

## ERRATUM

To the paper “Hysteresis Properties of EMG Activity of the Shoulder Belt and Shoulder Muscles at the Development of Isometric Efforts by the Human Arm,” by A. V. Gorkovenko, O. V. Legedza, I. V. Vereschaka, M. Dornovskii, and A. I. Kostyukov, Vol. 47, No. 1, pp. 61-70, February, 2015

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**Abstract:** In tests with four volunteers, we examined manifestations of hysteresis in EMG activity recorded from eight shoulder belt and shoulder muscles; the subjects should develop, by their arm, targeted isometric efforts of eight different directions within the horizontal plane. Totally, 250 realizations were analyzed; we characterized interrelations between the levels of rectified and integrated EMGs and amplitudes of the effort under conditions where the effort was developed and then returned to a zero level; force trajectories corresponded to double trapezes. Significant manifestations of hysteresis were found in 118 cases (46%). Hysteresis with the loops for interrelations between the EMG and force levels having a clockwise direction was observed in 107 cases (or 91%); the counterclockwise-directed loops were found in 11 cases (9%). It is hypothesized that manifestations of hysteresis under conditions of our tests are related to differences between the processes of recruiting/derecruiting of motor units in the course of natural voluntary activation of the muscles. The CNS demonstrates high flexibility in the selection of the type of nonlinear activation of the muscles in the course of generation of “two-joint” isometric efforts produced by the arm.