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Parameters of single and summated contractions of skeletal muscles in vivo and in vitro

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Abstract

It is well known that modern non-invasive methods for registration of functional activity of skeletal muscles in vivo due to technical reasons reflect amplitude and temporal parameters of muscle contractions not better than in vitro approaches. The aim of present study is to register and compare parameters of single and tetanic contractions of different types of skeletal muscles of warm-blooded animals in vitro and under minimally invasive surgery in vivo. It was found that single muscle contractions in vitro and in vivo indistinguishably close to each other, whereas frequency of tetanus fusion and waveform of tetanic contractions are different.

Keywords

Different types of skeletal muscles, Force and velocity of muscle contraction, Mechanomyography, Muscle contraction