

# Weakness (not caused by cerebrovascular accident)

## (January 2017)

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### Rationale

True weakness is abnormally decreased power of a muscle group, limb or in a more widespread distribution. It can be acute, subacute or chronic, and has a wide differential diagnosis. In young children, this may present as hypotonia. In its most severe form, it may present as paresis or paralysis and be accompanied by other neurologic or systemic symptoms. Since the causal condition may be life-threatening or severely disabling in many cases, skill is required to approach the problem effectively.

### Causal Conditions

(list not exhaustive)

- Muscular causes
  - a. Primary muscle disease
    - Congenital (e.g., muscular dystrophy)
    - Acquired (e.g., myositis, myasthenia)
  - b. Central nervous system
    - Malignant
    - Infectious (e.g., encephalitis)
    - Degenerative
    - Autoimmune or Inflammatory (e.g., multiple sclerosis)
    - Traumatic
    - Vascular (41 Weakness (not caused by Cerebrovascular Accident))

- Other (e.g., genetic, cataplexy)

## Key Objectives

Given a patient exhibiting weakness not caused by a cerebrovascular accident, the candidate will differentiate fatigue from inhibition and pain. In particular, the candidate will determine whether the condition is due to muscle, nerve or upper neurological disorder, characterize the distribution and/or localize the lesion, and determine the underlying cause.

## Enabling Objectives

Given a patient with weakness not caused by a cerebrovascular accident, the candidate will

- list and interpret clinical findings, including results of an appropriate history and physical examination aimed at determining
  - a. the source of the weakness (e.g., muscle, peripheral nerve);
  - b. the distribution of the weakness;
  - c. the most likely pathology or cause of the weakness (e.g., vascular, inflammatory, malignant);
- list and interpret critical investigations, including
  - a. laboratory data (e.g., creatine kinase, genetic testing);
  - b. nerve conduction studies and electromyography;
  - c. imaging, including computed tomography or magnetic resonance;
- construct an effective management plan, including
  - a. perform acute medical or surgical intervention (e.g., correction of electrolytes abnormalities);
  - b. treat underlying disease or correct causative factors (e.g., control of diabetes, cessation of steroids or statins);
  - c. take measures to support the patient and to retain function (e.g., physiotherapy, occupational therapy);
  - d. anticipate medium- and long-term complications of the disorder (e.g., psychosocial impact, safety).