There are various subtypes of muscle pain:

- Pain onset during exercise: may be due to exhaustion of fuel supply to the muscle, or build-up of lactic acid
- If there is a metabolic defect, or vascular ischaemia (reduced blood supply) then normal exercise may not be painful (but blood CK may be high).
- If normal exercise is painful and the blood tests are normal, then this might indicate either structural damage (muscle/tendon/joint/bone) or a Polymyalgia syndrome.
- If pain onset is hours after exercise and lasts up to 5 days, and the blood CK is raised, this might suggest a myopathy (abnormality in the muscle), especially disorders in which there is rhabdomyolysis (muscle breakdown)
- Pain unaffected by exercise may indicate: <u>Polymyalgia</u>, <u>Drugs</u> / <u>Toxins</u> or certain types of polyneuropathy.
- <u>Cramps</u>: may be associated with drugs such as: Caffeine, Diuretics(water tablets), Labetalol, Lithium, Nifedipine, Terbutaline, <u>Tetanus</u>, Theophylline, <u>Vitamin A</u>) They are also a very common feature of arachnoiditis.
  - Pain with prolonged immobility.
- Central Nervous System related: Restless legs; Upper motor neuron disorders; Dystonias (many arachnoiditis patients have abnormal muscle tone: dystonia, and restless legs syndrome is common; spinal cord involvement constitutes an upper motor neuron disorder and this is associated with spasticity: increased muscle tone)
  - Fatigue syndromes: Chronic fatigue; Depression

**Typical evaluation** for generalized muscle pain or discomfort:

**History:** Precipitating factors; Nature & Location of pain.

**Examination:** Strength; Sensory loss; Trigger & tender regions; Endurance.

## Laboratory tests

- Blood: blood count; ESR (a non-specific sign of inflammation); CK, creatine kinase: a measure of muscle inflammation; potassium; calcium; Phosphate; thyroid function; Connective tissue antibody screen (ANA)
  - EMG (electromyogram) & Nerve conduction studies
  - Muscle biopsy: if indicated by other abnormal test results.
  - ? Exercise testing: Lactate after mild exercise