Motor units and their ~~'s~~ relation with electromyograms ~~(EMG)~~

Motor unit~~—~~:

A single motor neuron~~motoneuron~~ and its~~it's~~ axon~~axons~~ innervate~~supply not only just a muscle fiber, but also~~ several muscle fibers. ~~The m~~Muscle fibers ~~that is supplied~~ innervated by one motor neuron through its single axon along with branches are called a ~~M~~motor ~~U~~unit. The number~~A variety~~ of ~~numbers of~~ muscle fibers in a motor unit varies~~are present~~. It ~~is~~ has been observed in cat leg muscles that approximately 120~~–,~~ 165 fibers are present in one motor unit.

Electromyography:~~EMG~~

~~A~~ M~~m~~otor unit activity is measured by~~through~~ inserting~~placing~~ a coaxial electrode in~~-~~to the muscle that is to be studied. Next, the electrode is~~they are~~ connected to an electromyograph~~electromyography (EMG)~~ and a~~. A~~ recording is obtained during muscular activity~~. This recording is~~ called an electromyogram ~~(EMG)~~.

A hollow needle can be made into~~in to~~ a coaxial electrode by introducing an insulated~~insolated~~ inner wire ~~with in~~ into it. C~~Possible c~~hanges are recorded from the small volume of ~~the~~ muscles in the immediate vicinity~~neighbuorhood~~ of the tip of the needle. Thus, ~~it is has been observed that most~~ the ~~of~~ highest ~~the~~ electrical activity is observed ~~from~~ in the active fibers near the electrodes. Sometimes, surface electrodes are~~is~~ used in~~-~~stead of deep muscle coaxial electrodes~~electrode~~. In this recording method, two surface electrodes are placed over the muscle to be studied ~~muscle's~~ at a reasonable distance.

When the muscle is at rest, no action ~~is~~ potential is recorded; however, as soon as the muscle becomes active, action potential~~s~~ results from~~are recorded. The potential recorded during activity is as a result of~~ the asynchronous discharge of motor neurons~~motoneurons~~ in the vicinity of the electrodes. During minimal voluntary activity, only a few ~~number of~~ motor

Comment [A1]: Abbreviations are not usually included in the titles or articles.

Comment [A2]: We have changed "it's" to "its" because this is a case of a possessive pronoun. The use of "it's" is incorrect because "it's" a contraction of "it is" or "it has."

SAMPLE

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units— are dischargeddischarges, and as voluntary effort activity increases, the more number of units areis activated. This is called recruitment of motor units.

Gradation of muscular activity is a function of thea part of the function of a number of motor units activated. ElectromyographicElectromyographe studies are clinically importanthave clinically importance in the diagnosisdiagnosiz of motor unit disorders, including peripheral nerve injuries, and neuromuscular disorders, such asincluding myotonia and myasthenia gravis, so on and so forth.

Comment [A3]: Redundant phrases make a sentence wordy. Being economical in writing enhances clarity (in terms of meaning) and readability of the sentence. Here, the phrase "so on and so forth" is not required as this is implied by the use of "including."

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