

## Monitoring, Comparison and Correlation between the Body Mass Index and Spermatozoa with Normal Motility and Putative Fertility Potential among the Population of Adult Men in Plovdiv Region.

*Borislav Mateev<sup>1,2</sup>*

<sup>1</sup> Medical Centre BORA, Plovdiv, Bulgaria

<sup>2</sup> Plovdiv University "Paisii Hilendarski", Faculty of Biology, Department of Developmental Biology, Plovdiv, Bulgaria

\* Corresponding author e-mail: b.mateev@boramedical.com

The aim of this retrospective study was to assess the relationships between body mass index and sperm quality and respectively infertility, among the population of adult men in the region of Plovdiv, comparing sperm concentration to the lower reference value for normal fertility. Samples from 918 male partners in subfertile couples, who visited the clinic between January 2017 and July 2019, were analyzed and compared in the groups according to their body mass index. The results clearly indicated that BMI is a factor influencing sperm parameters in the adult male population in Plovdiv region and participants with overweight and even obesity conditions are more likely to be a risk group for potential infertility.

*Key words:* body mass index (BMI), overweight, obesity, sperm quality, infertility