

Anxiety and salivary cortisol modulation in exercise induced stress, using a phytotherapeutic product containing *Rhodiola Rosea*

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Abstract

Background. Phytotherapeutic products may influence the effect of stress on anxiety and salivary cortisol.

Aims. The objective of the study is to highlight the phytotherapeutic modulation of dynamic peri -stress changes induced by intense short duration physical exercise on two parameters (anxiety and salivary cortisol), in sedentary subjects.

Methods. The chosen subjects (n=24) were selected according to the requirements of the study. Stress was represented by intense short duration physical exercise, made with a Monark Ergonomic 839E cycle ergometer. The analyzed indicators were anxiety and salivary cortisol. The phytotherapeutic product (PP) used contained *Rhodiola Rosea*. Statistical evaluation was made on the basis of Student test.

Results. Anxiety and salivary cortisol were reduced immediately pre- and post-stress in subjects who were administered the PP, compared with subjects who did not follow the phytotherapeutic treatment.

Conclusions. 1) Anxiety and salivary cortisol were significantly reduced immediately pre- and post-exercise, in the case of stress caused by intense short duration physical exercise, in sedentary persons, under PP influence. 2) There were differences in dynamic developments between the PP treated group and the untreated group, for anxiety and salivary cortisol. 3) The influence of the PP used was significantly more intense on anxiety than on salivary cortisol, immediately pre- and poststress. 4) The PP used may be an effective, safe and accessible modulation path for stress caused by intense short duration physical exercise in sedentary persons.

Keywords: stress, short duration physical exercise, anxiety, salivary cortisol, phytotherapy.