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Bergamot Polyphenolic Fraction supplementation improves metabolic balance, endothelial function and maximal oxygen uptake in athletes

Background: The study aimed to evaluate the effects of a 4-week Bergamot Polyphenolic Fraction (BPF Gold; Bergamet Sport) supplementation on serum nitric oxide (NO), asymmetric dimethyl-arginine (ADMA), Endopat indices of endothelial function and maximal oxygen uptake (V_ O2max) of athletes.

Methods: The effects of dietary supplementation (BPF Gold, 650 mg twice a day for 4 weeks) and placebo administration on flow-mediated dilatation (via Endopat measurements), serum markers (NO, ADMA), lipid profile, and V_ O2max were analysed in 30 athletes both before and after dietary protocols.

Results: Significant differences between pre- and post-intervention baseline NO levels were observed after BPF Gold dietary protocol. Higher post-intervention baseline NO level was observed after BPF Gold diet compared with placebo. Moreover BPF Gold Sport increased baseline NO concentration (?NO). The positive correlation was observed between baseline post-intervention NO concentration and maximal oxygen uptale and also between ?NO and ?VO2max in response to BPF Gold supplementation. There was an association between a higher Edopat values of endothelial function and higher V O2max after Bergamet Sport diet compared with lower values of placebo.

Conclusions: These findings suggest that an increase in NO release in response to BPF Gold Sport supplementation may play a central role in cardiovascular adaptive mechanisms and enhanced exercise performance in athletes.

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Active gaming and self-paced exercise: A self-determination perspective

Purpose: This study aimed to identify physical activity, enjoyment, and factors for future activity between an active video game (AVG) condition and self-paced exercise (SPE) among college-aged students.

Methods: Thirty college-aged volunteers (age=22±1.68 years) completed 4-45 minute physical activity sessions (2 AVG; 2 self-paced). A survey and a brief structured interview followed.

Results: Overall, participants expended more calories, accumulated more steps, and more physical activity during SPE; however, participants in the AVG condition met daily exercise recommendations. The majority of participants (81%) enjoyed playing the AVG. Autonomy and competence were found as common themes among those who preferred the SPE condition; whereas, lack of knowledge and exercise variety were emergent themes among those who preferred AVG.

Conclusions: This study provides evidence that college students could meet daily exercise recommendations by participating in AVG interventions; although AVGs that provided autonomy and allowed users to demonstrate competence would be preferable.

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The body composition analysis: Differences between students and the trend of their change

Anthropometric characteristics, represent one of the most important subsystems within the “system” of man, and which can be in affected by physical exercises in the direction of the desired transformation. Very often the anthropometric parameters (height and weight) are used in the assessment of the morphological status of an individual, and on the basis of the results of Body Mass Index (BMI) bring certain estimates and conclusions. BMI as a statistical measures, is used in many public health campaigns as an approximate measure of the ideal body mass and the degree of nutrition of a population. The main goal of the research was to determine and analyze differences in BMI parameters between male and female students, aged 18±0.5 years, and determine the trend of changes. Using the T-test module, the obtained results confirmed that there are statistically significant differences in body height ($t=8,17$; $p<0.001$) and body weight ($t=5,29$; $p<0.001$), while in BMI values there are not statistically significant differences ($t=-0.68$, $p>0.001$). Based on BMI values, a positive trend of somatic changes of both poles is evident.