MOTOR UNIT CONTRACTIONS EVOKED BY STIMULATION WITH VARIABLE INTERPULSE INTERVALS

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Abstract

During natural contractions motor units (MUs) are activated by variable frequency discharge patterns of motoneurones. The aim of this review was (I) to discuss differences between tetanic contractions developed at constant and random frequencies of pulses; (2) to show results of mathematical decomposition of these tetani into series of twitch-shaped responses to individual pulses; (3) to indicate that it is possible to predict the tetanic force of a MU with high accuracy by using regression equations derived on a basis of the relationships between the parameters of the decomposed twitches and the force level at which the next response begins.

Keywords: motor unit, tetanic force, decomposition, rat