## Fibromyalgia syndrome – "A chronic case of the flu"

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In a typical case scenario, a 43-year-old female teacher has widespread body and neck pain. chronic fatigue, sleep disturbance and altered mood after a whiplash neck injury from a motor vehicle crash two years ago. She has flashbacks and dreams of the crash, has lost her job and is involved in legal action for compensation. She lives in a daze - 'I'm too sore to move, and too tired to think.'

Fibromyalgia is a clinical syndrome with a spectrum of symptoms including chronic widespread pain and fatigue, sleep disturbance, altered mood and cognition; and, also, neurological, immune, autonomic and endocrine dysfunction. Fibromyalgia syndrome (FMS) is described by patients as 'feeling like a never-ending dose of the flu'. It is a chronic stressor-sickness response triggered

## Key messages

- FMS is a chronic stress-orsickness response to allostatic load in a predisposed person
- Psycho-neuro-immune, cortical, endocrine dysfunction and in some cases widespread smallfibre polyneuropathy are involved.

by a variety of physiological or psychological stressors.

FMS affects up to 8% of the population, most commonly women between 30 and 60, with a higher incidence in patients with a history of developmental duress (childhood and adolescence), localised chronic pain, joint hypermobility, rheumatological disease, bipolar, anxiety (PTSD), depression, or a family history.

FMS is a prime example of a complex biomedical, psychosocial and environmental illness associated with whole-person physiological and psycho-cognitive effects.

Organisms including humans have evolved systems to deal with stressors threatening physiological homeostasis, tissue viability and survival. The cumulative effect of stress on an organism is known as allostatic load. Organisms generate defensive stress responses to allostatic load to protect their tissues from damage

The acute stress response ('fight or flight') is a rapid defence system protecting us from imminent threat. However, if exposed to prolonged or overwhelming stress, a person will trigger a chronic stress

> continued on Page 41

## continued from Page 40

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response, aka the sickness response (widespread body pain, fatigue, sleep disturbance, brain-fog, poor motivation, anorexia), which is exactly what we experience when we are laid-low by the flu!

Neuroimmune dysfunction (e.g. serotonin, norepinephrine, dopamine, cytokines, glia) is a key factor in this response. With repeated stress exposures, humans accumulate an

'allostatic debt' because homeostasis never fully returns to pre-stress levels. Less stress is required to trigger a subsequent sickness response, and FMS develops.

Management involves a multimodal bio-medical psychosocial approach. Pain education (identify stressors, rehabilitation and demedicalising) is key. Analgesics and neuromodulators (e.g. tricyclics SNRIs) have

a role. Avoid typical opioids (tramadol and tapentadol are OK) benzodiazepines and cannabinoids. CBT and mindfulness together with antidepressants assist with stress management. Sleep hygiene is important, as is regular activity and energy management. Physiotherapy and occupational therapy has a role.

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