

Exercise-Induced Weight Reduction and Fertility Outcomes in Women with Polycystic Ovarian Syndrome who are Obese and Infertile: A Preliminary Report¹

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Abstract

The influence of graded Aerobic exercise on obese infertile women with polycystic ovarian syndrome (PCOS), over a period of three months was studied. The study group consisted of 21 women with mean age (34.0±2.0 yrs) and control group consisted of 21 women with mean age (33.0±2.0 yrs) who were clinically, biochemically and ultrasonographically -confirmed cases of Obese, infertile & PCOS. The results of the both groups were compared initially and after three months. The results were analyzed with “t” test. The study group showed significant decrease in mean body mass index as compared to control group. In addition to the reduction in the body weight, the study group also showed increase in ovulation and pregnancy rate, and decrease in ovarian cyst size as compared to control group. The graded aerobic exercise was found to be a definite tool in obese infertile women with polycystic ovarian syndrome.

Key Words: Obesity, Infertility, PCOS, Body Mass Index, Aerobic exercise

Introduction

Body weight is not static and varies throughout the life in response to physical activity, environmental, nutritional, social and psychological factors. Obesity is associated with many abnormal hormonal dynamics. Menstrual disorders are common among women with obesity. It includes dysfunctional uterine bleeding and polycystic ovarian syndrome (PCOS). Often it is difficult to ascertain whether obesity is the cause of menstrual dysfunction or whether the underlying illness is playing the major role (*Henley & Vaitukaitis, 1985*).

Obesity can effect ovulation, pregnancy rate which leads to infertility or Polycystic Ovarian syndrome (PCOS). The fertility of obese women compared to normal weight women is lower in natural cycles and infertility treatment cycles. *Clark et al. (1995)* reported that even a small weight loss in anovulatory obese

infertile women, achieved in a group setting over a six month period, resulted in an improvement in ovulation, pregnancy rate and pregnancy outcome, self esteem and endocrine parameters. Studies have demonstrated that a BMI greater than 27 is associated with an increased risk of ovulatory infertility. There is considerable evidence in the literature that young, middle aged and elderly women benefit from the endurance exercise training programme & study showed that with the aerobic exercise of 3 to 6 months with diet control had a beneficial effect of weight loss and it has the beneficial effect on reproductive system (*Guzick et al., 1994*).

Polycystic ovary syndrome (PCOS) is a heterogeneous clinical entity that is defined as the association of hyper androgenism with chronic anovulation in women without specific underlying diseases of the adrenal or pituitary glands. PCOS is also associated with a metabolic