Sperm and hormonal differences between physically active and sedentary subjects.

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Introduction: It has been previously shown that high-load training, whether intensity or volume, might be detrimental for sperm parameters [1,2]. However, it seems that a less demanding physical activity does not promote any sperm alterations. Moreover, we hypothesize that a physically active lifestyle might result in a more favorable environment for fertility-related processes and might improve sperm need to move in order to reach the egg and for conception to be able to occur [3]. Thus, the aim of this study was to compare sperm and hormonal values of sedentary and physically active subjects.

Methods: Sperm and hormonal values of 16 physically active subjects (PA; VO2max=45.2±4.2 ml/min/kg, age=19.0±1.8yr) and 15 sedentary subjects (SE; VO2max =34.6±3.9 ml/min/kg, age=19.2±1.9yr) were assessed. The exclusion criteria were any factors interfering with the exercise by athletes. The slight augment in IL-6 after exercise may be due to the type (concentric) and duration (234.0 ± 5.8 s) of the exercise or to the subjects’ training status. Our data indicate that a single 1000m kayak bout impair antioxidant status and induce lipid peroxidation, muscle damage and inflammation even in high-level kayakers.

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RESULTS: No significant differences were found for either type “a” or type “c” velocities. However, the percentage of sperm with type “b” velocity was significantly greater (p<0.05) in PA than in SE [27.4±7.2 vs. 21.8±6.8, respectively], moreover, the percentage of static sperm (type “d” velocity) was significantly lower (p<0.05) in PA than in SE [30.6±4.9 vs. 34.8±5.7, respectively]. Likewise, the T/C ratio showed significantly higher values of type “b” velocity and lower values for “d” velocity (static); this seems to be supported by the greater T/C observed. Therefore, it can be concluded that PA may have a healthier microenvironment for the sperm production process.

REFERENCES