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The adverse effects of obesity on fertility and pregnancy outcomes are overwhelming and indisputable. Body mass index (BMI) in  $\text{kg/m}^2$  is calculated from maternal height and weight data. Morbid obesity is defined as BMI of 40 or greater; obesity is defined as BMI over 30. In obese women with excessive adipose tissue, abnormal hypothalamic and pituitary hormone secretions are common, leading to anovulation (lack of ovulation). Obesity is strongly related to polycystic ovarian syndrome (PCOS) in women. Obese women are also particularly susceptible to diabetes and insulin resistance. Even with fertility drugs or in Vitro Fertilization (IVF) treatments, pregnancy rates are adversely affected by obesity.

Many studies have demonstrated that in obese women, especially those with PCOS, a 5-10% weight loss often is associated with resumption of ovulation and higher pregnancy rates with all fertility treatments.

The vast majority of infertility patients are between the ages of 35-45 and often require IVF to get pregnant. Today almost all IVF centers are freestanding, outside of hospitals. IVF egg retrievals are performed under conscious sedation (moderate sedation/analgesia).

Conscious sedation is a drug induced depression of consciousness. The most critical part of patient care is providing for patient safety during the time the patient is sedated. Obese patients are at increased risk for complications such as over-sedation, under-sedation, respiratory insufficiency, hypoxemia (decreased oxygen in the blood), airway obstruction, and aspiration of stomach contents. Aspiration, although rare, is the most common cause of death secondary to conscious sedation. Proper patient selection involves recognition of risk factors that may place the patient at increased risk for complications and is critical to safe patient care.

For this reason, many IVF centers have imposed a strict cutoff for BMI and IVF egg retrievals under conscious sedation. Women with a BMI over 40 (morbid obesity) cannot proceed to egg retrieval and conscious sedation. Obese women with a BMI 35-39 must get medical clearance from their primary care physician before proceeding to IVF.

Many studies confirm that obese women who do conceive have an increased risk of pregnancy complications and adverse perinatal outcomes. These complications include pre-eclampsia, antepartum stillbirth, caesarean section, shoulder dystocia, meconium aspiration, early neonatal death, diabetes mellitus, and birth defects involving the brain, heart and neural tube defects.

The take home message from these studies is that women need to be informed that obesity seriously hampers fertility; they need to be counseled about the serious dangers associated with obesity and pregnancy complications. Obesity is a chronic but treatable condition. The problem of obesity can be solved, but requires motivation, counseling, and behavior modification.

I have recently created a Fitness and Weight Loss program for my overweight fertility patients willing to make a serious commitment to using proper nutrition and physical conditioning to aid their fertility therapy. Remember, only a 5-10% weight loss can dramatically improve fertility treatment pregnancy rates. I have personally battled weight issues my entire life. Recently, I found success in conditioning and weight loss with the help of a new device, the X2 Vest. The X2 is an adjustable weight vest that can easily be worn in the gym, outdoors, or just around the house. The X2 Vest works safely and effectively allowing the individual to add weight to their CORE (the mid-section of the body) in one-pound increments. Adding weight to your body requires more muscle fibers to be called into action, thus requiring more calories to be burned, which allows muscle development and weight loss, and most importantly in my patients ... potentially improving pregnancy rates. For more information about this novel fitness product go to [www.X2Vest.com](http://www.X2Vest.com) or email me questions at [Laurence.Jacobs@Integramed.com](mailto:Laurence.Jacobs@Integramed.com). Be sure to discuss any fitness and weight loss program with your doctor before beginning a regimen of your own.

For women who actively manage their obesity or PCOS via good nutrition, proper exercise, and help from a Reproductive Endocrinologist with expertise in the latest treatments, the chances of conceiving are extremely good.

I encourage primary care physicians and OB/GYNs to seriously discuss nutrition and weight loss with obese women before and during pregnancy in order to reduce complications

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