

# Evaluation of semen quality in men with different lifestyles

Adrianna Zańko<sup>1</sup>, Katarzyna Siewko<sup>2</sup>, Iwo Martynowicz<sup>3</sup>, Anna Citko<sup>4</sup>, Paulina Konopka<sup>4</sup>, Adam Paszko<sup>4</sup>, Łukasz Szczerbiński<sup>4</sup>, Adam Jacek Krętowski<sup>2</sup>, Waldemar Kuczyński<sup>3</sup>, Robert Milewski<sup>5</sup>

<sup>1</sup> Doctoral studies, Medical University of Białystok, Poland

<sup>2</sup> Department of Endocrinology, Diabetology and Internal Diseases, Medical University of Białystok, Poland

<sup>3</sup> Center for Reproductive Medicine KRIOBANK, Białystok, Poland

<sup>4</sup> Clinical Research Center of the Medical University of Białystok, Poland

<sup>5</sup> Department of Biostatistics and Medical Informatics, Medical University of Białystok, Poland



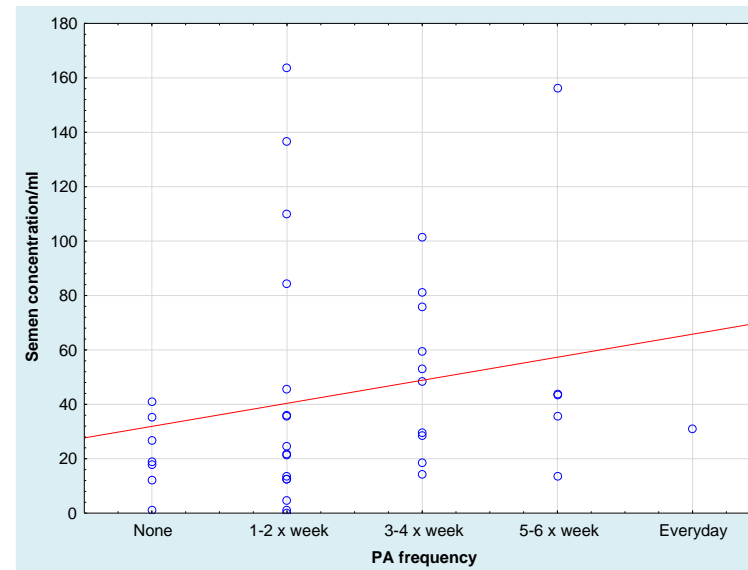
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The first publication of the World Health Organization (WHO) Laboratory Manual defining how to test human semen was in 1980. This publication was created to standardize semen analysis procedures. It has been updated five times, each time responding to the new needs of reproductive medicine. The manual contains standardized laboratory methods for semen analysis, widely used by laboratories to better understand the male reproductive tract, better diagnose and plan treatment for infertile couples, and evaluate male contraceptive methods. In addition, we can learn a lot from it about the influence of lifestyle and external environment on semen quality.

The data found in scientific studies on the relationship between exercise and semen quality are ambiguous. Most studies confirm that physical activity is associated with many health benefits, including a reduced risk of being overweight or obese, insulin resistance, diabetes, and cardiovascular disease. However, excessive exercise has also been proposed as a risk factor for male infertility, largely based on lowered testosterone levels and sperm quality in sports such as long-distance running and cycling. Moderate levels of physical activity and its frequency, and their impact on semen quality, are still being studied.

## Study group

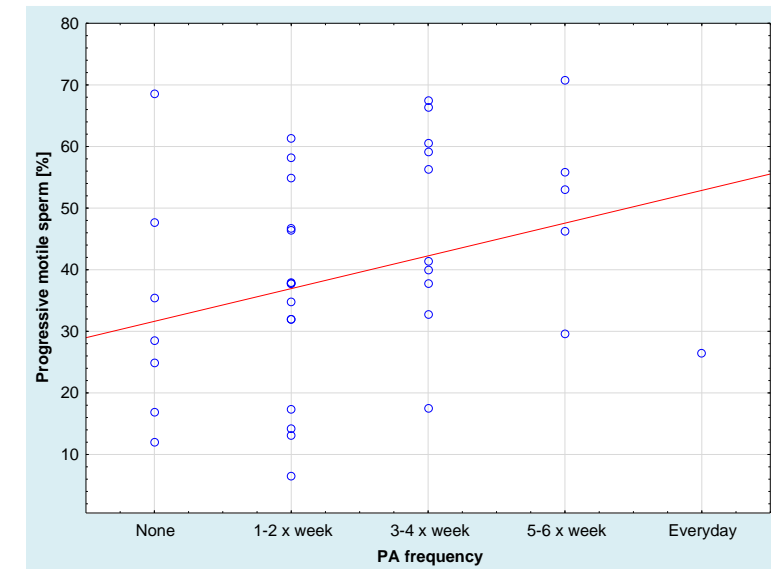
The preliminary study was conducted among 39 men with and without fertility impairment. The patients came from the KRIOBANK Infertility Treatment Clinic and the Endocrinology, Diabetology and Internal Diseases Clinic of the Medical University of Białystok.



Positive, average correlation ( $R=0.35$ ,  $p=0.03$ ) between the semen concentration/ml and the physical activity frequency.

## Results

There was a statistically significant positive correlation between semen concentration/ml and the physical activity frequency as well as statistically significant positive correlation between the progressive motile sperm and the physical activity frequency.



Positive, average correlation ( $R=0.32$ ,  $p=0.045$ ) between the progressive motile sperm and the physical activity frequency.

## Conclusions

Preliminary research suggests that the frequency of moderate physical activity may be important in terms of semen quality. Further research is required to determine how important this parameter is.