

**When
Moving
Hurts**



**Assess
Understand
Take Action**

GLOBAL YEAR AGAINST MUSCULOSKELETAL PAIN

OCTOBER 2009 – OCTOBER 2010

Fear Avoidance and Musculoskeletal Pain

Psychological factors play a key role in the development of chronic musculoskeletal pain, in particular dysfunctional beliefs about pain and fear of pain. Fear of pain leads to avoidance of activities (physical, social, and professional) that patients associate with the occurrence or exacerbation of pain, even after they may have physically recovered. Whereas this response is adaptive in the acute phase—rest promotes recovery—it leads to disability and distress when avoidance behavior is continued after the injury has healed.

Epidemiology and Economics

There are no exact numbers on the prevalence of clinical fear of pain, because establishing a cut-off point for “clinical levels” of fear of pain is difficult. Fear of pain is adaptive: it prevents us from doing potentially harmful activities and is helpful in learning to avoid harmful activities. It becomes dysfunctional when the fear is in excess of the actual risk of harm or injury.

There is a substantial economic cost to excessive fear of pain. In the acute phase, only activities directly related to pain are avoided. However, the pattern of avoidance may gradually spread across activities, cumulating into a sedentary lifestyle, characterized by the fear that any activity may lead to (re)injury and/or pain. This pattern adds to the social and economical cost of musculoskeletal pain, as fear of pain prolongs—and sometimes increases—disability, absenteeism, and health care utilization.

Diagnosis

- Fear avoidance beliefs can be assessed using:
 - The Fear Avoidance Beliefs Questionnaire (FABQ) [8], in clinical populations
 - The Pain Anxiety Symptoms Scale (PASS) [4]
 - The Fear of Pain Questionnaire [5], in nonclinical samples
- Dysfunctional beliefs about physical activities are assessed using the Tampa Scale for Kinesiophobia (TSK) (Miller RP, Kori SH, Todd DD, unpublished report, 1991) [6].
- In addition, the Photograph Series of Daily Activities (PHODA) [3] was recently developed to determine the perceived harmfulness of daily activities in patients with chronic low back pain and to construct a hierarchy of feared movements.

Treatment

- Graded activity is an effective strategy to regain physical fitness and concurrent positive effects on cognitive factors. Focusing on the cognitive factors directly may foster stronger effects.
- During exposure in vivo therapy, patients are encouraged to engage in supervised activities that they rate as extremely fear-provoking until they become convinced that the movement can be done without the expected catastrophe. When patients experience how disengagement from “safe behaviors” does not lead to the expected catastrophic consequences, their catastrophic misinterpretations are challenged and disconfirmed, and they correct their fear expectancies.
- Assessment of pain-related fear is recommended, because these forms of treatment may only be appropriate for patients who are more likely to be “avoiders,” and they may even be counterproductive for those low in fear-avoidance beliefs.

References

1. Asmundson GJG, Vlaeyen JWS, Crombez G. Understanding and treating fear of pain. Oxford University Press; 2004.
2. Leeuw M, Goossens MEJB, Linton SJ, Crombez G, Boersma K, Vlaeyen JWS. The fear-avoidance model of musculoskeletal pain: current state of scientific evidence. *J Behav Med* 2007;30:77–94.
3. Leeuw M, Goossens ME, van Breukelen GJ, Boersma K, Vlaeyen JW. Measuring perceived harmfulness of physical activities in patients with chronic low back pain: the Photograph Series of Daily Activities—short electronic version. *J Pain* 2007;8:840–9.
4. McCracken LM, Dhingra L. A short version of the Pain Anxiety Symptoms Scale (PASS-20): preliminary development and validity. *Pain Res Manag* 2002;7:45–50.
5. McNeil DW, Rainwater AJ 3rd. Development of the Fear of Pain Questionnaire—III. *J Behav Med* 1998;21:389–410.
6. Roelofs J, Sluiter JK, Frings-Dresen MH, Goossens M, Thibault P, Boersma K, Vlaeyen JW. Fear of movement and (re)injury in chronic musculoskeletal pain: evidence for an invariant two-factor model of the Tampa Scale for Kinesiophobia across pain diagnoses and Dutch, Swedish, and Canadian samples. *Pain* 2007;131:181–190.
7. Vlaeyen JW, Linton SJ. Fear-avoidance and its consequences in chronic musculoskeletal pain: a state of the art. *Pain* 2000;85:317–32.
8. Waddell G, Newton M, Henderson I, Somerville D, Main CJ. A Fear-Avoidance Beliefs Questionnaire (FABQ) and the role of fear-avoidance beliefs in chronic low back pain and disability. *Pain* 1993;52:157–68.

