



Weight, conception and fertility treatment

Weight, and particularly Body Mass Index (BMI), can influence the chance of success of any fertility treatment. In some women, a change of just + or – 15% in BMI can change the pattern of their periods and even create fertility problems. If weight returns to within the normal range, there is an increased chance of pregnancy occurring spontaneously.

Before treatment is agreed, a patient’s weight and height will be measured to calculate her BMI, by comparing the ratio of her height and weight (adult BMI = weight in kilograms divided by height in metres squared). The maximum ideal adult BMI is 25kg (3st 11lb)/height (m)², eg:

Height	Maximum ideal weight
1.52m (5’)	58.6kg (9st 3lb)
1.60m (5’3”)	65kg (10st 3lb)
1.68m (5’6”)	71.4kg (11st 3lb)
1.75m (5’9”)	77.7kg (12st 3lb)

The National Institute of Clinical Excellence (NICE) and the British Fertility Society recommend a BMI range of 19 - 30 as suitable for fertility treatment. Clinics usually follow these guidelines because there is strong evidence that extremes of BMI can affect fertility, the response to fertility treatment and pregnancy.

BMI	Patient condition
less than 15	seriously underweight
15 - 18.5	underweight
18.5 - 25	normal
25 - 30	overweight
30 - 40	obese
40+	morbidly obese

To calculate BMI, visit midlandfertility.com and use the BMI calculator in the ‘Treatments’ section.

Low BMI, conception, pregnancy and birth

Evidence suggests that women with a very low BMI will have problems getting pregnant, carrying a baby to full-term and may also experience specific problems soon after the birth:

- women need some body fat to have regular periods. Very low BMI can mean that a woman’s hormone levels are reduced and she may not have regular periods, reducing the chance of conceiving, naturally or with assisted conception
- if a woman with a very low BMI does conceive, she has a higher risk of miscarriage and her baby has an increased chance of a lower birth weight and being born prematurely
- after she gives birth, a woman with a very low BMI may experience increased exhaustion and depression in the post-natal period

High BMI, conception, pregnancy and birth

A very high BMI may be the cause of a woman’s infertility (as in Polycystic Ovaries Syndrome/PCOS), or it may complicate other existing causes of infertility. In addition to these, the general risks to health of a high BMI include:

- increased risk of some cancers
- heart problems
- high blood pressure
- late-onset diabetes
- musculo-skeletal problems
- menorrhagia - heavy periods

A high BMI can make fertility treatment more complicated:

- it can reduce the quality of the lining of the uterus (the endometrium) and prevent ovulation
- obtaining accurate clinical measures is difficult because the increase in fatty tissue between the ultrasound probe and the ovaries reduces the image quality of ultrasound scans
- egg recovery and embryo transfer can be more uncomfortable and there is a higher risk of bleeding
- higher doses of drugs are often required, which increases the cost of treatment to privately-funded patients
- lack of response to treatment or the increased risks of OHSS mean a greater chance of cancelling the treatment cycle before embryo transfer
- obesity has been highlighted as a contributing factor in at least two deaths following fertility treatment in the UK

The risks of high BMI during pregnancy

The risks of an increased BMI during pregnancy range from mild or uncomfortable conditions to those which are long-term, permanent or life threatening - to the mother and/or baby - including:

- back pain
- varicose veins
- haemorrhoids
- high blood pressure or pre-eclampsia
- increased risk of miscarriage
- need for premature delivery of the baby
- difficulty monitoring the pregnancy
- difficult delivery
- increased rates of neo-natal death

High BMI and male fertility

In addition to the general health risks of a high BMI, a man with a BMI of 25+ produces fewer well-formed, motile sperm in his ejaculate, and therefore has an increased chance of fertility problems and the need for his partner to undergo IVF or ICSI treatment.

How MFS can help patients with low or high BMI

- create a positive and supportive environment
- advise patients how to adjust their weight - and maybe not by diet alone
- assess the realistic opportunities to exercise
- discuss the possible use of alternative therapies, eg hypnotherapy or acupuncture
- arrange for a referral to a dietician

Further information

Please visit midlandfertility.com and search for 'Preparing for Treatment' or read the following MFS infosheet:

- Diet Plan for PCOS
(downloadable from midlandfertility.com by searching for 'MFS Treatment Literature', or in hardcopy from MFS).