

Coping with Chronic Repetitive Strain Injury Pain

By Tamara Mitchell



Even with the best care and proper ergonomics, sometimes pain from repetitive strain injury continues for months or even years. In this article we explore the ways people deal with pain and how to effectively cope when pain has become a part of life.

Most importantly, we are not saying that you should “work through” pain and ignore the signals that injury is occurring. You always should be aware of the warning signals your body is giving you. But, when injury has already occurred and you healing, there is often chronic pain that is always present. It can interfere with sleep, enjoyment of life, and really become a boundary and backdrop to your whole life.

When pain becomes chronic, psychological factors move to the forefront in dealing with the injury.¹ Little research has actually been done with regard to psychological response for many types of injuries, however high levels of psychological distress have been found in patients with myofascial pain (including temporomandibular joint (TMJ) syndrome and lower back pain).¹ Bringing psychosocial factors into the equation of repetitive strain injuries (RSI)/cumulative trauma disorders (CTD) may undermine the case for people suffering from these health issues because it moves the person from a category of being a medical patient to being a mental patient.² Western lay thinking about illness has a deep division between mind and body engrained by the biomedical model of health-care professionals.² Research has shown that patients without psychosocial problems in conjunction with medical conditions are viewed as more credible than those either with or without a known physical cause, but who claim that there are some psychosocial problems associated.² In many cases of RSI, no physical cause can be found for the pain experienced by a patient.

Slowly, thanks to the work of researchers and practitioners over the years such as Jon Kabat-Zinn, Andrew Weil, and many others, the close connection between mind and body is receiving attention and credibility. It still has a long way to go, but in the case of RSI, we know that the link between mind and body is very close resulting in physical manifestations of psychological traumas, especially with stress and other emotional burdens. At the same time, injury and pain place their own psychological burdens on people, often resulting in more stress, depression, anger, etc.

This article is devoted to exploring research and suggestions found to be successful in helping people deal with the burden of chronic pain.

Identifying pain triggers and breaking pain cycling patterns.

Through either an interview process or a diary, it can be very helpful to identify behavioral and social factors that may be influencing pain. The following factors should be considered:³

1. Time pattern. Identify activities that precede pain and identify diurnal patterns of pain.
2. Environmental responses. Determine how other people in your life such as co-workers, family, or friends respond to pain-related behaviors. It might be possible that others are reinforcing these behaviors.
3. Pain activators or diminishers. Pinpoint activities that increase or decrease pain.
4. Changes in activity because of pain. How has life changed because of pain for you and/or for your spouse/partner?

Through studying patient diaries, it has been found that there is a tendency to work until a point of pain tolerance is reached and then there is a period of rest.³ This “pain cycling” pattern becomes habitual with periods of work and rest decreasing in length. Training can break this cycle by pacing activities and taking breaks based on a time interval rather than waiting for excessive pain. This can help people tolerate activities that have the potential to cause them pain if they keep at them long enough and to resume activities they may be avoiding due to the potential for pain, but may not cause pain in shorter intervals

Research: Questionnaire results.

Two different questionnaires have been devised to assess thought processes and to determine if there are any patterns that emerge in people who are experiencing chronic pain.

The Coping Strategies Questionnaire (CSQ) assesses six cognitive and one behavioral strategy for coping with pain:⁴

1. diverting attention away from the pain (cognitive)
2. reinterpreting pain sensations (cognitive)
3. coping self-statements (cognitive)
4. ignoring pain sensations (cognitive)
5. praying or hoping (cognitive)
6. catastrophizing (cognitive)
7. increasing activity (behavioral)

Patients use a 7-point scale to indicate how often they use a particular coping strategy.⁴ At the end of the test, the patients also rate the effectiveness of their coping strategies along two dimensions: the ability to control pain and the ability to decrease pain.⁴ This questionnaire has been used in a variety of studies, but one series of studies looked at patients with osteoarthritis in the knees.³ Analysis revealed that two factors accounted for 51% of the variance in responses. Factor 1, called Coping Attempts, were correlated with diverting attention, reinterpreting pain sensations, coping self-statements, ignoring pain sensations, praying or hoping, and increased activity level. Factor 2, called Pain Control and Rational Thinking were negatively correlated with catastrophizing and positively correlated with the abilities to control pain and decrease pain.⁴

Patients who scored high on Factor 2, the Pain Control and Rational Thinking factor, exhibited lower levels of impairment on dexterity, mobility, household activities, anxiety, depression, and pain.⁴ These patients moved from a standing to sitting position, from a standing to a reclining position, and walked 5m significantly faster than patients who measure low on Factor 2.⁴ They also exhibited less knee-rubbing behavior. Patients who measured high on Factor 1, Coping Attempts, exhibited a higher level of rigidity.⁴

In related research, patients who showed increases in scores on Factor 2 after undergoing cognitive-behavioral treatment, were also much more likely to have improvement in physical disability.³ In another study of patients with upper-extremity pain, cognitive-behavioral treatment

resulted in a significant increase in the frequency of active coping strategies compared to a control group of patients placed on a waiting list for treatment.³ A review of 33 papers and 24 trials concluded that cognitive-behavioral therapy is effective, particularly with respect to reducing the pain experience, improving cognitive coping and appraisal (opposite of catastrophization), and reducing behavioral expressions of pain.⁵ The review also concluded that cognitive-behavioral therapy did not have a significant effect on mood/affect (eg. depression), cognitive coping, and catastrophization.⁵

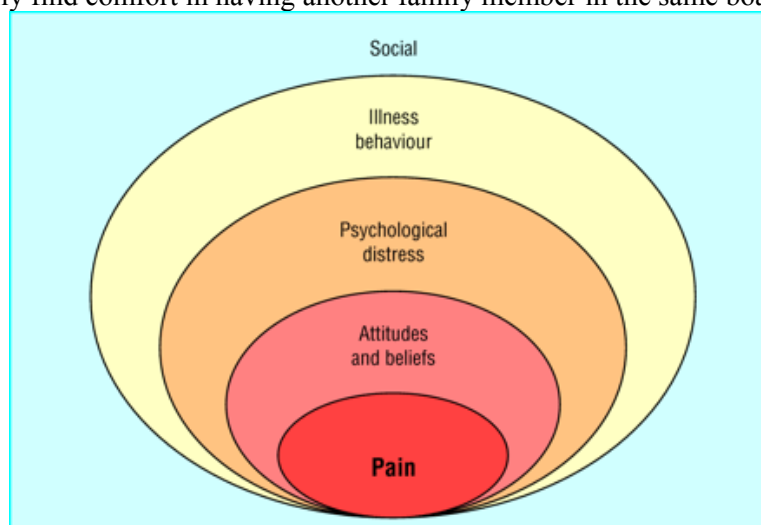
The Cognitive Errors Questionnaire (CEQ) consists of 24 short vignettes covering a wide range of life situations (work, family/home, recreation) ending with a statement of cognitive distortion.³ People taking the test are asked to rate on a 5-point scale how similar the statement is to what they would think in a similar situation. There are four types of cognitive errors:

1. catastrophizing. Expecting a catastrophic outcome from the event.
2. over-generalization. The outcome of one event is generalized to the same or similar events in the future.
3. personalization. Taking personal responsibility or attributing personal meaning to a negative event.
4. selective abstraction. Paying attention to the negative aspects of a situation.

Research studying people with lower back pain were tested on situations relating to back pain as well as general life experiences. Depressed people with or without lower back pain made more cognitive errors than people who were not depressed. People with both depression and lower back pain were especially prone to make cognitive errors and endorsed more errors on pain-related items than pain-free depressed subjects.³

Research: Social reinforcement for pain behaviors.

As suggested above, pain behaviors may be unintentionally reinforced by others around you. One study found a highly significant correlation ($p < .001$) between patients with family members with at least one disability and occurrence of CTD.³ 52% of CTD patients had at least one family member who was disabled, while only 15% of the control group (asymptomatic workers) had a disabled family member. The authors of the study conjectured that a “disabled” support system may serve to support and maintain disability in CTD patients.³ In addition, disabled family members may be serving as role models for pain and illness behaviors and disabled family members may reinforce these behaviors when they are displayed by the CTD-injured person.³ This may be totally unintentional, but misery loves company and when one person is disabled, they may actually find comfort in having another family member in the same boat with them.



Research: Belief systems.

People with chronic pain may have formed maladaptive beliefs about the diagnosis and treatment of pain, expecting treatment to fail, which serves to increase severity of pain and reduce compliance with treatment.³ Research shows that there are 3 basic dimensions of pain:

1. self-blame: believing that they are to blame for their condition.
2. mystery: the pain cannot be explained and is a mystery to them and everyone else.
3. time: the pain will persist in time.

People who scored high on the “time” and the “mystery” factor were found not to comply well with physical therapy and cognitive-behavioral pain management.³ People who scored high on the “mystery” factor also had higher levels of somatization and psychological distress.³ Somatization is a chronic disorder where there are numerous complaints with no identifiable physical origin that can last for years and result in substantial physical impairment.^{6,7} This is a psychiatric diagnosis, the pain is very real, and the patient may visit many doctors seeking help they think they need, but for which there is no cure.⁶

Other research studying the success of multidisciplinary rehabilitation for lower back pain found that those patients who did not complete the program due to lack of compliance were characterized by lower return to work expectations, heightened somatization, pain intensity and perceived disability.⁸

Research: Cognitive-behavioral intervention.

Studies have shown that cognitive-behavioral intervention either alone or in combination with multidisciplinary treatment can be very helpful in reducing pain, depression, and disability through teaching better coping strategies, relaxation, anger management, frustration, and other emotional responses.^{3,9} Learning to deal with pain and can break the cycle of negative reactions that lead to further disability.



This has been shown to work through either individual or group counseling, alone or in combination with traditional rehabilitation programs in as few as 5 sessions.^{3,9,10} A review of 23 years of research on cognitive-behavioral therapy in treatment of specific syndromes (chronic fatigue, IBS, etc) and general somatization and hypochondria, was shown to improve the physical symptoms in 71% of the studies and a trend of improvement in 11% more studies.¹⁰ Reduction in psychological distress and improvements in functional status was generally somewhat less, but advantages were shown for both of these as well. Results appear to be long-lasting over months or even years and may enable people to return to work successfully.^{3,11} Certain types of pain may not be benefited as much as others, as evidenced by one study that found biofeedback to be a more effective long-term therapy for chronic back pain and temporomandibular pain.¹² In 6 and 12-month follow-ups only the biofeedback group (compared with cognitive-behavioral treatment

and conservative medical treatment) maintained significant reductions in pain severity, interference, emotional distress, pain-related use of the health care system, stress-related reactivity of the muscles, and an increase in coping self-statements.¹²

Examples of some components of cognitive-behavioral intervention are:

Components	Objectives
Cognitive restructuring	<ol style="list-style-type: none"> 1. Challenge maladaptive pain beliefs. 2. Accept the role of psychological variable in pain experience. 3. Reduce the frequency of negative thoughts.
Goal setting	<ol style="list-style-type: none"> 1. Increase activity. 2. Re-establish social contracts. 3. Increase reinforcing events and activities. 4. Enhance time management skills.
Relaxation training	<ol style="list-style-type: none"> 1. Reduce overall muscle tension. 2. Reduce tension during stressful events and repetitive work tasks. 3. Interrupt pain-tension-pain cycle. 4. Progressive relaxation and biofeedback.
Training in cognitive coping strategies	<ol style="list-style-type: none"> 1. Divert attention from pain using imagery, distraction. 2. Reinterpret pain sensations – relabeling. 3. Self-hypnosis. 4. Problem solving skills.
Communication skills	<ol style="list-style-type: none"> 1. Learning to make requests. 2. Refusing unreasonable requests. 3. Dealing with supervisors and co-workers.
Sleep hygiene	<ol style="list-style-type: none"> 1. Stimulus control methods to improve sleep. 2. Relaxation to assist in decreasing tension.

Mindfulness-integrated Cognitive Behavioral Therapy (MiCBT)

Though cognitive-behavioral intervention or therapy (CBT) has proven to be very helpful in dealing with many types of chronic pain, a recent approach is to integrate principles of CBT with the principles and skills of mindfulness. The theory is that once a trigger is perceived, it's judgment at higher cortical levels leads unavoidably to some co-emerging body sensations and automatic mindless reactions.¹³ Studies found that preventing these reactions while remaining fully aware and accepting bodily experiences leads to a rapid extinction of conditioned responses, whatever the nature of the disorder.¹³ Main principles of mindfulness training are acceptance and observation of fleeting thoughts and corresponding body sensations without reacting to any experience.¹⁴ By paying attention to the various levels of the experience, objectively attending to the physical, emotional, cognitive, behavioral, and interpersonal aspects, sufferers discover new perspectives on the problem.¹⁴ Jon Kabat-Zinn has found that not only are new insights gained, but by doing this, the patient gains greater sense of self-control, self-efficacy, and well-being.¹⁴ In other cognitive approaches, maladaptive thoughts are replaced with adaptive or positive thoughts. Mindfulness therapy involves disengaging from additional thoughts entirely.¹⁵ It encourages simple observation of all thoughts, positive and negative, along with physical sensations.¹⁵ Patients can learn that often their thoughts in response to a symptom make the sensation much worse, so by learning to eliminate the thoughts associated with the pain, you can eliminate the agony.¹⁵

This approach to dealing with chronic pain is relatively new. Research is fairly preliminary, but controlled studies have shown that MiCBT is significantly effective in helping patients deal with a large number of chronic physical and psychological problems. We feel that this approach is very promising in dealing with chronic CDT pain.

Tools for coping

A multimodal approach is the most successful way to deal with chronic pain of any type. The following list suggests ways to maximize your overall health and minimize the suffering associated with your pain symptoms:^{16, 17}



1. **Acknowledge your feelings** about pain and how it affects you. Anger, blame, guilt, frustration and sadness are normal feelings. Share these feelings with your friends, family, and healthcare workers and allow them to support you and seek out ways to cope.¹⁶
2. **Manage stress and emotions.** Find ways to reduce stress in your life and you will likely experience less pain. As we discussed in our article on stress, it aggravates inflammation in the body. Follow our suggestions in that article to reduce your response to stressful situations.
3. **Adopt a healthy lifestyle.** Taking care of yourself physically is important.^{Wisconsin}
 - a. **Eat an anti-inflammatory diet.** Read our article on inflammation, Arming Your Body in the Inflammation Battle (<https://insider.sri.com/services/ehs/ergo/articles/archive.html>) to understand the foods that you should and shouldn't eat. Lose weight if you need to.
 - b. **Drink plenty of water.**¹⁶ Drink at least 32 oz. of water every day to keep body tissues hydrated.
 - c. **Exercise.** Cardiovascular fitness is highly associated with overall health and with a positive outlook on life. Find a form of exercise that you enjoy and that will not aggravate your symptoms and make it a part of every day.^{16,17} When you are in pain, you might feel like skipping exercise, but that may make matters worse. Follow the directions of a physical therapist on an exercise program that you can do most days of the week to increase strength, endurance, and flexibility.¹⁶ If your body is out of shape, you may feel more pain the first few weeks, but it's probably not because your chronic pain is worse.¹⁶
 - d. **Control painful movement and avoid overexertion.**^{16,17} If you keep a log of your symptoms, you will be able to identify movements and activities in your daily life that aggravate your symptoms. Exclude those movements or look for adaptive equipment that will let you perform the activity without the associated stress or in a different way.

Overexertion is a danger when your pain level is lower and you push yourself to accomplish things you couldn't when pain was more severe.¹⁶ You need to build back slowly to the activities you used to do, so learn to pace yourself and do the same amount of activities each day even on days when pain is less. Alternate activity with rest throughout the day.

Learn to discriminate between flare-ups and new pain. Flare-ups are an increase in existing pain, but rarely require further tests or doctor visits. Work with your practitioner to come up with a plan for you to follow when flare-ups happen. If you've kept an activity journal, try to identify what might have triggered the

- flare-up.¹⁶ Your plan for flare-ups may include changing activities or pace, relaxation skills, getting more sleep, icing, or increasing medications.¹⁶
- e. **Get plenty of sleep.**¹⁶ For most people the amount of sleep they get is closely linked to mood and pain. Sleep allows the body to heal and restore hormone levels. Get at least 6 hours of sleep and use exercise to ensure sound sleep, staying away from drugs and foods that disrupt sleep (eg. Coffee, tea, sleeping pills, alcohol).
 - f. **Be cautious with medications.**¹⁶ Medications may be prescribed as part of your treatment, but understand that they are rarely the answer to chronic pain and almost always have side effects. Take them as prescribed. Never take more than prescribed and do not mix them with over-the-counter drugs.¹⁶
4. **Set realistic goals.** Pain may not go away, but it's important to not let it rule your life. Set and meet goals to improve the quality of your life and help you feel less pain.
 5. **Take an active part in your care.**¹⁶ Professionals can help you control pain and look for ways to manage it, but you are the most important member of the treatment team because only you can make the changes that will lead to improvement.¹⁶
Attending group sessions can be very helpful and informative. Search for Repetitive Strain Injury support groups, classes on mindfulness meditation, gentle yoga, and other resources, on our website at: <https://insider.sri.com/services/ehs/ergo/groups.html>.

By learning more about your condition, you will discover keys to improvement. Read about your injury online, read our Feature Articles that apply to your issue: <https://insider.sri.com/services/ehs/ergo/articles/archive.html>, and learn more about RSI <https://insider.sri.com/services/ehs/ergo/prevention.html>.

6. **Get professional counseling.**¹⁶ Psychological counseling should be part of managing chronic pain for everyone. A good counselor can help you learn to cope with stress, isolation, and disruptions that pain can cause. Learning about your own coping methods and learning new ways to cope can help as much as any medicine or physical therapy.¹⁶

RESOURCES:

American Chronic Pain Association (ACPA)

<http://www.theacpa.org/>

email: acpa@pacbell.net

The ACPA

P.O. Box 850

Rocklin, CA 95677

1-800-533-3231

Sorehand Repetitive Strain Injury Online Support Group

Online discussion group and access to archives since 1999. Free subscription.

<http://www.sorehand.org/>

Stanford Center for Integrative Medicine

Classes in Mindfulness Meditation, Love Yourself, and others

<http://www.stanfordhospital.com/clinicsmedServices/clinics/complementaryMedicine/default>

National Association of Cognitive-Behavioral Therapists (NACBT)

Search for a therapists certified by NACBT near you:

<http://nacbt.org/searchfortherapists.asp>

Association for Behavioral and Cognitive Therapies (ABCT)
Find a licensed professional (psychologist, psychiatrist, or clinical social worker) who have met requirements for membership in ABCT: <http://www.abct.org/>

BOOKS & CD's

Managing Pain Before It Manages You
by Margaret A. Caudill, MD, PhD.
The Guildford Press, New York, 1995

The Chronic Pain Control Workbook
By Ellen Catalano & Kimeron Hardin
New Harbinger Press, 1996

Mindfulness-Integrated Cognitive Behavior Therapy
CD's available for training and practicing <http://www.mindfulness.net.au/>

This article and all of our articles are intended for your information and education. We are not experts in the diagnosis and treatment of specific medical or mental problems. When dealing with a severe problem, please consult with a healthcare or mental health professional and research the alternatives available for your particular diagnosis prior to embarking on a treatment plan. You are ultimately responsible for your own health and treatment!

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