

## **Electro-dermal activity in the perception of the sports scene athletes and non-athletes**

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Dynamics of three indexes of electro-dermal activity (EDA) of skin potential of wrist (SPW, left hand), EDA of skin potential of frontal derivation (left side SPFD = Fp1), galvanic skin response (index finger and middle finger on the left hand – GSR) was studied on the example of perception of video clips of sports contents (the overcoming of a springboard, shooting from the first person). These indexes (except GSR) were cooperative, consisting like signals of Electroencephalography (EEG) of several high-frequency components. Two groups of participants: athletes water skiers (8 persons) and not the athletes (9 persons) watched the video clips and then visually recalled them with eyes closed (imagination of clips). The group of water skiing athletes was in common with the situation displayed in the clips. The average size of a vector of the three indexes of this group during their perception was bigger than the one of not the athletes. In the case of imagination of clips, this difference was not practically noticeable. After processing the signals SPW, SPFD with the digital bandpass filters, rhythms similar to the main rhythms of EEG (delta, beta, alpha, theta, gamma), were found. This fact forces to look at the nature of EDA in a new way, what is important both in theoretical and practical aspects, as EDA indexes are often applied to assessment of the training level and the functional states of athletes.

**Keywords:** water skiing, sports psychophysiology, electrodermal activity, encephalogram, biorhythms

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