

Muscle twitches and cramps

Dept Clinical Neurosciences, NHS Lothian 2024

What are the common causes of muscle twitches and cramps?

Muscle twitching and cramps are common normal symptoms, occasionally they may indicate an underlying neurological condition but are nearly always benign. In one study over 50% of the population had muscle fasciculation and 37% of had muscle cramps in a single year.

Muscle fasciculation. Usually seen or felt, most commonly in the calves and after exercise but may be more widespread. They can be associated with cramps and in the absence of weakness are usually “benign cramp/fasciculation syndrome”. Nearly always benign. Health-related anxiety (MND specifically) can amplify them.

Myokymia: painless repetitive muscle fibre twitching, commonly seen around the eye or first dorsal interosseous muscle. Nearly always benign.

Myotonia: described by patients as “muscle stiffness” or discomfort rather than visible twitching with an inability to relax a muscle. It's rare and suggests underlying neuromuscular disease (e.g. myotonic dystrophy or neuromyotonia).

Muscle cramps: the sudden involuntary painful contraction of an isolated muscle cramp is usually benign and commonly worsened by exercise, dehydration, or pregnancy, and especially sleep in the elderly (sleeping with feet plantarflexed). Occasionally, when profound and/or associated with other symptoms such as weakness, they may indicate underlying neuromuscular disease. Metabolic disorders may also cause cramp.

Blepharospasm: This is bilateral repeated eye closure (blinking) due to overactivity of the orbicularis oculi muscle. Benign, if annoying and cosmetically embarrassing, and can cause effective blindness in more severe cases.

Hemifacial spasm: what it says on the tin- unilateral eye blinking with upwards twitching of the corner of the mouth.

What questions should I ask?

- Is there any weakness – if so, this would suggest referral appropriate?
- Is there a family history (common in benign cramp-fasciculation syndrome)?
- Are they on medications that might cause either electrolyte imbalance or the symptoms (e.g. diuretics, methylphenidate etc)?
- Is it nocturnal only – if so, any symptoms to suggest restless legs syndrome? Check ferritin and see our separate advice about Restless Legs Syndrome on Refhelp
- What are they concerned about? Googling fasciculation/muscle twitching immediately leads to articles about MND. Most people will be reassured with careful explanation that isolated fasciculation is common, but occasionally this can evolve into health-related anxiety which in turn can amplify fasciculation. Health anxiety, especially common in health professionals, requires explicit explanation and avoidance of repeated reassurance.

What tests should I do in primary care?

- Biochemical screen including U&Es, calcium, Ferritin and TFTs
- Creatine kinase (trivial increase above reference range rarely relevant)

What treatments are available/ When should I seek advice from Neurology?

Condition	Treatment	When to seek advice from Neurology
Cramps	Calf muscle stretches before bed. Reduce diuretics/caffeine. Vitamin B complex, Diltiazem, Quinine (recommended short course)	Unusually profound/debilitating and/or associated symptoms, notably weakness
Myokymia	Explanation and reassurance	Any neurological symptoms other than myokymia
Fasciculation	Explanation and reassurance. If severe then treatment of health anxiety.	Any wasting/weakness, or very florid or widespread, or with severe cramp
Blepharospasm/hemifacial spasm	Conservative or botulinum toxin	If causing problems

References:

Dijkstra JN, Boon E, Kruijt N, et al. Pract Neurol 2023;23:23–34.

Erogu M. The perils of being your own doctor. Guardian 4 Aug 2016 (article about benign fasciculation).

Jon Stone and Richard Davenport

Consultant Neurologists, NHS Lothian 2024