Surface Electromyography

The American Academy of Neurology has written a guideline to express the opinion of the medical experts on the value of Surface Electromyography. This is a complete copy of that guideline.


BIBLIOGRAPHIC SOURCE(S)


ADAPTATION

Not applicable: Guideline was not adapted from another source.

DATE RELEASED

2000 Jul

MAJOR RECOMMENDATIONS

Each recommendation includes a ranking for the quality of evidence supporting it, as well as a rating of the strength of the recommendation. Definitions of the levels of evidence (Class I, Class II, Class III) and strength of recommendation (A through E, O) as well as a glossary of terms are provided at the end of the Major Recommendations field.

Recommendations

1. Based on Class II data, surface electromyography is considered unacceptable as a clinical tool in the diagnosis of neuromuscular disease at this time (Type E recommendation).
2. Based on Class III data and inconclusive or inadequate Class II data, surface electromyography is considered unacceptable as a clinical tool in the diagnosis of low back pain at this time (Type E recommendation).
3. Based on Class III data, surface electromyography is considered an acceptable tool for kinesiologic analysis of movement disorders; for differentiating types of tremors, myoclonus, and dystonia; for evaluating gait and posture disturbances; and for evaluating psychophysical measures of reaction and movement time (Type C recommendation).

**Quality of Evidence Ratings:**

**Class I.** Evidence provided by one or more well-designed clinical studies of a diverse population using a "gold standard" reference test in a blinded evaluation appropriate for the proposed diagnostic application.

**Class II.** Evidence provided by one or more clinical studies of a restricted population using a reference test in a blinded evaluation of diagnostic accuracy.

**Class III.** Evidence provided by expert opinion, nonrandomized historical controls, or observation(s) from case series.

**Definitions:**

**Safe.** A judgment of the acceptability of risk in a specified situation, e.g., for a given medical problem, by a provider with specified training, at a specified type of facility.

**Effective.** Producing a desired effect under conditions of actual use.

**Established.** Accepted as appropriate by the practicing medical community for the given indication in the specified patient population.

**Possibly useful.** Given current knowledge, this technology appears to be appropriate for the given indication in the specified patient population. If more experience and long-term follow-up are accumulated, this interim rating may change.

**Investigational.** Evidence insufficient to determine appropriateness, warrants further study. Use of this technology for given indication in the specified patient population should be confined largely to research protocols.

**Doubtful.** Given current knowledge, this technology appears to be inappropriate for the given indication in the specified patient population. If more experience and long-term follow-up are accumulated, this interim rating may change.

**Unacceptable.** Regarded by the practicing medical community as inappropriate for the given indication in the specified patient population.

**Suggested Strength of Recommendations:**

**Type A.** Strong positive recommendations, based on Class I evidence, or overwhelming Class II evidence when circumstances preclude randomized clinical trials.

**Type B.** Positive recommendation, based on Class II evidence.

**Type C.** Positive recommendation, based on strong consensus of Class III evidence.
Type D. Negative recommendation, based on inconclusive or conflicting Class II evidence.

Type E. Negative recommendation, based on evidence of ineffectiveness or lack of efficacy, based on Class II or Class I evidence.

Type O. Insufficient data to make a recommendation.

CLINICAL ALGORITHM(S)

None provided

DEVELOPER(S)

American Academy of Neurology - Medical Specialty Society

GUIDELINE COMMITTEE

Therapeutics and Technology Assessment Subcommittee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Subcommittee Members: Douglas S. Goodin, MD (Chair); Elliot Mark Frohman, MD, PhD; Robert Goldman, MD; John Ferguson, MD; Philip B. Gorelick, MD, MPH; Chung Hsu, MD, PhD; Andres Kanner, MD; Ann Marini, MD, PhD; Carmel Armon, MD; David Hammond, MD; David Lefkowitz, MD; and Edward Westbrook, MD.

ENDORSER(S)

Not stated

GUIDELINE STATUS

This is the current release of the guideline. This guideline broadens the scope of a previous assessment of surface EMG published by the American Association of Electrodiagnostic Medicine (Haig AJ, Gelblum JB, Rechtien JJ, Gitter AJ. Technology assessment: the use of surface EMG in the diagnosis and treatment of nerve and muscle disorders. Muscle Nerve 1996 Mar;19[3]:392-5).

GUIDELINE AVAILABILITY
Electronic copies: A list of American Academy of Neurology (AAN) guidelines, along with a link to a Portable Document Format (PDF) file for this guideline, is available at the [AAN Web site](http://www.aan.com).

Print copies: Available from the AAN Member Services Center, (800) 879-1960, or from AAN, 1080 Montreal Avenue, St. Paul, MN 55116.

**AVAILABILITY OF COMPANION DOCUMENTS**


**PATIENT RESOURCES**

None available