Abstract Submitted for the OSF07 Meeting of The American Physical Society

Entropy measures of back muscles EMG for subjects with and without pain ULRICH ZURCHER, MIRON KAUFMAN, BRYAN VYHNALEK, Physics Dept., Cleveland State University, PAUL SUNG, Dept. of Health Sciences, Cleveland State University — We have previously reported that the time-dependent entropy S(t) calculated from electromyography time series of low back muscles exhibit plateau-like behavior for intermediate times [50 ms < t < 0.5 s]. We proposed that the plateau value can be used to characterize the sEMG signal of subjects with low back pain [J. Rehab. Res. Dev. 44, 599 (2007)]. We report results of a larger study, and compare the entropies for the left -and right thoracic and left- and right lumbar muscles. We also compare entropies from muscles before and after physical therapy intervention.

> Ulrich Zurcher Physics Dept., Cleveland State University

Date submitted: 28 Sep 2007

Electronic form version 1.4