

# QUESTIONS OF CONCEPTION

With one in six couples experiencing fertility issues, education around the role nutrition and lifestyle plays is crucial.

“Over the past 20 years, fertility problems have increased dramatically.

At least 25 per cent of couples planning a baby will have trouble conceiving, and more and more couples are turning to fertility treatments to help them have a family.”

That is the view of Dr Marilyn Glenville PhD, the UK’s leading nutritionist specialising in women’s health and author of books including *Getting Pregnant Faster*, in discussing the nation’s fertility issues.

She also pointed out that, on average, young couples can expect to wait an average of three years before conceiving,

and, as a result, very few doctors will consider a diagnosis of infertility until after at least a year has passed.

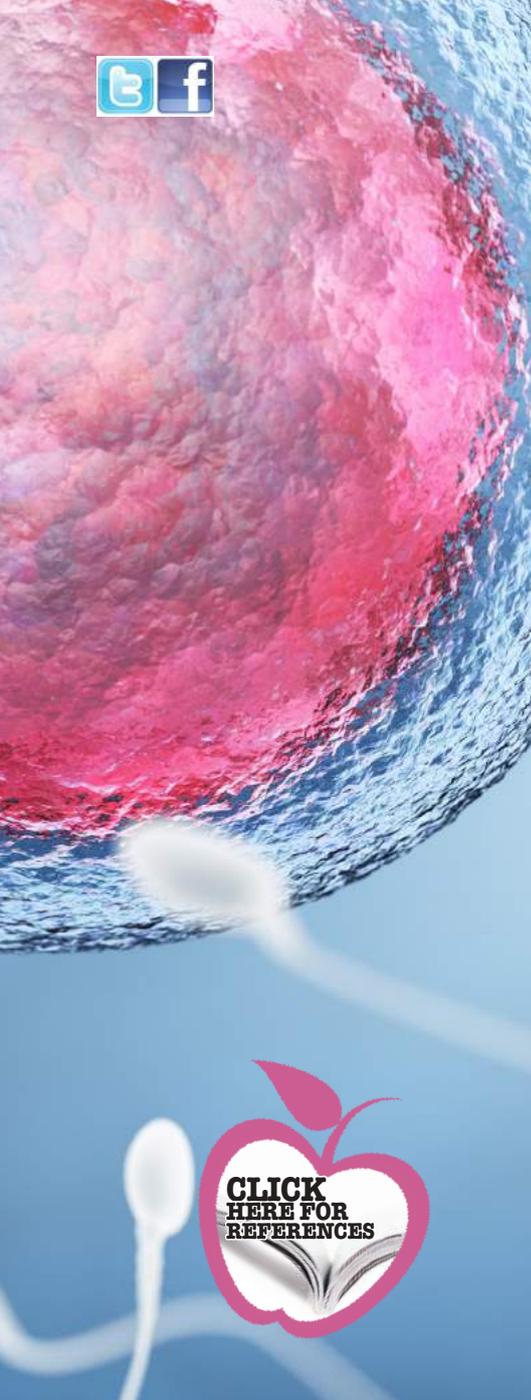
And Dr Glenville is not the only nutritional expert raising their concern.

Nutritionist, Rachel Bartholomew, who represents Nutri, added: “Fertility problems have increased dramatically over the last 20 years; now, one in six couples in the UK struggle to conceive and a quarter of all pregnancies can end in a miscarriage. The growing scale of fertility disorders worldwide has now prompted the World Health Organization to recognise infertility as a social disease, which affects between 13-17 per cent of all couples of reproductive age.”

What we know is that fertility problems

are increasing.

Mark Whitney, founder of Pillar Healthcare, which created the pre-Conceive supplement, pointed out: “In 2013, the last report from the UN, states that, ‘Fertility has declined significantly since the 1994 International Conference on Population and Development’. Fertility in developed countries has been decreasing steadily from the 1950s. We are also starting to see fertility crisis’ being highlighted in the developing world, with Kenya the most recent country highlighting a fertility problem on its horizon. The statistic from the World Health Organization is one in six. This incorporates all women of childbearing age. This figure is thought to be closer to



one in four, from the age of 28 and above (a more reflective age for people trying to conceive)."

## COMMON CAUSES

There are common reasons why couples can struggle to conceive.

Dr Elisabeth Philipps DPhil BSc (Hons) BSc Nut Med FNTF is a renowned nutritional consultant and manages practitioner training and education for Nutrigold. She explained: "There's no doubt that a rise in nutritionally poor diets and stressful, busy lifestyles impacts on the quality and optimal function of both the male and female reproductive systems. Men are just as likely to have fertility issues as women, with factors such as the impact of environmental chemicals that have weak oestrogenic effects (for example, DDT and BPA) being

blamed for reduction in sperm count in men and also disrupting female hormone balance. Rising numbers of men are also experiencing erectile dysfunction.

"There are also an increasing number of female hormone disorders including Polycystic Ovary Syndrome (PCOS) and fibroids. Other female conditions such as endometriosis can also be a cause of difficulty in getting pregnant. Sexually transmitted diseases such as chlamydia infections are on the rise and are known to contribute to infertility if left untreated."

The issue for many is not being able to reach a conclusive reason for not conceiving.

"The most common cause of infertility is often described as 'unexplained', where medical investigations have actually failed to identify any physical or medical issues of relevance. Unfortunately, lifestyle, diet and nutritional factors are rarely considered at this point – despite their clear importance for fertility and conception," Amanda Williams, Managing Director at Cytoplan, commented.

"However, it must be considered that many birth defects and fertility issues find their root cause in toxic build-up/ exposure of the parents due to a vast array of contributory factors – some of which you may not have previously considered. The simple fact of the matter is we are toxic beings. Why? Because of widespread exposure to toxins in the immediate environment around us from food, environment, personal hygiene products and coffee, alcohol, cigarettes etc."

Bartholomew added: "For around 25 per cent of couples, the cause is not known and this is where a natural approach can offer a light in the dark."

## IDENTIFY DEFICIENCIES

We know that certain vitamins and minerals are critical for improving chances of conception. And those with deficiencies could find fertility affected.

Bartholomew said: "Nutritional deficiencies are very common in couples experiencing fertility issues. In men, deficiencies of zinc, selenium and the amino acids L-arginine and L-carnitine

are common, and both men and women can be low in vitamin E, vitamin C, beta carotene, omega 3s, magnesium, vitamin D and B vitamins. Iron and folic acid may be low in women."

Dr Glenville continued: "Nutritional deficiencies are common, with the most likely ones being vitamin D and also an imbalance between omega 3 and 6 essential fatty acids."

Whitney added: "Data compiled from a UK Government analysis of food by McCance and Widdowson compared nutrient content in foodstuffs from 1940 and 1991. The difference over the 50 years because of our modern farming practices is staggering. This, coupled with modern food refining and production, depletes our food, unquestionably.

One example of a realistic implication of one mineral deficiency is the following. A small English trial studied six women with unexplained infertility or early miscarriage who had deficient magnesium levels and who remained deficient even after four months of magnesium treatment. These women were compared with six other similar women who had managed to restore normal magnesium levels. The women who had failed to restore their magnesium levels were found to have significantly lower activity levels of the potent antioxidant (glutathione) and were prescribed two months of supplementation with selenium and further magnesium. All six women restored their RBC magnesium levels with great results."

## A PRECONCEPTION PLAN

"Preconception is an important time, during which both prospective parents can prepare their bodies by ensuring a healthy diet and good nutrition to assist in fertility and conception. If conception does not happen straight away, this does not mean that there is something amiss – making subtle changes to your diet and lifestyle could provide the change needed," Williams said.

Whitney added: "I would suggest that anyone planning on conceiving should optimise their health and nutritional

intake at least 90 days before conceiving. The sperm cell that ultimately fertilises the egg cell helps to create the DNA of the embryo. This is the DNA for the newly developed embryo, foetus, baby etc. It is imperative that we make sure this DNA is as strong as it possibly can be. It is our responsibility to ensure we have the healthiest cells as possible for the immediate and future health of our children."

Bartholomew added: "I would recommend seeking advice at the point when you are thinking about starting a family. Regardless of fertility problems, it is always a good idea for a couple to make dietary and lifestyle changes to improve their health, at least three months before even trying for a baby. However, people often seek help when a problem has been identified; nutritional support can still be incredibly useful at this time, either as an adjunct to IVF or another assisted conception procedure, or as an alternative if this route has been ruled out."

Williams suggested a detoxification period prior to conception. She recommended: "Planning ahead for a healthy pregnancy should include a review of:

■ **Diet:** Set in place a healthy eating regime for you, your partner and future baby. Research indicates that the benefits of the Mediterranean diet for health and fertility. Important foods included in this diet are fruit, vegetables, nuts, seeds, fish and lean white meats.

■ **Weight:** Excess weight can impact on fertility, and preconception is the time to achieve any desired weight loss. Following the dietary guidelines above and ensuring adequate exercise will, for many, provide both weight loss and a healthier lifestyle. Those with very low or very high body weight need to be aware that this can influence hormonal balance, potentially impacting on ovulation and fertility.

■ **Lifestyle:** Adopting a healthy lifestyle, including regular exercise, can assist in fertility. Excessive and intensive exercise can impact negatively on ovulation and fertility; for prospective fathers, long-distance cycling is considered potentially

detrimental to male fertility."

And then comes supplements as part of a preconception plan.

Williams continued: "Ideally, if recommending a supplement programme, it should comprise a well-balanced multivitamin and mineral formulation and should include beta carotene, the B vitamins, vitamin C, D and E, folic acid, iron, calcium, magnesium, selenium and zinc.

■ **Folic acid:** Should ideally provide the recommended dose of 400ug daily. Research indicates the benefits for folic acid go beyond the previously advised 12 weeks, with recommendation for folic acid being taken during preconception and continuing throughout pregnancy.

■ **Vitamin A:** High levels of vitamin A as retinol should be avoided in pregnancy; vitamin and mineral formulations are available providing the more suitable beta carotene, a precursor of vitamin A, which is converted to vitamin A in the body as and when it is required.

■ **Essential fatty acids:** Omega 3 is a particularly important essential fatty acid during preconception and pregnancy for both the man and woman. Omega 3 is available from sources including fish, crustaceans, algae and seed oils, such as flax. Fish and crustacean sources have positive benefits, requiring much smaller daily amounts than seed oils, for example, and they provide omega 3 in a form that is well utilised by the body. Fish liver oils should be avoided as can be both high in vitamin A and also pollutants.

■ **Selenium:** Selenium has a number of approved health claims and this includes 'Selenium contributes to normal spermatogenesis' so evidently we can see its importance for dads-to-be and male preconception planning. Selenium is one of the most depleted nutrients and extremely important for many aspects of fertility in both parents.

■ **Iron:** Maintaining good levels of the mineral iron are important at all stages for menstruating women and particularly so during pregnancy and breastfeeding. Iron is essential for the foetus and baby too, with iron particularly needed for development of

normal cognitive function. (Juan Pablo Peña-Rosa et al, 2015). It is much harder to rebuild iron levels and stores at a time when there is a drain on resources, so much better to start ahead and have optimum ferritin and haemoglobin levels ahead of conception.

■ **Zinc:** Diets high in protein, wholegrain products, brewer's yeast, wheat bran, wheat germ, herring and pumpkin and squash seeds are usually high in zinc. Approved health claims for zinc include 'zinc contributes to the maintenance of normal serum testosterone concentrations' and 'Zinc contributes to normal fertility and reproduction'."

Phillipps said it is important to focus on gut and liver function.

"This might include a pre-cleanse detoxification programme (undertaken before trying to get pregnant) and use mixed strain probiotic supplements to support digestion and elimination of detoxified hormones," she said. "From here, we can address nutrient status. Natural food matrix forms of minerals should be used like organic magnesium and zinc citrate. Krill oil is an excellent bioavailable form of omega 3 essential fatty acids. Women should also take an extra 400mcg folic acid during preconception phase and up to second trimester."

## NUTRITIONAL SUPPORT

Both hormone and fertility issues are key areas that people will seek advice from a nutritional therapist.

Dr Glenville said: "I would suggest that couples see a nutritional therapist if they have not conceived within six months of trying. They should also be seeing a reproductive medicine specialist, especially if the woman is over 35, in order to rule out any medical reason that they are not conceiving, for example, blocked fallopian tubes. With nutrition, the aim is to check for any nutritional deficiencies and also to look at other issues such as adrenal stress and digestive problems which would affect absorption of nutrients."

And Bartholomew suggested: "I would always refer a client back to their GP