EFFECTS OF LIFESTYLE CHANGES ON SEMEN QUALITY IN HEALTHY YOUNG MEN.

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Introduction. Human semen quality is affected by metabolic, lifestyle and environmental factors. The aim of this work, granted by the Italian Ministry of Health, was to evaluate the effects of lifestyle changes on semen quality in healthy young men living in highly polluted areas in Italy. We present here some preliminary data on the association between lifestyle and semen quality.

Methods. A randomized controlled trial was conducted. 150 non-smokers, non-alcohol drinkers and non-obese young healthy men, aged 18-22 years, have been assigned to an intervention or control group according to a 1:1 randomization plan. The intervention group follows a 4-month nutritional pathway based on a Mediterranean dietary pattern and receives suggestions on practice of physical activity. All subjects undergo urologic examination, measurement of weight, height and abdominal circumference, an interview on lifestyle variables, and provide blood and semen samples in fasting conditions, at the enrollment and at the end of the intervention and follow-up (after 8 months). Adherence to Mediterranean diet is assessed using the “PREvención con DIeta MEDiterránea” (PREDIMED) tool, and physical activity using the “International Physical Activity Questionnaire” (IPAQ). Automated sperm analysis for all semen parameters is performed on the SQA-V GOLD.

Results. The data of 147 subjects living in a highly industrialized area in North Italy (mean±SD: age: 20.0±1.2 years, BMI: 22.4±2.3, WC 77.2±5.8) were analyzed. The 58% of the subjects had a low adherence to Mediterranean diet (Fig. 1), but more than the 80% had a moderate or high physical activity (Fig. 2). Sperm quality parameters were on average higher than the WHO minimum value, even if some subjects had lower values. The analysis of the association showed that sperm motility and percentage of normal cells were higher in subjects with a better adherence to Mediterranean diet (Fig. 3).

Conclusion. These preliminary data suggest that the Mediterranean diet seemed to be protective towards semen quality in healthy young men.