

Quality of life was similar between groups in all studies. Unsupervised interventions were similar for all outcomes evaluated.

**Conclusion:** Supervised gamified exercise programs seem to increase the level of physical activity compared to usual exercises in patients with chronic diseases. However, studies with better methodological qualities and subgroup analyzes are needed.

**Implications:** Gamified physical exercise programs can be a good strategy to increase physical activity levels if they are supervised compared to habitual exercise programs. However, other strategies need to be implemented so that this improvement in the level of physical activity has a positive impact on the quality of life of patients with chronic non-communicable diseases.

**Keywords:** Gamification, Sedentary behavior, Physical activity

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### ACUTE INFLUENCE OF MODIFIED LASER IRRADIATION OF BLOOD (ILIB) ON ANAEROBIC POWER AND SYMPATOVAGAL BALANCE IN ACTIVE ADULTS

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**Background:** Intravascular Laser Irradiation of Blood (ILIB) is a low-level laser technique, that has systemic effects, including activation of the antioxidant system, inhibition of the systemic inflammatory process, increased blood fluidity and hemorrheological property on the red cells. However, the use of ILIB as an ergogenic resource in sports is little studied.

**Objectives:** To investigate the acute influence of ILIB on muscle power and heart rate variability (HRV), in physically active individuals submitted to a submaximal effort test.

**Methods:** The study is a randomized controlled crossover clinical trial. Nine male participants, university students, with a mean age of  $24 \pm 4.52$  years and practitioners of regular physical activity were evaluated. The volunteers participated in the two intervention groups (ILIB and placebo) at different times. First, an evaluation session was carried out, being identified HRV indicators and blood lactate level at rest and in response to the stress test. After seven days, the participants received a session of the experimental protocol, which was drawn. After finishing these sessions, a reassessment was performed, getting data on HRV indicators and blood lactate level at rest and in response to the exercise test. After seven days, the entire data collect was repeated, however, the participants performed the remaining experimental protocol. The results were analyzed using Two-Way ANOVA with repeated measures, complemented with the Bonferroni test. All conclusions were obtained at the 5% significance level.

**Results:** For the physical performance variables, the Fatigue Index showed a significant difference ( $p < 0.05$ ) from the Post-Placebo moment ( $54.5 \pm 13.9$ ) in relation to the Post-ILIB ( $45.1 \pm 9.9$ ). Blood lactate showed a significant difference between moments (initial, post-test and after 15 min) within all groups. For HRV, in the time

domain, the indices showed a significant difference ( $p < 0.05$ ) when comparing the moments within the interventions in relation to the initial moment. Furthermore, the RMSSD values were different between Pre-ILIB ( $3.54 \pm 0.44$ ) against Post-ILIB ( $4.22 \pm 0.27$ ); after the Wingate test, the Pre-Placebo ( $1.00 \pm 0.31$ ) differed from the Post-Placebo ( $1.77 \pm 0.74$ ). In the frequency domain, HF and LF/HF showed a significant difference ( $p < 0.05$ ) from Post-ILIB to Pre-ILIB after 15 min.

**Conclusion:** The study showed a possible relationship between the acute influence of the use of ILIB on parasympathetic activity. It did not show improvement in performance in an anaerobic test, but suggested a possible improvement in the ability to withstand high-intensity stimuli. The lack of ILIB studies in sports science, as well as the study's findings, suggest that more research should be done, using different protocols with different stimuli.

**Implications:** The ILIB can be useful for coaches and health professionals working with athletes, helping to optimize physical recovery, making it a resource for post-training recovery.

**Keywords:** Photobiomodulation, Physical performance, Heart rate variability

**Conflict of interest:** The authors have no conflict of interest.

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### PROFILE OF WORKERS WHO USE COMPUTER TERMINALS

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**Background:** Nowadays, the computer allied to the use of the internet is already fundamental in the work routine. Understanding the individual, in a broad and integral way, is an ongoing need to establish strategies for the prevention and cure of occupational diseases.

**Objectives:** To trace the sociodemographic profile of workers who use computer terminals in the cosmetics industry.

**Methods:** The present research was approved by the Ethics Committee of the Faculty of Medicine of the University of Coimbra through the letter 094 CE - 2018. This is a cross-sectional study, carried out with 55 workers of both genders, older than eighteen years of age, who made use of computers in their work activities in a Cosmetics Industry located in the mid-western region of Brazil, had a workload greater than four hours a day, and agreed to participate in the research by signing the informed consent form (ICF). We excluded workers who terminated their work contract and were on vacation during the research and those who, despite having signed the ICF, decided to discontinue participation. The Sociodemographic Questionnaire was applied, which consisted of a standardized instrument created for this study.

**Results:** It was observed that, on average, the workers' age was 29 years old, with a body mass index (BMI) of 24. Most were male (52.7%), married (58.2%), without children (61.8%), had completed college (52.7%), worked 9 hours a day (65.5%), in good ergonomic conditions (67.3%), sat for 2 to 6 hours (54.5%), took breaks (72.7%), and had no systemic arterial hypertension (SAH) (94.5%), was not a