

# OPTIMAL HEALTH UNIVERSITY™

Presented by Katie Gravesen, DC

## Psychosocial Factors in Back Pain

*Many physical factors trigger or exacerbate back pain. But did you know that psychological and social factors can also play a major role?*

*The chiropractic approach to wellness acknowledges the interconnection between the body, mind and spirit. Dr. Gravesen gives special attention to the spine, while caring for the wellness of the whole person. Below, Dr. Gravesen outlines an approach that considers more than just the body; explains how psychological health and social relationships interact with back pain; and describes therapies that improve back pain through the power of the mind.*



### The Biopsychosocial Model of Health

In years past, the medical establishment attributed physical complaints like back pain solely to physical causes, while mental health was considered a completely separate realm.

Today, however, Dr. Gravesen and many other holistic healthcare providers approach illness and pain with a recognition of the interplay between the mind and the body. This approach, called the *biopsychosocial model*, views physical symptoms in the context of each patient's whole life, in-

cluding psychological and social circumstances.

Research supports the notion that psychosocial elements of back pain can play as large a part as biomedical factors (*Phys Med Rehabil Clin N Am* 2010;21:801-15).

### Psychosocial Causes of Pain

*Somatization* is the experience of physical symptoms — such as pain — as a result of psychological distress. Pain may occur concurrent to depression, anxiety, grief or other conditions. For example, in a prospective 10-year study of 600 individuals in Finland, researchers found that many who developed low-back pain had histories of depression and other psychiatric disorders (*Pain* 1993;53:89-94).

And, one inquiry of teenagers revealed that musculoskeletal pain is 3.4 times more common in girls with an anxiety disorder, compared to those without anxiety (*J Spinal Dis & Tech* 2010;23:513-20).

Multiple investigations also link back pain to job dissatisfaction. One followed 3,000 employees of Boeing, tracking back pain reports as well as employee views of their work. Those who did not enjoy their work were two and a half times more likely to experi-

ence back pain, compared with those who enjoyed their jobs (*Clin Orthop Relat Res* 1992;279:21-34).

Another study of 4,500 workers in Iran found that of all lifestyle, social and health factors, the most significant predictors of low-back pain were low control, job strain, low-job satisfaction and low-job appreciation (*Occup Med* 2008;58:341-7).

Pain can also result from a *somatoform disorder*. A somatoform disorder is an experience of physical symptoms with no apparent physical cause and no concurrent psychological disorder. These are classified as mental disorders, and are not well understood by scientists. The experience of pain or discomfort is real, though, and not fabricated.

A well-known example of a somatoform disorder is hypochondriasis, in which an obsessive fear of a particular disease or symptom — like pain — leads to actually experiencing symptoms. This fear can be debilitating.



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In one study, individuals performed a two-part concentration task and were told that they would receive a painful stimulus during the second part. They were actually given no pain stimulus, but high hypochondriacal subjects performed poorly throughout the task, while low hypochondriacal subjects performed significantly better on the first part of the task (*J Psychosom Res* 1993;37:745-52).

### Psychosocial Factors in Physical Pain

When back pain has a physical root — such as an injury or a **vertebral subluxation** (misalignment of the vertebrae) — psychosocial factors still impact its severity and the pace of recovery. This is called a *psychosomatic* (meaning “mind-body”) condition.

Psychosocial dynamics can worsen or extend back pain in several ways. In *respondent conditioning*, mental stress about an injury induces muscle tightness and spasm, constriction of blood vessels, and the release of chemicals that produce pain. This pain leads to more stress and creates a pain-stress cycle.

*Operant conditioning* occurs when an individual associates pain with attention from others and is behaviorally conditioned to feel pain in order to receive continued attention.

*Conditioned fear of reinjury* is exactly what the term suggests — the individual is afraid of experiencing pain again and becomes immobilized, slowing rehabilitation and, ironically, extending the pain.

Psychosocial wellbeing at the onset of back pain is amazingly predictive of how easily an individual will recover. Numerous studies have assessed the psychosocial status of back pain patients to predict which patients will or will not have recovered by a one-to-five-year follow-up.

Researchers correctly classified up to 82 percent of patients, and one study revealed that psychosocial factors

gave a much more accurate forecast for recovery than structural measures like MRI and discography testing (*J Clin Epidemiol* 2005;58:714-8).

On the other hand, depression sometimes develops for the first time in cases of chronic pain. This is especially true when a patient loses a degree of mobility and independence.

An Australian study of 812 pain patients found that depressive symptoms correlate strongly with not only pain and disability but also low perceptions of social support, self-efficacy in dealing with pain and catastrophizing (*Med J Aust* 2009;190:S66-70).

Conversely, another analysis linked perceptions of control over pain and decreased catastrophizing with less disability and pain intensity (*J Consult Clin Psychol* 2001;69:655).

The importance of strong social support in recovery is further underscored by a survey of pain patients and their partners. Patients ranked their perceptions of how positively or negatively they felt their partners responded to their pain. Perceived negativity from partners showed significant association with disability and depression — much more so than the partners’ self-ratings of their reactions (*J Pain* 2006;7:91-9).

### Psychosocial Therapies

Research reviews confirm that a multifaceted approach to pain — one that includes physical as well as psychosocial interventions — achieves better short-term and long-term results than physical intervention alone.

A meta-analysis of 22 studies of psychological therapies supports their value for back pain patients. These approaches include cognitive-behavioral therapies, self-regulatory techniques (like biofeedback and relaxation) and counseling (*Health Psychol* 2007;26:1-9).

Beliefs and self-talk about pain can have a huge influence on recovery. Positive thoughts about ability to man-

age and bounce back from pain help patients return to normal activity and maintain better psychological wellbeing, compared with negative self-talk about pain (*Pain* 2000;84:347-52). Staying as active as possible is also important — distraction cuts down on the perceived intensity of pain (*J Psychosom Res* 1998;44:251-9).

Mind-body techniques also effectively reduce the severity of pain and associated depression. Biofeedback increases awareness and control of bodily functions such as heart rate and muscle tension. Researchers find that biofeedback reduces pain-related anxiety, thus reducing the pain itself (*J Consult Clin Psychol* 2008;76:379).



Deep breathing techniques also have the power to reduce pain (*Pain* 2010;149:12-8).

Finally, interpersonal support is key for recovery from back pain. Patients with social support are able to return to work more quickly after back injuries (*Orthopade* 2010;39:866-73).

Aside from supporting recovery from back pain, the power of psychosocial therapies reduces the need for potentially addictive painkillers.

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