



Body Mass Index (BMI) and Fertility Treatment

What is the body mass index (BMI)?

The body mass index (BMI) is a measure that uses your height and weight to work out if your weight is healthy. The BMI calculation divides an adult's weight in kilograms by their height in metres squared. For example, A BMI of 25 means 25kg/m².

Table 1: BMI ranges

BMI (kg/m ²)	Classification (WHO)	Fertility Treatment
18.5 – 24.9	The healthy range	Ideal range
Below 18.5	Underweight	No IVF or ovulation medication
Between 25 – 29.9	Overweight	IVF & ovulation medication possible
Between 30 – 34.9	Class I obesity	NO IVF but ovulation medication possible

If you want to calculate your BMI, try the NHS [healthy weight calculator](#).

Background

The World Health Organisation has defined obesity as a BMI greater than or equal to 30 kg/m² [Table 1]. Obesity is associated with cardiovascular disease, diabetes, osteoarthritis and malignancies such as colon and endometrial cancer. It is also well recognized that obesity contributes to fertility problems. The National Institute of Clinical Excellence (NICE) [www.nice.org.uk] fertility guideline suggests a BMI of less than or equal to 29 is ideal. British Fertility Society guidance suggests that fertility treatment (with medication) should be deferred until BMI is less than 35 kg/m², although in those younger than 37 years, weight reduction to BMI less than 30 kg/m² is preferred. In this hospital we are willing to use **Clomiphene Citrate (Clomid^T)**, a drug used to treat women who do not ovulate in women with a BMI between 30 – 35, but many units insist on a BMI less than 30 before treatment starts.



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This is because it is more likely to work, the patients are less likely to miscarry and there are fewer complications in pregnancy.

Impact of Obesity on Fertility

Obesity in women has been shown to increase time to conception. The risk of not ovulating (anovulatory infertility) is 3 x higher in women with a BMI greater than or equal to 32 kg/m², while in women who ovulate but are sub fertile the chance of conception decreases by 5% for each unit increase in the BMI. Obesity is also associated with polycystic ovary syndrome (PCOS) which is a condition characterized by infrequent or absent periods, symptoms due to an increase of male hormones (hyperandrogenism), and an ultrasound scan showing multiple small cysts (follicles). It is a leading cause of subfertility due to lack of ovulation as well as metabolic dysfunction [tendency to develop diabetes].

Impact of Obesity on Fertility Treatment

Obesity in women impacts on fertility treatment. Obesity decreases the outcome of ovulation induction treatments. Obese women undergoing in vitro fertilisation (IVF) require higher doses of gonadotrophins (FSH), respond poorly to ovarian stimulation and have fewer eggs (oocytes) harvested. Obesity is associated with lower fertilization rates, poor quality embryos and higher miscarriage rates. Weight loss in these women improves their reproductive outcomes; however, for this to be effective it must be gradual and sustained.

From 1st January 2019 smoking will not be permitted on any NHS site in England. Smoking will not be permitted within any of our buildings or anywhere outside on our sites. Smoking facilities will not be provided. Please be considerate of others when vaping in hospital grounds.

This information sheet is available to order in other languages and formats. If you would like a copy, please contact us on 01793 604031 or email gwh.pals@nhs.net

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