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Medical and surgical interventions to improve outcomes in obese women planning for pregnancy

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Obesity is a known risk factor for infertility in women. The exact mechanism through which obesity is linked to infertility is still not fully understood. Hyperleptinaemia, hyperinsulinaemia and resultant hyperandrogenism are all thought to play a role. Various medical and surgical interventions have been attempted to improve fertility rates in obese women. Encouraging evidence for pharmacotherapy, bariatric surgery and assisted reproduction are yet to be seen. In this chapter, we review the hormonal changes in obesity and the evidence behind medical and surgical interventions to improve fertility in obese women.

Introduction

Per the World Health Organization (WHO) guidelines, overweight is defined as a body mass index (BMI) of 25–29.9 kg/m^2 and obesity as a BMI of ≥30 kg/m^2. Obesity is further subcategorized into class 1 (BMI 30–34.9 kg/m^2), class 2 (BMI 35–39.9 kg/m^2) and class 3 or severe obesity (BMI ≥ 40 kg/m^2) [1]. According to the Health Survey for England in 2012 [2], the prevalence of obesity among adults rose from 15% to 25% between 1993 and 2012 with women having a higher prevalence of severe obesity compared to men [2]. Obesity in women has been linked to infertility through a variety of mechanisms including anovulation, increased rate of miscarriage, both mechanical and medical complications in pregnancy and difficulties in performing assisted reproduction [3,4]. In this section, we review the

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