

## Functional Movement Disorders: Patient Information & Resources

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### WHAT ARE FUNCTIONAL MOVEMENT DISORDERS?

Functional movement disorders (FMD) represent a disorder of neurological *function* rather than of *structure*. Symptoms can include tremor, abnormal postures, jerking movements, weakness, problems with speech or walking, or many other symptoms. Often more than one symptom is present. This is a very common problem. Recent evidence shows that up to 1 in 3 people referred to Neurology Clinics have some functional neurological symptoms. Importantly, these conditions are associated with loss of work, high levels of disability, and distress.

FMD is a clinical diagnosis, meaning that it is diagnosed based on the history and physical examination, on the basis of “positive” diagnostic signs. Some of these may have been shown to you today, for example if we redirect your attention away from the symptom (i.e. use distraction), the symptom can disappear. Sometimes symptoms are present in some situations, but not others. There is no laboratory test to make the diagnosis, and imaging studies such as MRI are usually normal. It is important to recognize that we know the symptoms are real, disabling and not intentionally produced.

### WHAT ARE ‘ABNORMAL MOTOR PROGRAMS’?

We can think of functional movement disorder symptoms as stemming from abnormal motor programming. A computer analogy to contrast structure and function is useful: think of functional neurological symptoms as similar to a brain “software” problem rather than a “hardware” problem. We have demonstrated on your examination that the hardware of your nervous system, i.e. your brain, spinal cord, and nerves, and muscles are all capable of working normally. But just like computers, our brain software programs sometime malfunction and can create an *abnormal* motor program. Over time, and with repeated use, the brain can become used to using the abnormal motor program, and it can start to produce it automatically, without your control. In the same way that a musician or athlete can learn complex *normal* motor programs, our brains can learn in an abnormal way to perform *abnormal* motor programs. It is important to understand that the cause of the malfunction is often difficult to determine, and sometimes we do not find the cause. However, things like pain, fatigue, stress, anxiety, depression and trauma (emotional or physical, such as surgery or an injury) are common associated concerns. Sometimes past experiences – even from childhood – can make the brain vulnerable to adopting these abnormal motor programs more readily. Addressing these issues, if present, will sometimes help relieve the neurological symptoms.

### WHAT IS THE PROGNOSIS of FMD?

At present, the prognosis of FMD is not fully known but studies are ongoing in this area. The following general observations have been made:

- There is commonly a delay to diagnosis, and misdiagnosis is common.
- Symptoms that have been present for shorter periods of time tend to have a better prognosis.
- Patient acceptance of the diagnosis and motivation to improve are the most important factors for symptom improvement.

## HOW ARE FMD'S TREATED?

The most important part of the treatment of FMDs is the correct diagnosis by a medical expert. Once this has been made, then a combination of physical therapy and psychological therapy has been shown to be beneficial. Some resources are included on the next page.

## WHAT ARE THE ROLES OF PAIN AND FATIGUE IN FMD?

Chronic pain is common in FMD. Patients diagnosed with FMD can have pain before their neurological symptoms started (in fact pain itself is a neurological symptom), or as a part of their symptoms, or in a completely different part of their body. The pain can sometimes be so severe that medications are used to treat it. Pain that has been present for longer than 3 months is defined as *chronic pain*. Chronic pain is different from pain that occurs as a result of an injury or surgery (chronic pain can be due to injury or surgery – e.g. phantom limb pain, pain from nerve injury). The brain interprets pain signals and incoming sensory information differently in chronic pain, which is the reason why common medicines used to treat acute pain do not work as well (e.g. Tylenol or Advil).

Most patients who suffer from FMD also suffer from fatigue. This is a very common symptom in the population in general but is even more common in FMD. Fatigue can be a result of poor sleep, stress and anxiety, and can also be a learned coping strategy in response to something unpleasant.

Other common symptoms in FMD include:

- Memory problems
- Vision problems (e.g. blurred vision)
- Walking and balance problems
- Dizziness
- Gastric upset, nausea, vomiting, irritable bowels
- Heart palpitations and shortness of breath

On the following page you will find some further resources about treatment of functional movement disorders. You may find the term “functional neurological symptoms” in your reading, which is the umbrella term, i.e. functional movement disorders are a subtype of functional neurological symptoms.

## PSYCHOSOCIAL INTERVENTIONS FOR PATIENTS DIAGNOSED WITH FMD:

### 1. Online Resources:

- a. Patient Guide to Functional Neurological Symptoms: [www.neurosymbols.org](http://www.neurosymbols.org)
- b. Patient online support group: <https://fndhope.org/>

### 2. Cognitive Behavioural Strategies: FMD-specific cognitive behavior therapy helps to recognize and change unhelpful coping strategies and thought patterns. "Overcoming Functional Neurological Symptoms" by Christopher Williams is a good resource and can be used either independently by a patient as a self-help strategy, or in conjunction with a clinician trained in CBT. [https://www.amazon.ca/Overcoming-Functional-Neurological-Symptoms-Approach/dp/1444138340/ref=sr\\_1\\_1?ie=UTF8&qid=1533519769&sr=8-1&keywords=overcoming+functional+neurological+symptoms](https://www.amazon.ca/Overcoming-Functional-Neurological-Symptoms-Approach/dp/1444138340/ref=sr_1_1?ie=UTF8&qid=1533519769&sr=8-1&keywords=overcoming+functional+neurological+symptoms)

For patients diagnosed with **functional seizures**, "Taking Control of Your Seizures" by Reiter et al. is a good resource:

[https://www.amazon.ca/Taking-Control-Your-Seizures-Workbook/dp/019933501X/ref=sr\\_1\\_1?ie=UTF8&qid=1533524448&sr=8-1&keywords=taking+control+of+your+seizures&dpID=41kLuVXEyOL&preST= SX258\\_BO1,204,203,200\\_QL70\\_&dpSrc=srch](https://www.amazon.ca/Taking-Control-Your-Seizures-Workbook/dp/019933501X/ref=sr_1_1?ie=UTF8&qid=1533524448&sr=8-1&keywords=taking+control+of+your+seizures&dpID=41kLuVXEyOL&preST= SX258_BO1,204,203,200_QL70_&dpSrc=srch)

### 3. Techniques to Reduce Body Tension - box breathing, mindfulness, progressive muscle relaxation - are relatively simple strategies that effectively reduce bodily tension and can help to reduce frequency of functional neurological symptoms. This self-help website is a great resource: <https://www.anxietybc.com/all-tools>

**PHYSIOTHERAPY:** FMD-specific physiotherapy, with a prioritization of motor retraining and reinforcement of normal movement, along with principles of rehabilitation have a solid evidence base in functional movement disorders. Recommendations are discussed in detail in recent physiotherapy consensus guidelines: <http://jnnp.bmj.com/content/86/10/1113>.

These guidelines can be printed and given to physiotherapists who are open to incorporating these techniques into their practice.