

An Integrative Approach to Low Back Pain

How common is low back pain?

Low back pain is very common. About 75% of individuals (three out of every four people) will experience low back pain at some point in their lives. It is one of the most frequent reasons for clinic visits.

What causes low back pain?

There are many causes for low back pain. Some of the most common ones include: accidents, injuries, tight muscles from the hassles of daily life, and changes in the body due to getting older and/or being overweight. Only about 3% (3 out of 100 people) will have low back pain from cancer, infection, or diseases in other organs. Stress can affect how strong the pain is and how long it lasts.

When should I see a clinician for low back pain?

Usually back pain goes away on its own, and you do not need to see a clinician. It is a good idea to make a clinic appointment if:

- your pain is severe
- the pain does not get better over time
- your pain is from a fall or an injury
- you have had cancer
- you have any of the following along with back pain: trouble urinating; weakness, pain, numbness, or tingling in your legs; fever; or unplanned weight loss.



Courtesy: NIAMS

How long does back pain last?

Low back pain can be **acute**, lasting less than six weeks, or **chronic**, lasting longer than three months. If it is chronic, you might feel it all the time, or it might come-and-go. Most people (60%) who have acute pain recover in one week. Sixty to 90% of patients recover in six weeks. Ninety-five percent of patients recover in 12 weeks. Of concern, back pain tends to recur within six months for 40% of patients.

How is low back pain treated?

Low back pain is treated in a variety of ways.

1. **Acute pain usually goes away on its own.** It is important to stay active, and not lie in bed. The following approaches may help you feel more comfortable:
 - take over-the-counter pain medication
 - apply heat to the back, then ice, then heat again (Apply each for 20 minutes. Protect your skin, so you do not burn or freeze it. Do this two or more times per day.)
 - receive therapy from a chiropractor or osteopathic physician. (An osteopathic physician uses her/his hands to move your muscles and joints by stretching, using gentle pressure and resistance. This is called osteopathic manipulative treatment or OMT).



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2. **See your primary care clinician if your pain does not improve.** Your clinician will determine if you need further testing to search for a specific cause for your pain. If a cause is found, ask about your options for treatment.
3. **Receive treatment for chronic pain.** If a specific reason is not found for your pain, it is then important to start treatment early to prevent long-term pain and disability. There are a number of treatments for **chronic** pain. Some are expensive and may not help all that much. Also they may not be safe to use long-term.

Chronic severe low back pain is often treated with narcotic medication called opioids. Recent research suggests that this may not be the best approach for people without cancer. Long-term use of opioids may even increase pain, because the medicine can make you more sensitive to it. In Denmark, over 10,000 patients with chronic pain who did not have cancer participated in a study testing long-term opioid treatment. Researchers found that overall this drug treatment did not provide relief from pain, did not improve patients' quality of life, and did not improve their ability to function. Other problems with opioid medication include: side effects, the possibility of misusing or abusing the drug, and a need for larger doses over time. Even overdose and death can occur. Also, by taking a narcotic drug, you may not learn what will help your body heal.

Evidence-based medicine is treatment based on the best available information learned through research or experience. The National Institute of Clinical Excellence (NICE) in the United Kingdom recommends the following evidence-based treatments to manage low back pain: manual therapy, acupuncture, non-steroidal anti-inflammatory drugs, psychological therapy and exercise. A study reported in 2008 of warehouse workers with low back pain found that a combination of acupuncture, relaxation exercises, exercise, dietary advice, and a back care booklet was more helpful than a combination of only physical therapy education and a back care booklet. In the long-run, the treatment involving the acupuncture also cost less.

How does Integrative Medicine treat back pain?

Our integrative approach has three goals

1. to encourage you to assume an active role in your care
2. to decrease your pain and increase both your ability to function and your quality of life
3. to prevent chronic disability while reducing your need for long-term therapies such as medications, injections or manipulation.

In this handout, we will share our evidence-based suggestions for managing low back pain. This approach involves:

- **A team of helping professionals.** You may work with several different specialists.
- **Guidance from your medical home.** It is best if your care is managed by your primary care clinician or a health coach communicating closely with your primary care specialist. Research has shown that having your care managed by a clinician who knows you well can improve your care and reduce cost. If needed, your clinician can prescribe pain medication and/or refer you to a pain clinic while continuing to follow-up with you.



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- **Patient-centered care.** No therapy for low back pain has been found to be better than another. When this is the case, your treatment may be more successful if you are able to choose options that fit best with your interests, daily schedule, and your beliefs.

Treatment Approaches

We have organized treatment recommendations into three categories:

1. External/Physical (which includes Chiropractic, Osteopathic Manual Therapy, Massage Therapy, Acupuncture and non-steroidal anti-inflammatory drugs [such as ibuprofen or naproxen sodium])
2. Internal/Emotional
3. Reconditioning (strength and support)

Work with your primary care clinician to choose one therapy from each of the three groups for your treatment plan to help reduce chronic pain. The options you choose and the timing of each is up to you and your clinician.

1st Therapy Group Options

- **External/Physical**
 - **Direct force to joints of the spine.** The hands-on work done by chiropractors and osteopathic physicians can involve both direct and indirect techniques. Direct techniques use force to restore motion to a joint. This involves movement past the range that you can do yourself. Direct techniques of the spine have been found to improve pain and the ability to move. All major international medical guidelines recommend it as a treatment option for both acute and chronic low back pain. You are most likely to be helped by this approach if you have had pain for less than 16 days, you do not have symptoms that travel below your knees, and you do not avoid movement because you fear the pain will become worse.
 - **Indirect manual therapy and muscle energy techniques.** Indirect techniques stay within the range of motion that you can do yourself. They include:
 - **strain-counterstrain:** briefly moving the tender area to a position of greater comfort and then returning to the original position
 - **myofascial release:** gentle pressure applied over time into the fascia (the body's connective tissue). This helps the fascia to become longer and more relaxed, while eliminating pain and restoring motion.
 - **spine mobilization:** gentle movement of the joint to restore normal motion
 - **cranio-sacral therapy:** very light touch used to balance the bones, nerves, fluids, and connective tissue of the head and spinal area.



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Courtesy: NCCAM

In **muscle energy therapy**, you are guided to use your muscles in a direction opposite of pressure applied by the clinician.

These techniques are used by many different clinicians including osteopathic physicians, chiropractors, physical therapists and massage therapists among others. Indirect techniques are helpful for both acute and chronic low back pain.



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- **Massage.** Massage therapy involves moving the soft tissues of the body, returning them to normal. Therapists use their hands, forearms or elbows to apply pressure, hold, or cause the body to move. There are different types of massage for different purposes. Therapists tailor their approach to match each patient's unique needs.



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Massage has been found to be similar to exercise in improving back pain and function. In a study on chronic low back pain, 401 patients were assigned to one of three treatment groups: 1) structural massage, 2) relaxation massage and 3) usual care. After 10 weeks, patients who received either type of massage could move better and had fewer symptoms than those who received usual care. These benefits lasted up to six months. One type of massage was not better than the other.

- **Acupuncture**
Acupuncture involves inserting very thin, sharp sterile needles into the skin. The needles are placed in specific spots in the body. Acupuncture improves the flow of energy and fluids in the body. The body can get out of balance, and the energy called qi (pronounced chee) becomes blocked. Discomfort or pain can occur when qi is blocked. Acupuncture helps unblock qi. It also helps release the body's natural pain-relievers.

Acupuncture can reduce pain and improve function. It appears to work better when combined with other therapies such as spinal manipulation and exercise therapy. In a study of 298 patients with chronic low back pain, acupuncture and "minimal acupuncture" was compared to no treatment. ("Minimal acupuncture" involved lightly placing needles at places on the body not known to be helpful.) After 12 sessions over eight weeks, people in both acupuncture groups experienced less pain than the patients who did not receive treatment. These benefits lasted up to a year. Acupuncture appears to be more helpful for chronic low back pain than for acute low back pain. Evidence shows that acupuncture helps more over the long-term and is less likely to cause harm than epidural steroid injections, which are a common treatment for low back pain.

- **Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)**
NSAIDs are medications used to help control pain and inflammation. Many, such as aspirin and ibuprofen, are available over-the-counter without prescription. One side effect is an increased risk for bleeding.

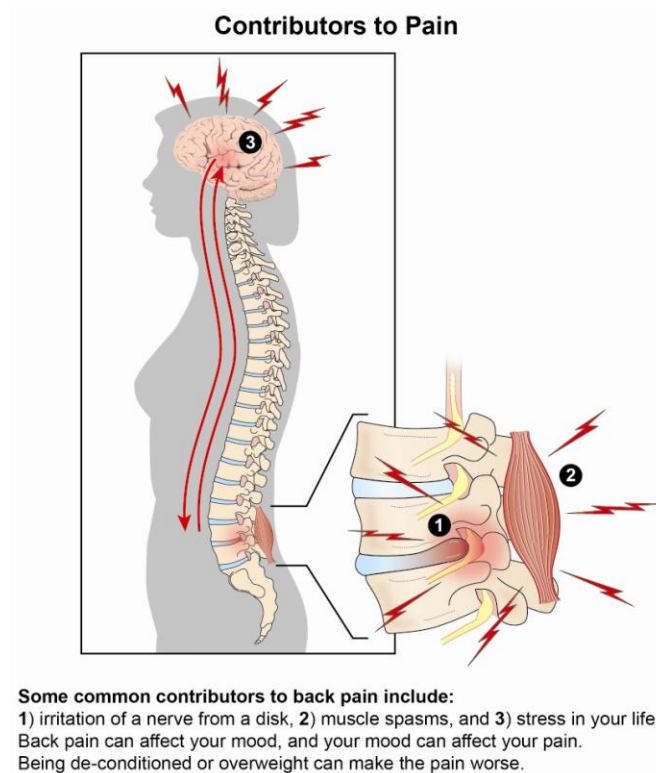
2nd Therapy Group Options

- **Internal/Emotional**
Pain can affect your mood, and your mood and stress can affect your pain. It is important for anyone with chronic low back pain to look at these mind-body connections. Research has shown that therapy focussing on how people with chronic low back pain think and feel emotionally can reduce pain, depression, and disability and increase their quality of life.



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Studies done to see if patients with low back pain were candidates for surgery showed surprising findings. Researchers looked at x-rays after injecting dye into the space around discs. (Discs are the cushions between the bones of the spine—the vertebrae.) They found that the degree of pain a patient reported was not related to how much a disc in the spine bulged or ruptured but rather to how much distress the patient reported. Many people who have bulging or ruptured discs on x-ray do not have pain. The disc may be blamed when at times the true cause of the pain may be a person's distress.



There are a number of mind-body therapies which you can consider.

- **Cognitive Behavioral Therapy (CBT).**

CBT is a form of psychotherapy that focuses on how people think. It is based on the idea that individuals' feelings and behaviors are influenced by their own thoughts, not by other people or situations. This therapy helps people change the way they think about whatever is bothering them, so they can feel and act better, even if the situation does not change.

One study looked at 213 individuals with chronic low back pain five years after treatment. It showed that those who received CBT had reduced pain, and increased physical activity, quality of life and general health. They also missed fewer days of work. Many psychologists, clinical social workers, and other counselors provide this therapy. It may be especially helpful to choose a professional who is experienced in pain management.



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- **Emotional Awareness.** Keeping your emotions bottled up inside when you are stressed, rather than expressing them, can cause physical pain to feel worse. William Boyd MD, a pathologist at the turn of the 20th century, said, *The sorrow that hath no vent in tears may make other organs weep*. This has proven true in the treatment of low back pain. John Sarno MD has written several helpful books on how back pain can be reduced or healed through recognizing stress and dealing with emotions in a positive way.

Books by John Sarno MD, on Emotional Awareness

- ***Healing Back Pain: The Mind-Body Connection*** (1991) Warner Books, Inc.
- ***The Mind-Body Prescription*** (1998) Warner Books, Inc.
- ***The Divided Mind*** (2006) HarperCollins Publishers

There are many reports of individuals with chronic low back pain who have been helped by this approach. However, there has been little research on Sarno's method. One group of 51 patients with chronic low back pain were followed from 3-12 months after completing a course that encouraged them to be aware of the relationship between their pain and "bottled up" stress. Their pain was reduced by an average of 52%. They also needed less medication, and they became more active. Those who had pain for more than three years were helped the most.

Howard Schubiner is a leader in offering Emotional Awareness Therapy. See his resources at:

- [Mind/Body Awareness Writing Exercise](http://www.fammed.wisc.edu/sites/default/files/webfm-uploads/documents/outreach/im/handout_mbs_workbook.pdf) on the University of Wisconsin-Madison Department of Family Medicine Integrative Medicine website. (http://www.fammed.wisc.edu/sites/default/files/webfm-uploads/documents/outreach/im/handout_mbs_workbook.pdf)
- <http://www.unlearnyourpain.com/>

- **Mindfulness Meditation.** Mindfulness is the process of bringing awareness to the present moment without judgment. Instead of distracting yourself away from pain, mindfulness teaches you to bring your attention to it. (For more information on this approach, see our handout [*Meditation for Health and Happiness*](#).)

Studies have used magnetic resonance imaging (MRI) to show that multiple areas of the brain are affected when mindfulness meditation is used for pain. (MRI is a procedure in which radio waves and a powerful magnet linked to a computer are used to create detailed pictures of areas inside the body). Mindfulness works in part by helping people reduce their fear and anxiety. Patients with chronic pain who have low mindfulness scores tend to be more fearful and worry more about pain.



Bob Stockfield
Courtesy: NCCAM

PATIENT HANDOUT



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There are few studies of mindfulness for chronic low back pain. One project studied 37 adults older than age 65 with chronic low back pain. It found that those who practiced mindfulness meditation had less pain and better function compared to people in a control group who did not do the meditation. Another study compared an eight-week mindfulness-based stress-reduction program (MBSR) with a program involving eight weekly educational sessions on chronic pain from a nurse, physical therapist and dietician. After three months, people in both groups were found to have less pain and distress. One approach was not better than the other.

You can locate MBSR classes through clinics, hospitals, or a website maintained by the University of Massachusetts Medical School's Center for Mindfulness: <http://w3.umassmed.edu/MBSR/public/searchmember.aspx>.

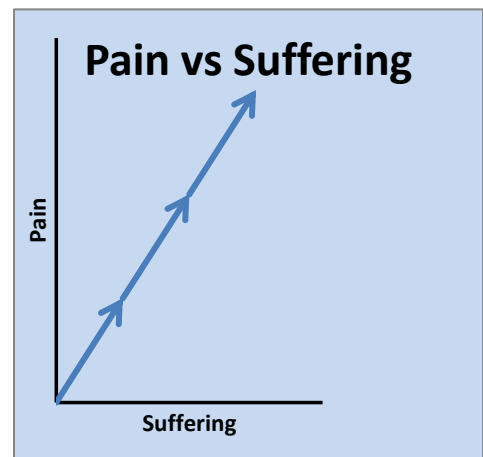
NOTE: Perhaps the most important thing you can do for yourself is to be aware of how your mood and the stress in your life affect your pain. This can help prevent long-term pain and disability.

RELATIONSHIP BETWEEN PAIN AND SUFFERING

Pain and suffering influence each other. The more suffering, the more pain. The more pain, the more suffering. Both need to be addressed. When you treat one you treat the other.

Treatment for pain: medications, acupuncture, OMT, massage, etc.

Treatment for suffering: trusting relationship with your clinician, cognitive behavioral therapy, emotional awareness, mindfulness, spiritual connection.



3rd Therapy Group Options

- **Reconditioning (strength and support)**
Back pain results in stiffness and loss of strength and range of motion as the body protects itself against pain. The longer the pain lasts, the worse this becomes. You then will start to carry your body in a new position which is not normal. This can cause you to feel even more pain. It is very important to regain flexibility, strength, and to have your body work the way it should again.
- **Physical Therapy.** Physical therapy is an excellent way to regain movement, strength, flexibility and function. Research has shown that you will be helped more by a physical therapist designing a program for your unique needs, than by following a general treatment program for low back pain.



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- **Yoga Therapy.** Yoga means "yoke" or union of mind and body. Yoga works through asanas (body poses) and a mindful awareness that your body and mind are one. A number of randomized controlled trials (the gold standard in research) have shown that yoga improves pain and function for people who have chronic low back pain. Ninety healthy adults with chronic low back pain received either a 24-week Iyengar yoga therapy class or standard medical care. (Iyengar is a type of yoga that places special attention on body positioning). Study participants were evaluated at 12 weeks, 24 weeks and 48 weeks after the start of the class or care. The group receiving yoga was able to do more, with less pain and depression than the other group. These benefits were seen after 24 weeks. When participants were tested at 48 weeks, the yoga group was still doing better.

Another randomized controlled trial of 101 people with chronic low back pain compared three types of treatment: 1) a viniyoga class (a form of yoga that modifies positions according to individual needs), 2) an exercise class and 3) an evidence-based back education book. After 12 weeks, people in the yoga group felt better than those in the other two groups.

Look for yoga classes in your area that are specifically tailored towards back health. Ask about the credentials/experience of the leaders.

- **Structured Fitness Classes.** Many communities offer a variety of fitness classes, which can improve the health of your back. Look for classes such as strengthening the core, flexibility, spine ball, and pilates. Ask about the credentials/experience of the class leaders. Low-cost classes can be found at community centers, school-community recreation programs, senior centers, and YMCAs. Fitness centers are another good source for classes.
- **Back Exercises.** At the very least, learn some exercises that you can do at home to help with flexibility, mobility and strengthening. An exercise physiologist or personal trainer can tailor a plan just for you. Below are some on-line resources.
 - **Patient handout on neck pain** from the McKinley Health Center at the University of Illinois at Urbana-Champaign:
http://www.mckinley.illinois.edu/Handouts/neck_pain/neck_pain.htm
 - **Patient handout on managing chronic back pain** from the McKinley Health Center at the University of Illinois at Urbana-Champaign:
http://www.mckinley.illinois.edu/Handouts/manage_chronic_back/manage_crhonic_back.htm
 - **Video for patients demonstrating back exercises** from The Patient Education Institute on Medline-Plus:
http://www.nlm.nih.gov/medlineplus/tutorials/backexercises/htm/yes_50_n_o_0.htm
 - **Video for patients demonstrating five back stretches and exercises to maintain a healthy back** from SpineUniverse, a website leader in providing patient and professional health care education:
<http://www.spineuniverse.com/wellness/exercise/5-back-pain-stretches-exercises-video> .



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- **Feldenkrais Method®**

Feldenkrais Method® uses movement, light touch, and your imagination to improve physical functioning. It can help you to become aware of habits of movement that are poor or restricted. You are gently guided to find your own best way to move. The idea is that given enough choices, your brain will opt for the most efficient way to move. Feldenkrais Method® does not strengthen or condition your body. You can have strong core strength and yet not move efficiently. Feldenkrais will help you learn to be aware of how you move, where you hold tension, and where you exert unnecessary effort.

There has been little research on using Feldenkrais for chronic low back pain. It has been most helpful for people with long-term injuries whose bodies may not be properly aligned.

There are two options for experiencing Feldenkrais:

- **Awareness Through Movement Class.** These are group classes led by a Feldenkrais practitioner. The practitioner verbally guides you through a series of gentle movements. You become aware of your habits and rigidities, while you explore better ways to move.
- **Functional Integration Individual Sessions.** The practitioner works one-on-one with you, communicating through gentle touch, movement, and words. The process helps you become aware of how you are moving and gives your body new information about other ways to move that may be better for you.

Feldenkrais practitioners must complete 740-800 hours of training over a 3 to 4 year period.

- Find certified Feldenkrais practitioners and authorized *Student Awareness Through Movement* Teachers on the website of the Feldenkrais Guild of North America at: <http://www.feldenkrais.com/practitioners/find/>
- For more information on this approach, see the website of The Feldenkrais Method® of Somatic Education:
http://www.feldenkrais.com/method/frequently_asked_questions/
- [View a demonstration](http://www.feldenkrais.com/method/frequently_asked_questions/) of a Feldenkrais Method® practitioner treating low back pain: <http://www.fammed.wisc.edu/our-department/media/618/feldenkrais-low-back-pain>.

Summary

There are a number of ways to treat low back pain. Important parts of the process include: 1) taking an active role in your care and 2) working with a clinician who knows you well. This should be someone who has compassion and whom you trust. When you have pain, you need someone to provide guidance. There is potential harm from having too many therapies that focus on a symptom or body part without having a guide who sees you as a whole person with unique needs. Your primary care clinician/medical home can:

1. Listen to your story and understand which therapies will likely help you the most,
2. Encourage you to choose one therapy from each of the three categories above,
3. Provide support and regular follow-up. If your pain does not improve, s/he can refer you to a spine specialist as needed.



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The information in this handout is for general education. It is not meant to be used by a patient alone. Please work with your health care practitioner to use this information in the best way possible to promote your health.

References, if needed, can be found in the clinician version of this handout.

This handout was created by Charlene Luchterhand MSSW, Integrative Medicine Education/Research Coordinator, adapted from a handout for clinicians by David Rakel MD, Associate Professor in Family Medicine and Director of the Integrative Medicine Program, Amy Bauman DO, 3rd Year Resident, and Charlene Luchterhand. All are in the Department of Family Medicine at the University of Wisconsin-Madison School of Medicine and Public Health.

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Notes: