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Infertility explained

What is infertility?

The World Health Organization (WHO) defines infertility as 'a disease of the male or female reproductive system defined by the failure to achieve a pregnancy after 12 months or more of regular unprotected sexual intercourse'. There are a couple of issues with this definition. First, not everyone who is unable to conceive has a 'disease' of the reproductive system. Yes, there are certain diseases that can impact fertility, including undiagnosed coeliac disease (more on that later), but for many individuals and couples trying to conceive, there may be many underlying causes for their infertility that do not include any disease state. Second, and I will discuss this more later, the definition is not inclusive of all individuals and couples with infertility.

The term 'subfertility' is also used when describing someone's ability to conceive, and often it is used interchangeably with 'infertility'. However, they are different. Subfertility is a delay in conceiving – for example, if someone has been trying to conceive for a few cycles and has not yet been successful. Infertility is when that delay extends to 12 months or more, so this is the term that will be used throughout this book.

If you have been trying to conceive for more than 12 months it would be a good idea to see your GP or doctor. They will be able to do an initial assessment to check for things that may be causing problems and can then advise you what to do next. The assessment

is likely to include questions on your medical history and lifestyle, and may also include a physical examination of you and your partner if applicable. You may then be sent for further tests which, for women, would include blood tests to check hormone levels, scans which can pick up any problems with the ovaries, fallopian tubes and womb (uterus), and any additional examinations that may be needed. For men, tests would include a semen analysis and I will explain what is looked for in this test shortly.

For women aged 35 and over, when fertility is known to begin to decline, infertility may be diagnosed after six months of trying for a baby. This does not mean that when you turn 35, your fertility will suddenly fall off a cliff and you will automatically struggle to conceive. Women conceive and have healthy pregnancies throughout their late 30s and into their 40s and even 50s; it is just that we are born with a set number of eggs and as we age our eggs reduce in number and quality, so conceiving later in life may pose more of a challenge. There is also an increased risk of health problems as we age that may impact fertility, along with an increased risk of miscarriage and genetic abnormalities. That all sounds a bit grim but all I am trying to highlight here is that thinking about fertility-preserving options at a younger age is important and also empowering because if you are armed with knowledge you can then decide what to do with that knowledge. If you fall into the 'older parent' category and have been trying to conceive for six months, do go and see your doctor now. Don't wait for another six months.

How rates of infertility are changing

Almost half of women in England and Wales born in 1989 remained childless by their 30th birthday, an increase of 11% compared to their mother's generation, and 28% compared to their grandmother's generation. This in part is explained by a shift towards delaying child

bearing until later years, but it also reflects the increasing rates of infertility in both men and women, which affects 8-12% of couples globally. This is a significant number of people. These fertility patterns are set to continue, with women born in 1995 showing lower rates of fertility in their 20s than previous study populations.[1]

Changing rates of IVF

The game changer for those struggling to conceive came in the form of fertility treatments, which include intra-uterine insemination (IUI) and in vitro fertilisation (IVF) treatment. The first 'test tube' baby, Louise Brown, was born in Manchester in 1978 and since that time fertility treatment has come a long way. A report published by the Human Fertilisation and Embryology Authority (HFEA) in 2021[2] showed in 1991 (when they first started recording information), 6,700 IVF cycles were performed. Fast forward to 2019 and that number had increased to 69,000! Not only that, but success rates have vastly improved as well. In 1991, the chances of having a live birth for each embryo transferred were only 6%. In 2019 that percentage had risen to 25%. There are also significant differences in women in same-sex relationships and on their own accessing treatment. In 2009, 489 IVF cycles involved women in same-sex relationships. In 2019 this had increased almost fivefold, to 2,435, along with a significant rise in IUI treatment. Women going through treatment alone accounted for 565 IVF cycles in 2009, but in 2019 this had increased to 1,470.

Reasons for IVF

Although not mentioned in the 2021 report, the previous HFEA report looking at 2014-2016[3] showed that male infertility was the most common reason for couples accessing fertility treatment. This accounted for 37% of couples. Unexplained infertility accounted for 32%, followed by ovulatory disorder (13%), disease related to the tubes (12%) and endometriosis (6%). The fact that male infertility was the most common reason for couples turning to fertility treatment really highlights how important it is to get men involved in the conversation and making positive changes to their diet and lifestyle in order to help their fertility.

Making the conversation inclusive

It is vital to make the conversation inclusive to all, including those wanting to have a child without a partner, people of colour, people living with disabilities or medical conditions who may require fertility services, those from disadvantaged backgrounds and people from the LGBTQIA+ community.

It is important to make clear that the diet and lifestyle guidance in this book is aimed at men and women without structural defects, such as blocked fallopian tubes, scarring from previous injury or infection, obstruction of the reproductive tract, or congenital defects. In these cases, optimising diet and lifestyle will unfortunately not help to optimise fertility, although it will of course have beneficial effects on overall health and the risk of chronic disease. This book's guidance is aimed at men and women with unexplained infertility, male-factor infertility, infertility associated with hormone-driven conditions, including polycystic ovary syndrome (PCOS) and endometriosis (more on these conditions in Chapters 4 and 5), hormonal imbalances leading to thyroid dysfunction and absent or irregular menstrual cycle, and lifestyle factors including

obesity, underweight, excessive alcohol consumption, smoking, stress and poor-quality diets.

I have split the diet and lifestyle advice in this book into what are known as the 'six pillars of lifestyle medicine' (developed by the American College of Lifestyle Medicine). This is because I believe infertility and any health condition can only be helped fully by adopting all six pillars rather than just focusing on one thing. Health is a jigsaw; it needs all the pieces, and Figure 1 sets those out for you.

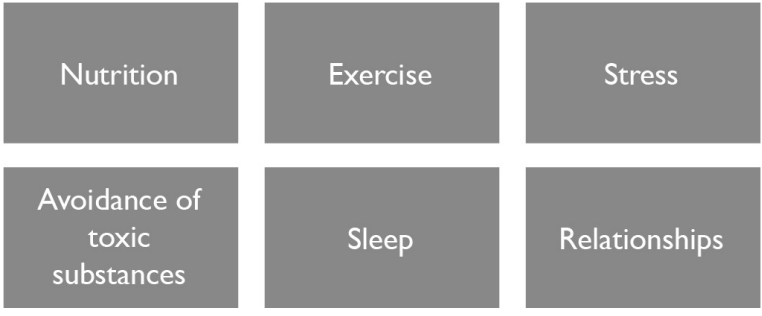

Figure 1: The six pillars of lifestyle medicine

Lifestyle medicine is different from the medical model. The medical model – what your GP and/or gynaecologist will have been taught in medical school – focuses on treating existing diseases with medication but ignores the root causes of many diseases. Lifestyle medicine has six key focus areas: nutrition, exercise, stress, the avoidance of toxic substances, sleep and relationships. It acknowledges that all of these areas need attention in order to treat illness and disease holistically. By highlighting all of the areas in our lifestyle that have the potential to cause ill health, it enables you to take control of your health and encourages positive behaviour change, something that is vital in treating lifestyle-related conditions and diseases. Of course, this does not mean that medication should be

ignored; the model is a complementary not an alternative way of treating disease and should always run alongside medical interventions if these are needed. Please run like the wind if you encounter anyone who advises otherwise.