



DOES BODY MASS INDEX (BMI) IMPACT THE LIKELIHOOD OF A SUBJECT PARTICIPATING IN A RESEARCH STUDY FOCUSED ON BODY COMPOSITION?

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OBJECTIVE: It is well established that obesity has a negative impact on fertility and reproductive outcomes. However, it is unclear whether pre-treatment BMI influences a subject's decision to participate in research studies focusing on body composition. This is important given that research on metabolic health may disproportionately benefit obese patients. The goal of the present analysis was to determine if pre-enrollment BMI influenced subject participation in a research study specifically evaluating body composition on IVF outcomes.

DESIGN: Prospective observational study

MATERIALS AND METHODS: All patients (ages 18-45) and their partners completing an egg retrieval at a single center from 2016 to 2017 were offered participation. Subjects were contacted via telephone on the day prior to and in person on the day of the egg retrieval. Patients and partners could participate independently. Consented subjects were asked to stand on the InBody scale which utilizes bioelectrical impedance to measure intra and extracellular water content. Consented subjects received a body analysis report. BMI was obtained from those who participated from their InBody report. Declined subject's BMI was collected from the medical record. Chi-squared analysis was used to analyze the data.

RESULTS: 3,245 subjects (1,697 females and 1,548 males) were approached. 2,048 subjects participated (1,121 females and 927 males) and 1,197 subjects declined (576 females and 621 males). The enrollment among obese females ($BMI \geq 30 \text{ kg/m}^2$) was significantly lower than non-obese ($<30 \text{ kg/m}^2$) (obese females: enrolled (237/383) declined (146/383) vs. non-obese: enrolled (884/1314) declined (430/1314), $p < 0.05$). There was no significant difference between obese and non-obese males ($p=0.92$). Reasons for declination were as follows; 50% did not provide rationale, 25% not interested, 20% overwhelmed and 5% did not want to know their weight.

CONCLUSIONS: Obese females were less likely to participate in a study evaluating the impact of body composition on IVF outcomes than non-obese females. This same phenomenon was not observed in males. Different recruitment strategies may be needed to attract these subjects who may especially benefit from the findings of the study. Furthermore, adequate recruitment of women in this category is essential to allow the most robust evaluation of the impact of body composition on IVF outcomes.