



South London
and Maudsley
NHS Foundation Trust

Functional Neurological Disorder

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SLAM NHS TRUST

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Aims

- Introduction to FND
- Consider the role of physiotherapy
- Evidence for treatment approach
- Consider the approach to take with patients with FND
- Practical tips for this patient group

What is FND?

- FND is an umbrella term for a variety of neurological symptoms which are caused by abnormal nervous system functioning not by structural disease
- No damage to the central nervous system
- Symptoms can vary from more specific motor or sensory symptoms to cognitive or dissociative

Prevalence

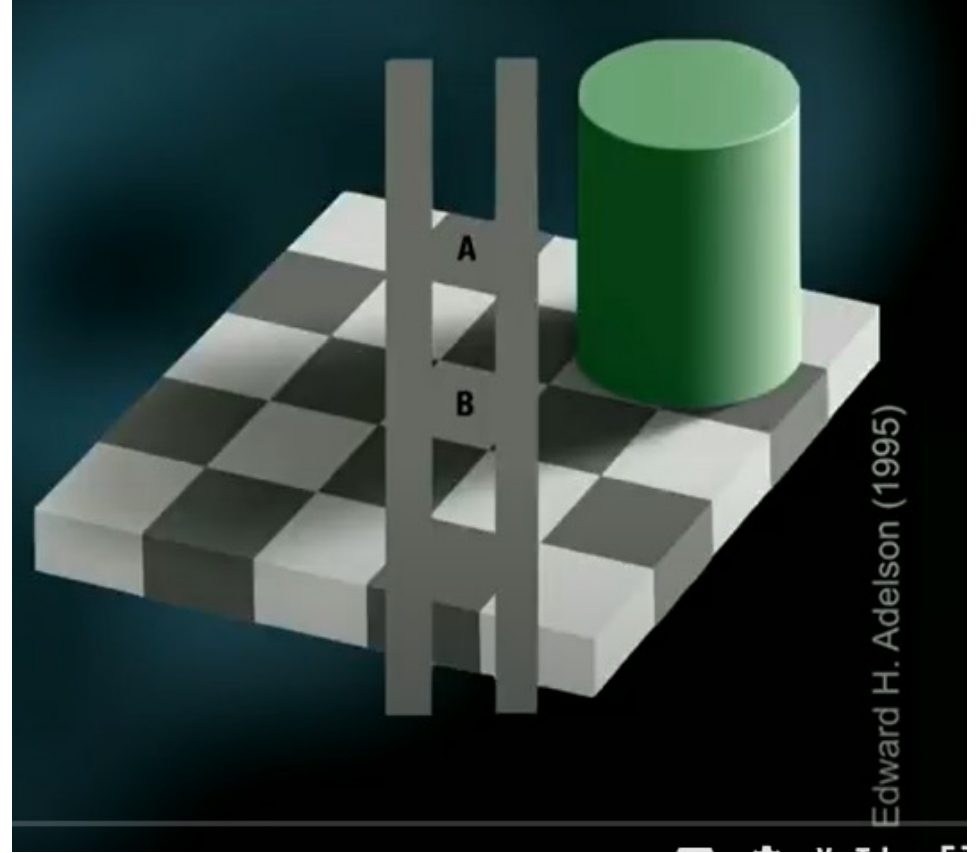
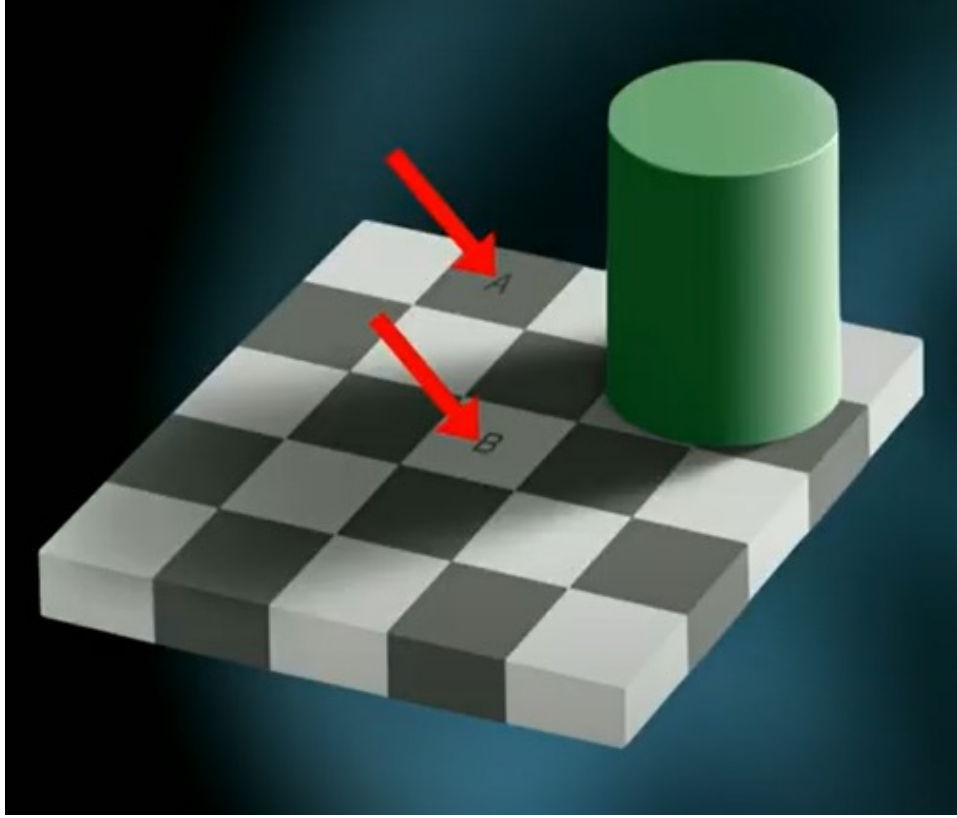
N=3781	
Headache	19%
FND	16%
Epilepsy	14%
Peripheral Neuropathy	11%
Multiple Sclerosis	7%
Movement Disorder	6%
Spinal Disorder	6%
Syncope	4%
Stroke	3%

Body mind connection

Psychological experiences affect the body all the time.

It is normal for physical changes to happen in the body without a structural cause.

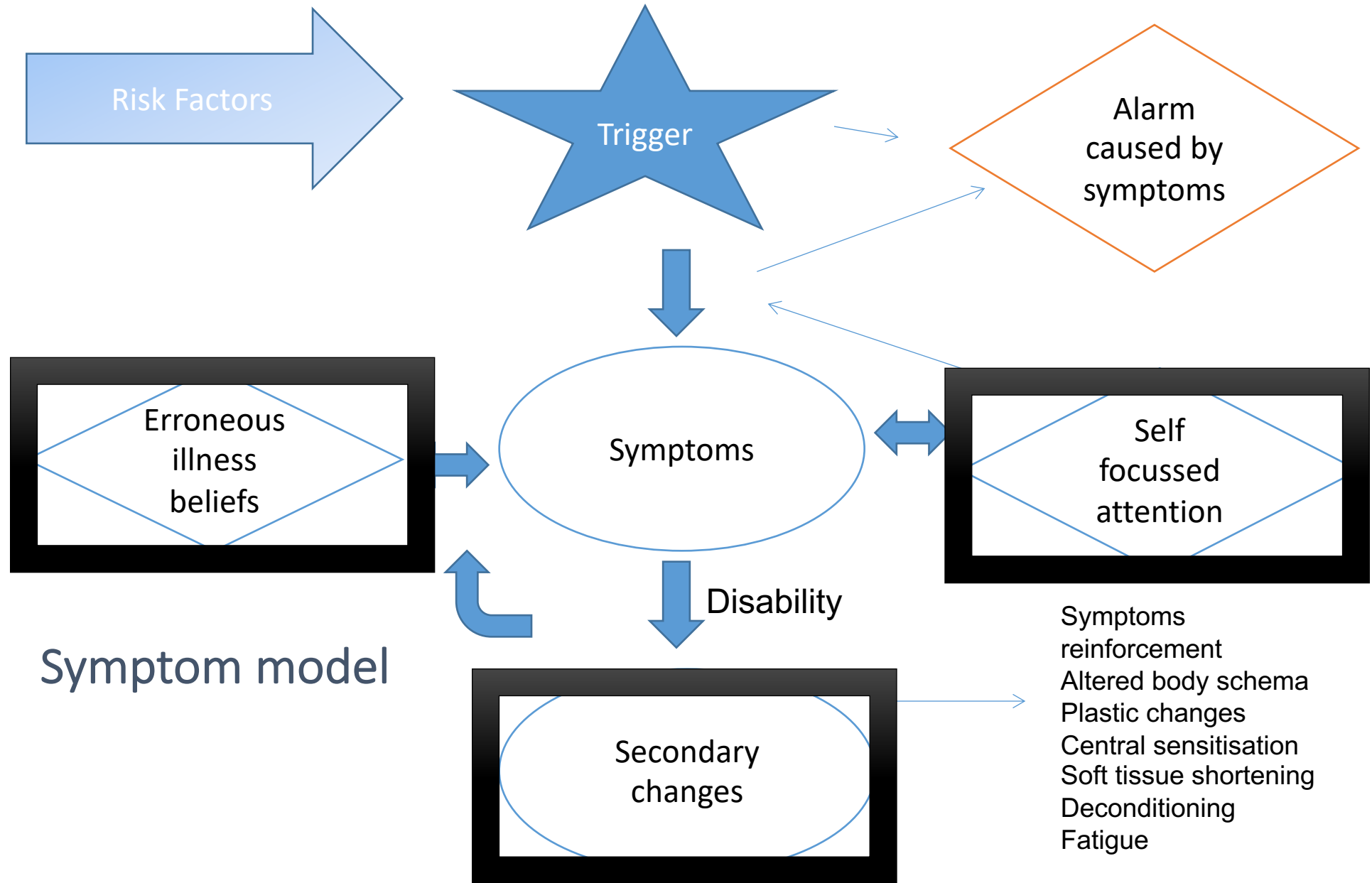
Before we go too far...



<https://twitter.com/MaxCRoser/status/1347854974349430785>

	Biological	Psychological	Social
Predisposing Factors	Genetic Factors Structural Disease	Personality/Coping Style Depression/Anxiety	Adverse Experiences
Precipitating Factors	Physical Trauma Illness	Psychological Trauma/Stress	Stressful Life Events Life Changing Events
Maintaining / Perpetuating Factors	Changes to neuroplasticity Deconditioning Muscle tension Pain/Fatigue	Fatigue Anger/Frustration Depression/Anxiety Symptom Checking and Avoidance of Symptom Provocation Adaptations & Aids	Not being believed Not having a clear diagnosis Loss of job/independence

(Nielsen G, et al. J Neurol Neurosurg Psychiatry 2015;86:1113–1119)



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Positive signs of FND – FND IS NOT A DIAGNOSIS OF EXCLUSION

<https://www.bmj.com/content/371/bmj.m3745/infographic>

- Positive signs
e.g Hoovers
- Inconsistency
- Incongruity

The infographic is titled "Positive diagnostic signs" and is divided into four main sections, each with an illustration and descriptive text:

- Functional limb weakness:** Illustrates Hoover's sign (hip extension weakness improving with contralateral hip flexion) and the Hip Abductor Sign (abduction weakness improving with contralateral hip abduction).
 - Hoover's sign:** Hip extension weakness that improves with contralateral hip flexion against resistance.
 - Hip Abductor Sign:** Abduction weakness that improves with contralateral hip abduction against resistance.
- Functional movement disorders:** Illustrates functional dystonia (fixed position, clenched fist, inverted ankle) and functional facial dystonia (episodic contraction of platysma or orbicularis oculi).
 - Functional dystonia typically presents with a fixed position, usually a clenched fist or inverted ankle.
 - Functional facial dystonia presents with episodic contraction of platysma or orbicularis oculi.
- Functional or dissociative seizures:** Lists characteristic features: Eyes tightly closed, Tearfulness, Longer than 5 minutes, Side to side head shaking, and Hyperventilating. Includes a video icon and the instruction: "Ask patient if they would be willing to have their attacks video recorded by a family member".
- Functional visual signs:** Illustrates a tubular visual field defect at 50 cm (same width as at 150 cm) and visual field spiralling caused by progressive constriction of vision during the test.

Common pitfalls: Common reasons for missing the diagnosis of FND include:

- Placing too much emphasis on psychological comorbidity

Investigation and referral: While it may be reasonable for the diagnosis to be raised as a possibility with the patient in...

Hoover's Sign



Test hip extension – it's weak



Test contralateral hip flexion against resistance – hip extension has become strong

Clear understanding of the diagnosis is essential for the successful physio treatment.

- Diagnosis should be given and explained by neurologist or neuropsychiatrist, but often patients will need this repeated and discussed again as part of their physiotherapy assessment and treatment.
- Make sure whole team involved in patient care understand include family members, GP – clearly document in notes to avoid more investigations.
- When discussing the diagnosis and treatment with the patient be clear and use the correct terms this gives the diagnosis credibility
- Show how the diagnosis was made, e.g.
 - Hoover's sign
 - Distraction of a psychogenic movement disorder
- Normalise it – “this is common”
- Recommendation - READ trick or treat article (Stone & Edwards 2012)

WHY PATIENTS NEED PHYSIOTHERAPY

- Physiotherapy can be very effective (Gelauff et al., 2014b) (Nielsen et al., 2013)
- Successful outcomes were documented in the treatment of patients with functional movement disorders
- Physiotherapists in general are interested in treating such patients, however, inadequate service structures, knowledge and support from non-physiotherapy colleagues are judged to be barriers to provision of care. (Edwards., 2012)
- There are specific interventions and approaches that seem to work
 - unlearning maladaptive motor programs
 - ignoring negative movements
 - (Nielsen et al., 2013)
- The most successful programs appear to do this by conceptualizing the FMD as a problem with abnormally learned “motor programs” in the brain that have to be “unlearned” (Nielsen et al., 2013)
- Most physiotherapists questioned in a study felt that they could do more to help FND patients, but felt poorly supported by neurologists and existing service structure (Edwards et al., 2012b)
- FND Hope conducted a study of patients experience of services <https://fndhope.org/fnd-hope-research/> Out of 503 patient 225 reported that they had felt discrimination of stigma from physio or OT

Symptoms for Physiotherapy:

- Functional gait disorder
- Weakness or paralysis
- Dystonia
- Reduced, absent or altered sensation
- Involuntary movements (tremors or jerks)
- Balance difficulties and dizziness
- Freezing episodes
- Pain
- Fatigue

SECONDARY SYMPTOMS

Deconditioning

Fatigue

Pain

Central sensitisation

Stiff joints

Contractures

What can this look like in practice?

- <https://twitter.com/i/status/1355483194007707649>

Approach to physiotherapy in functional motor disorders

Neuropsychiatry



OPEN ACCESS

VIEWPOINT

Physiotherapy for functional motor disorders: a consensus recommendation

Glenn Nielsen,^{1,2} Jon Stone,³ Audrey Matthews,⁴ Melanie Brown,⁴ Chris Sparkes,⁵ Ross Farmer,⁶ Lindsay Masterton,⁷ Linsey Duncan,⁷ Alisa Winters,³ Laura Daniell,³ Carrie Lumsden,⁷ Alan Carson,⁸ Anthony S David,^{9,10} Mark Edwards¹

► Additional material is published online only. To view please visit the journal online (<http://dx.doi.org/10.1136/jnnp-2014-309255>).

For numbered affiliations see

ABSTRACT

Background Patients with functional motor disorder (FMD) including weakness and paralysis are commonly referred to physiotherapists. There is growing evidence that physiotherapy is an effective treatment, but the

as a group of geographically diverse and multidisciplinary health professionals to create recommendations for the content of physiotherapy for FMD to act as a guide for others and to form the basis of further treatment studies.

KEY ELEMENTS

Education

Promoting self-management

Demonstration that normal movement can occur

Retraining movement with diverted attention

Challenging maladaptive behaviours related to symptoms

What that means...

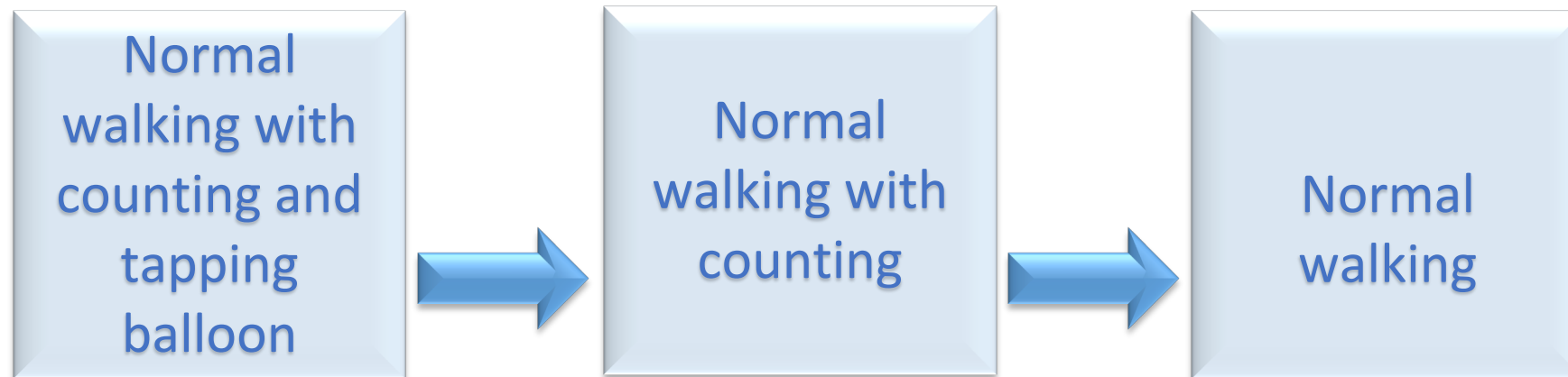
- Focus on function and automatic movement (sit to stand, walking)
- Early weight-bearing
- Avoid adaptive equipment and aids
- Distraction techniques (including visualisation)
- Use of videos and mirrors
- Graded exercise
- Address secondary changes

Alongside....

- Build trust and rapport before challenging the patient
- Project confidence and create an expectation of improvement
- Cultivate open and consistent communication between the multidisciplinary team, patient and family/carers
- Recognise and challenge unhelpful behaviours and thoughts

Example

Person walking with legs giving way, reliant on crutches



Retraining the Nervous System through Neuroplasticity



“perfect practice makes perfect”

- Continued practice of functional exercises, using distraction techniques, promotes normal movement patterns over time
- A graded approach eventually results in producing normal movement without distraction techniques

The CD analogy

What can maintain functional motor symptoms?

- Doing less activity
- Using walking aids
- Lots of attention on the body
- An unusual sitting position
- A different way of walking
- Boom and bust activity pattern
- Always walking next to a wall for safety
- Wearing a different shoe on the affected foot
- Standing differently
- Never going out alone



Outcome measures

- Pick et al 2020 carried out a systematic review of the use of outcome measures in FND
- 5 FND specific measures were identified
 - 3 clinician rated
 - 2 patient rated
- No single measure used across the range of symptoms in adults
- Physio specific measures in outcome in FND patients difficult as the act of measuring draws more attention to symptoms and can worsen them.

Resources

- fnforum.org (for clinicians)
- nonepilepticattacks.info
- neurosymptoms.org
- flippinpain.co.uk

Welcome to the Functional Neurological Forum



The Functional Neurological Forum is a new idea to help bring together health professionals internationally who work with patients with functional disorders seen in neurological settings such as

- Functional Movement Disorders eg Functional Tremor/Functional Dystonia
- Dissociative (non-epileptic) Seizures/Attacks
- Functional Visual Problems
- and others...

What is the forum for?
This forum was started in February 2015 by a multidisciplinary group consisting of Neurology, Physiotherapy, Neuropsychiatry, Occupational Therapy and Neuropsychology

At present we would like to collect contact details from health professionals to inform them of

1. Meetings specifically about Functional Neurological Disorders
2. Documents and news that may be important to developing services

Subscribe to our mailing list

Email Address (required) * indicates required

First Name

Last Name

Health Profession (Required)

- Physiotherapy
- Occupational Therapy
- Psychology
- Neuropsychology
- Neurology
- Rehabilitation Medicine
- Psychiatry
- Neuropsychiatry
- Liaison Psychiatry
- Nursing
- Patient/Carer interested in professional meetings
- Psychotherapy
- Other

If 'Other' please state profession

- TELL ME MORE
- SYMPTOMS
- CAUSES
- SELF-HELP
- TREATMENT
- FIND OUT MORE
- DOWNLOADS

TELL ME MORE

- Who are we?
- NEAD in numbers
- How this site works
- Contact us

SYMPTOMS & SIGNS

- What are non-epileptic attacks?
- Are NEAs common?
- What do NEAs look like?
- What do NEAs feel like?
- What about my other symptoms?
- How are NEAs diagnosed?
- Do I have epilepsy?
- How to feel about the diagnosis

CAUSES

- What causes my attacks?
- Early life factors?
- Why do NEAs start?
- What can trigger further attacks?
- Why have the attacks not stopped?
- How do these factors act together?
- How can stress cause symptoms?
- What if people don't believe me?

SELF-HELP

- What do I tell people?
- What should people do?
- What can I/my family do to help?
- How can I help myself get better?
- Should I stop doing anything?
- What can my family do?
- What if it gets worse?

TREATMENT

- Is there any treatment for NEAs?



Welcome

We are a group of healthcare professionals interested in developing effective treatments for non-epileptic attacks. Our group consists of neurologists, psychologists and psychotherapists. Between us we have many years of experience of working with patients with NEAD.



About this site

This site is designed to provide patients diagnosed with Non-Epileptic Attack Disorder (NEAD) and their families with more information about the disorder. Some doctors use different names for non-epileptic attacks (NEAs), for instance psychogenic seizures, dissociative seizures, conversion seizures or pseudo-seizures. These names describe the same condition in which attacks occur without a clear medical cause, so the information on this website should still be relevant.

This website is not about other nonepileptic attacks explained by obvious medical causes such as fainting, transient ischaemic attacks or blackouts related to low blood sugar.

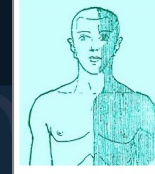
What is on this site?

Your website has been so helpful and has put my mind at ease to know that I am not mad and that I'm not making up what happens.

Functional Neurological Disorder (FND) : a patient's guide

including Functional/Dissociative (non-epileptic) Seizures, Functional Movement Disorder and other functional symptoms

- Welcome
- Symptoms
- Causes
- Not Imagined
- Treatment
- Video
- Stories
- About+News
- Links
- Downloads
- Feed



This website is about **Functional Neurological Disorder (FND)**. This is when someone has:

- NEUROLOGICAL SYMPTOMS (such as limb weakness, numbness, shaking or blackouts) which are REAL (and not imagined)
- caused by a PROBLEM with the FUNCTIONING of the nervous system
- not due to damage or structural disease of the nervous system
- causing difficulties for the person who experiences them

Some people have troublesome symptoms that they wish to understand without necessarily having a 'disorder' - these are called functional neurological symptoms, and this site is for you too.

FND and functional symptoms surprisingly common but can be difficult for patients and health professionals to understand.

This website, written by a neurologist with a special interest in these problems, aims to give you a better understanding of these symptoms. It has no advertising and is free. I hope you find it useful

Professor Jon Stone, Consultant Neurologist, Edinburgh

How to use this website ...

Most people with functional or dissociative neurological symptoms have a combination of symptoms like "weakness, numbness and fatigue" or "blackouts and sleep problems"

Click on a symptom on the right or use the menu above to explore the symptoms that are relevant to you.

Click on 'Causes' to discover what is known about...

- what is going wrong in the body when they do happen. (Mechanisms) and
- why people become vulnerable to these symptoms (Causes)
- what is known about the accuracy of the diagnosis (Misdiagnosis)

Click on 'Not Imagined' for some answers to this issue

Click on 'Treatment' for discussion of what treatments may help

Click on 'Videos' or 'Stories' for some real patient stories

Update December 2018

I have carried out an interim update of the site in December - to obtain a security certificate and move off the Adobe Flash platform. The site now runs in HTML5. Hope you like it! Jon Stone

Downloads and Links ...

Symptoms ...

- Functional Limb Weakness
- Blackouts / Attacks
- Sensory Symptoms
- Pain
- Tiredness / Fatigue
- Sleep Problems
- Poor Memory / Concentration
- Dissociation
- Worry / Panic
- Dizziness
- Headache
- Low Mood
- Facial Spasm
- Visual Symptoms
- Functional Tremor
- Functional Dystonia/Sp
- Functional Walking Prob
- Word Finding Difficult
- Sturred Speech
- Bladder Symptoms
- Bowel Symptoms
- Drop Attacks
- Swallowing Problems
- Complex Regional Pain
- Health Anxiety
- Post-Concussion Syndrome
- Functional Jerks and Twitches
- Other Symptoms

HOME UNDERSTANDING PAIN REAL STORIES RESOURCES NEWS & EVENTS MEET THE TEAM GET IN TOUCH

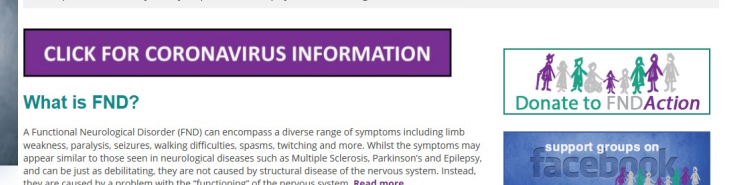
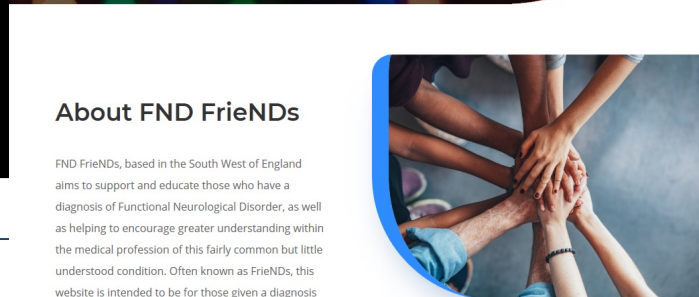
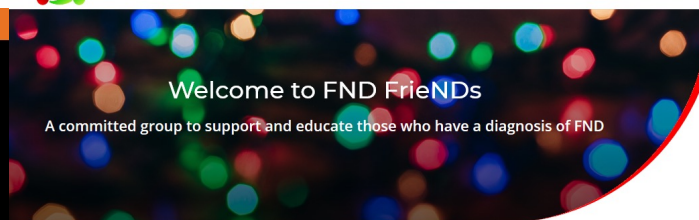
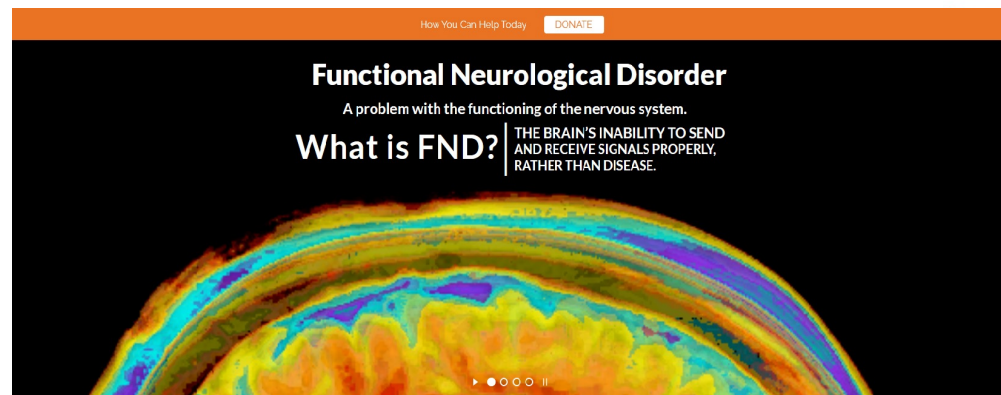
Understanding Pain

Without understanding, advice on the best way forward often makes no sense at all.

Understanding pain is important - it changes the way we respond to pain and can change the way it feels.

Patient Support Organisations

- FNDHope.org.uk (UK based)
- FNDDimensions.org (UK based)
- FNDAction.org.uk (UK based)
- FND FrieNDS (Bristol based)



Questions

- Contact details:

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