

## Pathophysiology and Treatment of Fibromyalgia

**Eva Kosek**

*Department of Clinical Neuroscience, Karolinska Institute, Stockholm, Sweden*

Multiple pathological findings have been reported in fibromyalgia including peripheral abnormalities such as muscle ischemia and small fiber pathology, autonomic dysfunction and central abnormalities i.e., functional as well as structural cerebral changes and recently also signs of neuroinflammation. The multitude of abnormalities in fibromyalgia would suggest a systemic disorder with pain caused by complex interactions between peripheral and central mechanisms. Fibromyalgia patients have a dysfunction of endogenous pain inhibitory mechanisms and neuroimaging studies indicate aberrant cerebral pain processing, making fibromyalgia a prototype of a nociplastic pain disorder. Clinically, fibromyalgia is characterized by widespread pain, increased pain sensitivity and other symptoms such as fatigue, disturbed sleep and frequently also depression or anxiety. Pain is typically exacerbated during and following more intense physical work or exercise as well as by stress. Information to the patient is the cornerstone of fibromyalgia treatment. Patients should be informed that the altered nociceptive function results in normally non-painful stimuli being perceived as painful, thus fibromyalgia pain should not be interpreted as a warning signal. Individually tailored, gradually increasing physical exercise should be implemented for all patients, some may benefit from a physiotherapist to get started. Serotonin-noradrenalin-re-uptake inhibitors and anticonvulsants are accepted for the treatment of fibromyalgia in some countries and can be tried, whereas there is a consensus among fibromyalgia experts that opioid drugs should be avoided, possibly with the exception of tramadol. Patients suffering from co-morbidities such as depression/anxiety disorders or having difficulties to cope with their situation may benefit from cognitive behavior therapy. Multimodal rehabilitation programs can help patients to resume their daily activities and return to work.