

## Effect of Increasing BMI on Routine Semen Parameters in Young Adult Males

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### Abstract

**Background:** Effect of increasing weight in females upon their reproductive health has been widely studied. There is very sparse data regarding similar effect of increasing weight in males upon reproductive health. Recently, even obesity has been considered to be a male factor in infertility. However, there are conflicting reports regarding the effect of increasing body weight upon semen parameters in males. Hence, the present study was undertaken to study the effect of increasing BMI upon routine semen parameters.

**Methods:** The ninety subjects participating in this study were grouped in three groups of subjects that were formed based upon BMI as normal weight group (BMI 18.0 – 22.9), overweight group (BMI 23.0 – 24.9) and obese group (BMI 25.0 and above). Routine semen analysis was done as per the guidelines of WHO and appropriate statistical test were applied.

**Results:** It was observed that there is a statistically significant decline in the routine seminal parameters like sperm count per ml, total sperm count, motile sperm count per ml and total motile sperm count from the normal weight group to the overweight and the obese group. There was no statistically significant difference in semen volume in the three groups. **Conclusion:** There is an direct inverse relationship between increasing body weight and routine semen parameters in young adult healthy males. There are several factors that may be responsible for such observation as disturbed hormonal milieu, decreased levels of Inhibin B, increased insulin resistance and adipocytokine mediated free radical damage. As the subjects are mostly young and in their reproductive age, it is important that BMI should be considered as an important factor in infertility checkup.