easily depleted by phthalates in the environment, such as plastics covering of foods. In one study, those given L Carnitine 3 grams daily, 80% had a **doubling of sperm counts.**

Pycnogenol 200mg (this is a high dose) given for 90 days at the Wessex Center for Advanced Reproductive Endocrinology in New Jersey increased the number of structurally normal sperm by 99% although sperm counts were unchanged. Another study of couples unable to conceive due to poor sperm quality in men found 40% of couples went on to successful outcomes after taking pycnogenol for a year.

Sperm counts also increase on stopping alcohol.

Men who take regular hot baths have also been shown to have lower sperm counts.

Mobile phones, kept in trouser pockets, damage sperm and increase the risk of cancer (see below).

Both paracetamol and ibuprofen have negative effects on sperm count.

Elevated glucose (even in non-diabetics) has been linked to poor quality sperm. So, cut down on sugar, processed foods and refined carbohydrates. Both sugary and diet drinks affect glucose control.

DIET:

Reduce meat and dairy products, which contain dioxins and hormones. Reduce coffee, alcohol, tea, refined sugars and flours. Increase fruit and vegetables – if

possible organic (to reduce pesticides). **A study by Boston University found one sweetened drink daily reduced fertility by 25%.** Eat more nuts and seeds which are high in zinc, magnesium and essential fats. Filter drinking water with a filter that removes pesticides. Drink 6 glasses of water daily. Do not heat food in plastic and keep plastic off any fatty foods. Use natural detergents. Eat organic linseed which helps hormone regulation. Add broccoli, Brussels sprouts, cabbage and cauliflower to the diet as these will block oestrogen-like substances. Avoid genetically modified soya. Reduce fried foods and hydrogenated fats.

High insulin levels are associated with infertility in men and women. The best marker of high insulin is raised triglyceride levels. High insulin is often associated with obesity and diets high in sugar and processed foods.

CHEMICALS:

Two or three decades ago nutritional treatment was often all that was needed to deal with infertility. But nowadays people have a much greater toxic load, and the problem can be more complex. To give an example, plastic bottles often have a chemical called BPA. Increasing BPA by just 30 parts per billion in feeding bottles for rats and mice led to reduced sperm counts. Reducing the toxic load can be a key part of the solution.

This is a big topic. However it is fairly easy to reduce exposure. Avoid pesticide use in the garden or home. Eat organic where possible. (Although there has been a 50% dip in male fertility in 50 years, this did not affect organic farmers in Denmark). Use a water filter. Avoid chemicals generally such as air fresheners, aerosols and fragranced products. Products that have the names fluorinated, brominated or chlorinated are particularly suspect. Remove “smellies” from the house. Beware of processed foods and avoid microwaving food in plastic containers, Avoid stain, crease and water-resistant products which nearly always contain toxic chemicals. Use natural personal care products wherever possible. Avoid teflon and aluminium pans for cooking. Anything that increases sweating such as exercise and saunas will release toxicity. Consider juice fasts which also release toxicity and increase nutrition.

Using Vitamin C to bowel tolerance (see Vitamin C leaflet) also reduces toxicity.

Also consider whether amalgam fillings could be the cause of your trouble. The book *Infertility and Birth Defects: Is Mercury From Silver Dental fillings an Unsuspected Cause* by Sam Ziff & Michael Ziff explores this subject.

The book “**Stop the 21st Century Killing You**” by Dr Paula Baillie-Hamilton has a useful section on infertility plus advice on removing toxic chemicals from your body.

Electromagnetic Fields

More recently electromagnetic field (EMF) radiation has become an important cause of infertility. This includes wifi, smart meters, DECT phones, mobile phones and their masts. For most people the biggest risk comes with mobile phones.

The radiation from these has become more toxic as phones have become smarter and carry more information. High levels of male infertility have now been noted in several technologically advanced countries.

Phones on standby emit continuous high speed irregular pulses which disrupt hormones and damage cellular function. A particular concern is men carrying phones in their trouser pockets. These irradiate the testicles, promoting all stages of cancer development and damaging sperm. (In comparison there have been 38 cases of breast cancer recorded in women who keep mobile phones in their bras).

So, avoid keeping phones in trouser pockets. If unavoidable then switch the wifi off the phone (through settings) so emissions are largely limited to the time of phoning. Protective cases are also available.

Another major source of microwaves is using a laptop on your lap (it is better to use laptops on battery and kept in flight mode).