Motor Unit Number Index (MUNIX): Guidelines for Recording Signals and Their Analysis

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INTRODUCTION
This study proposes guidelines for motor unit number index (MUNIX) recording and analysis.

METHODS
MUNIX was measured in control subjects and patients with amyotrophic lateral sclerosis. Changes in MUNIX due to E1 electrode position, number of surface EMG interference pattern (SIP) epochs, SIP epoch duration, force of contraction, and outlier data points were investigated.

RESULTS
MUNIX depends on optimized CMAP amplitude. Individual muscles showed variations when the number of epochs was low, or when the SIP duration was short. Longer SIP duration allowed better recognition of artifacts. MUNIX was affected by SIP values at all force levels, but more when SIP area was low.

DISCUSSION
We recommend changing E1 electrode position to maximize CMAP amplitude. Twenty or more SIP signals of 500 ms duration should be recorded using force levels ranging from slight to maximum. Traces should be reviewed to identify and exclude signals with tremor, or solitary spikes. This article is protected by copyright. All rights reserved.

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