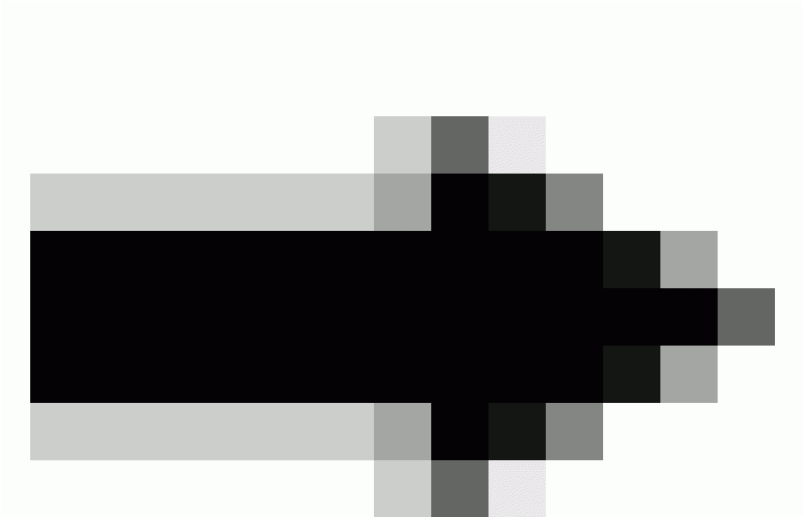
Dynamic Chiropractic



BACK PAIN

The Modern Report of Findings: The Role of Reactivation

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Musculoskeletal pain patients in general, and LBP patients in particular, require an approach that addresses the physical (biological) and psychosocial dimensions of their problems. This modern approach is called "biopsychosocial" (BPS), in that the total patient is our subject. Rather than focusing on structural causes and cures, this new paradigm emphasizes the goal of maintaining or restoring function. Such an approach is of value, regardless of the pathoanatomic diagnosis.

Patients with acute spinal problems tend to improve quickly, although recurrence is the norm and dissatisfaction is high.[6,35] Those who develop chronic pain or become disabled are failed by a health care system that characteristically falls into the trap of overemphasizing the structural cause of pain, rather than early on providing reassurance that there is no serious disease, and that the road to recovery is through gradually resuming normal activities and restoring function.[4,14,23]

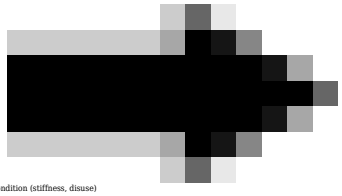
According to the International Association for the Study of Pain (IASP), pain does not simply result from structural injury or pathology, but is an "unpleasant sensory and emotional experience associated with actual or potential tissue damage..."[27] Pain has its origin in peripheral activation from physical sources, howeve, it is also modulated in the dorsal horn (Melzack andWall's gate control theory) and by descending influences largely of psychologic origin.[25] Concurrent evaluation of both the sources of pain and the psychophysical perceptions that lead one to fear, and thus avoid activity, should be addressed so that reactivation can occur.[14,22,33]

Table 1:The Road to Recovery is through Activity[48]
A. "Hurt equals harm" coping strategy:

Catastrophizing of pain (anxiety, apprehension)

Fear of movement

Activity avoidance



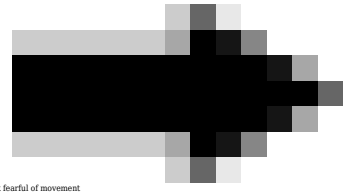
Decondition (stiffness, disuse)

Debilitation (disability, depression)

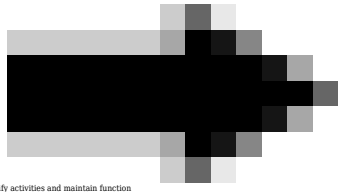
Re-injury, recurrence.

B. "There's a difference between hurt and harm" coping strategy:

Discomfort and injury are not equal



Not fearful of movement



Modify activities and maintain function

Recover.

Diagnosis should place patients in clinically useful categories that can guide treatment decisions and influence outcomes. Diagnostic labels are often assigned on the basis of imaging results, yet the correlation between pathoanatomy and clinical symptoms is poor! Labeling of patients as having herniated discs or degenerative arthritis - which are often coincidental findings - can have negative effects on recovery by giving them the idea they are injured or damaged.[3,22] According to Deyo, "We often apply frightening labels and employ a lot of irrelevant tests for our patients. The diagnostic labels themselves may be disabling."[11]

Indahl suggests that since patients need an explanation of what is wrong, it is reasonable to offer them a specific diagnosis, but that this must be coupled with "back school," which explains to them that the painful tissue recovers better with gradual and consistent movement, rather than rest.[14]

Since most acute LBP patients begin improvement fairly quickly, a strong argument can be made for minimalism in this stage.[12] Back pain may best be viewed as an illness, like the common cold. It runs its course, but is usually not something like an injury or disease, which necessitates excessive testing or treatment. In fact, overly aggressive diagnostic and therapeutic approaches may have iatrogenic side effects. Most experts agree that a simple approach, including reassurance that there is no serious disease, reactivation advice, and medication or manipulation for pain relief, are the mainstays of appropriate acute care.[1,10,28]

Disabling Beliefs

Patients who equate hurt with harm develop a disabling form of thinking. This is part of fear-avoidance behavior that promotes deconditioning (see Table 1).[33,34] Patients who are advised to "let pain be your guide" often decondition as a result of their pain. It is important to identify patients who are fearful and avoid encouraging them to take on a "sick" role.[22] Psychological variables have been demonstrated to account for 26 percent of self-reported pain, and 36 percent of self-reported disability (Roland-Morris scale).[24]

Fear-avoidance impacts performance by limiting effort. Individuals who perceive or expect an activity to be painful have reduced physical performance abilities.[17,18] In fact, the cognitive association of activity with pain or anticipation of pain has been shown to be more predictive of physical performance than purely nociceptive factors.[2] Council, et al., examined the association between pain expectancies and illness behavior by asking patients to anticipate how much pain they would experience when performing a number of simple motor tasks.[9] They found substantial correlations between pain expectancies and self-rated physical disability.[42]

Ciccione showed that depression, somatization, and current pain ratings in chronic pain sufferers combined to explain 34 percent of the variance in work disability.[7] By contrast, these same variables explained only eight percent of the variance in an acute sample. Such findings reinforce other studies' conclusions that psychosocial variables are significantly correlated with illness behavior in patients with chronic pain.[8,16,21] In fact, it is highly likely that these psychosocial factors result from persistent pain rather than being its cause!

Surprisingly, Ciccione showed that pain expectancies accounted for 33 percent of the variance in acute subjects ($P < .001$), but only 16 percent of the variance in chronic patients ($P < .001$).[7] Thus, fear-avoidance beliefs such as pain expectancies begin in acute pain and precede other psychosocial problems that develop as acute pain becomes chronic!

Patients who are at the greatest risk of developing chronic pain often have poorly developed coping skills.[15] They may tend to catastrophize their illnesses and feel there is nothing they can do themselves.[4] Patients who fear pain or an inevitable poor outcome are also less likely to perform exercise[33,34] and more likely to avoid activities.[13] Patients with fear-avoidance behavior can easily become deconditioned through activity avoidance, rest, symptomatic care, etc.

Table 2: Problem-Solving Process[29]

1. Identifying and selecting a problem
2. Analyzing the problem
3. Generating potential solutions
4. Selecting and planning a solution
5. Implementing a solution
6. Evaluating the solution

Thus, teaching patients what they can do for themselves is an essential part of caring for the person who is suffering with pain. Psychosocial and physical deconditioning go hand-in-hand since many individuals have the belief that they will be unsuccessful gaining control over symptoms (locus of control) or regaining lost function (self-efficacy). Such beliefs have also been shown to delay recovery.[4,30,37]

Stress, muscle tension and pain are interrelated.[22,26] Patients should be informed that fear or stress increases muscle tension, which can exacerbate pain.[14] Insight into this relationship helps to reassure a patient that pain is not exclusively due to an injury or irreversible structural pathology, but also to other factors that are potentially controllable.

Reactivation Beliefs

Treatment of psychological deconditioning has been successful. A simple technique for getting patients to become active in their own rehabilitation programs is to shift them from being pain avoiders to pain managers.[5] Reactivation approaches without a psychological component have been shown to improve psychological illness behaviors.[24] More comprehensive programs have traditionally involved cognitive-behavioral approaches focusing on graded exposure to generalized movements.[5,19,20] This has recently been modified by exposing the patient to the specific movements or activities avoided, and addressing the fearful beliefs and emotions that accompany them.[31,32] Another new strategy teaches patients to approach LBP in a problem-solving manner by: a. taking an active role; b. reducing modifiable risk factors; and c. avoiding impulsively to seek mainly symptomatic relief (see Table 2).[29]

a. Advice to Stay Active

Information and advice emphasizing the value of fitness and the safety of resuming activities achieved superior outcomes to that which reinforced rest, activity restrictions and the notion that the spine was injured or damaged (arthritis, herniated disc).[4] Reassuring workers and encouraging resumption of ordinary activities was superior to medication, bedrest or mobilization exercises.[23] Table 3 summarizes the reactivation advice process.

Table 3: Summary of reactivation approach	
Why -	dispel the myth that rest is required or that the spine is vulnerable;
When -	day one;
What -	that normal activities can be resumed (walk, swim, bike, etc.) and education about simple activity modifications to reduce biomechanical strain (i.e., exercises such as the hip hinge, cats, abdominal bracing);
How -	an educational discussion about mutual recovery goals and the means to reach those goals.

b. Types of Specific Advice

Reactivation advice requires an educational discussion about recovery goals and the means to reach those goals. It starts with reassurance of the safety of gradually resuming normal activities such as walking, swimming, and biking.

Normal activity is necessary to prevent the debilitating effects of inactivity. It is important to acknowledge that these activites may be uncomfortable, but the patient should be reassured that hurt does not necessarily equal harm. The above activities, while possibly uncomfortable, are less stressful than prolonged sitting. When people have the flu, their backs hurt because they have been resting. Similarly, pain when returning to activity is not usually due to harmful activity, but is a result of debilitation (i.e., rust!).

Along with advice to gradually resume normal activities, education about simple activity modifications to reduce biomechanical strain (i.e., early morning flexion, hip hinges, cats, abdominal bracing, etc.) is important. A basic activity modification advice for severe pain is to limit sitting to 20 minutes and limit unassisted lifting to 20 lbs. While healthful biomechanics can hopefully facilitate recovery and prevent recurrences, it can also have an unanticipated negative effect of deconditioning the patient! Strict avoidance of bending, reaching and lifting will certainly decondition. This is like wearing a brace or cast for too long.

If we modify activities to reduce harmful biomechanical stress and strain then we must provide some prescribed therapeutic exercise to maintain conditioning of those important muscles. An example: advising patients to avoid lifting with their spines in full flexion, especially early in the morning or after prolonged sitting. In such a case it is important to also prescribe cat/camel exercises to maintain mobility throughout the entire functional range of motion and to teach patients not to overprotect their backs during otherwise routine safe activities (i.e., forward bending in a back that is warmed-up).

According to the *Occupational Health Guidelines* (OHG),[36] the first treatment is generally acknowledged to be advice to remain active. "There is strong evidence that advice to continue ordinary activities of daily living as normally as possible, despite the pain, can give equivalent or faster symptomatic recovery from the acute symptoms, and lead to shorter periods of work loss, fewer recurrences, and less work loss over the following year than does "traditional" medical treatment (advice to rest and 'let pain be your guide' for return to normal activity).

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