

GETTING YOUR LIFE BACK!

DEALING WITH SCIATICA AND DISC RELATED PROBLEMS



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Sciatica & Discogenic Pain Treatments

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1. INTRODUCTION

Back and neck pain are extremely common health complaints, affecting over 80% of people at some point in their lives. Many back and neck problems are relatively minor and easily resolved, but some are associated with chronic pain and disability. Problems with the spinal discs, the soft tissue "shock absorbers" between the spinal bones are among the leading causes for chronic back and neck pain, as well as for radiating pain in the legs and arms.

The purpose of this book is to inform the reader on how disc problems arise, how to prevent them, and ways to alleviate most cases of disc pain, both through self-care measures and professional treatment. It is the author's intention to keep this book as simple and easy to use as possible, so that the average person is able to easily understand and implement the information and strategies described.

Besides alleviating acute pain, it is extremely important to treat disc problems as soon as possible for another reason. You see, unlike most other parts of your body, discs don't have a blood supply. They get the fluid and nutrients they need to stay healthy by means of a process called *imbibition* - the pumping action of the disc that normally occurs with movement. When a disc gets damaged, the pump no longer works properly and the disc is starved of fluid and nutrients. Now, what happens when any living tissue is deprived of fluid and nutrients? The tissue dies!

In the case of the discs, this death of tissue is called degenerative disc disease - and the longer the disc is deprived of fluid and nutrients, the more of the tissue dies and decays. Essentially, the disc dries out and shrivels up! The spinal bones that are separated by the decaying disc get closer and closer together, causing the spinal joint surfaces to be compressed and grind together. This causes abnormal wear and tear on the joints that causes the body to lay down additional bone. This additional bone forms spurs and ridges that can close off the openings through which the spinal cord and nerves must pass (this is called spinal and neural *stenosis*).

As the bone growth and disc bulging continues to narrow the openings for the spinal cord and nerves, neurological damage begins to occur, leading to increased pain, numbness, weakness, and possibly even paralysis of some muscles. At this point, surgery becomes the only treatment option and in some cases surgery may not be an option because it is too risky for some patients.

Even when surgery can be done, sometimes the neurological damage is permanent and the surgery doesn't help. Many people who degenerate to this point become partially or totally disabled.

The purpose of this book is to assist you in better understanding disc problems and to provide you with ways to effectively reduce disc-related symptoms and to prevent or even reverse disc degeneration and its results.

2. EASING PAIN RIGHT NOW

It is recognized that one of the reasons someone would purchase this E-Book is that he or she is desperate for immediate pain relief. So, this section is presented first to provide self-treatment instructions for that purpose. Additional recommendations for self-treatment, and more information on the techniques presented here are provided later in this book. This section will be a quick guide to what you can do without assistance and without any special equipment or products to hopefully get you some pain relief within a few minutes. Then you'll be in a better frame of mind to get use from the rest of the book at a later time.

Treatment for Sciatica: Tip A.

Ice - In the first 48 hours, you need to use ice to help reduce the inflammation which is around the nerve. This can help to stop it from getting worse. Wrap the ice in a cloth and apply the ice for 10 minutes, then off for 10 and on again for 10 minutes. Keep doing this 2 or 3 times during the initial phase.

Treatment for Sciatica: Tip B.

Stretching – You have a muscle called the Piriformis muscle. This muscle has the sciatic nerve running through it or along side it. By stretching this muscle you are able to ease the pain quickly.

You may do all of these exercises right away.

- **Piriformis stretch:** Lying on your back with both knees bent, rest the ankle of your injured leg over the knee of your uninjured leg. Grasp the thigh of your uninjured leg and pull that knee toward your chest. You will feel a stretch along the buttocks and possibly along the outside of your hip on the injured side. Hold this for 15 to 30 seconds. Repeat 3 times.
- **Standing hamstring stretch:** Place the heel of your leg on a stool about 15 inches high. Keep your knee straight. Lean forward, bending at the hips until you feel a mild stretch in the back of your thigh.

- Make sure you do not roll your shoulders and bend at the waist when doing this or you will stretch your lower back instead. Hold the stretch for 15 to 30 seconds. Repeat 3 times.
- **Hip abduction (with elastic tubing):** Stand sideways near a doorway with your uninjured side closest to the door. Tie elastic tubing around the ankle on your injured side. Knot the other end of the tubing and close the knot in the door. Extend your leg out to the side, keeping your knee straight. Return to the starting position. Do 3 sets of 10.

To challenge yourself, move farther away from the door.

- **Partial curl:** Lie on your back with your knees bent and your feet flat on the floor. Tighten your stomach muscles and flatten your back against the floor. Tuck your chin to your chest. With your hands stretched out in front of you, curl your upper body forward until your shoulders clear the floor. Hold this position for 3 seconds. Don't hold your breath. It helps to breathe out as you lift your shoulders up. Relax. Repeat 10 times. Build to 3 sets of 10. To challenge yourself, clasp your hands behind your head and keep your elbows out to the side.
- **Prone hip extension (bent leg):** Lie on your stomach with a pillow underneath your hips. Bend your injured knee, tighten up your buttocks muscles, and lift your leg off the floor about 6 inches. Keep your knee straight. Hold for 5 seconds. Then lower your leg and relax. Do 3 sets of 10.

Repeat this exercise for the other leg.

- **Quadruped Arm/Leg Raises:** Get down on your hands and knees. Tighten your abdominal muscles to stiffen your spine. While keeping your abdominals tight, raise one arm and the opposite leg away from you. Hold this position for 5 seconds. Lower your arm and leg slowly and alternate sides. Do this 10 times on each side.

Treatment for Sciatica: Tip C.

Pelvic Balance – This is a great treatment for sciatica because the pelvis is what keeps everything in balance. If your pelvis is balanced, then the tension will ease off all the other areas. You can do this by lying down on the floor. Place your hand under each side of your pelvis where you would wear your belt. As you are doing this, notice if there is more pressure on one side or the other. If there is more pressure on one side compared to the other, then your pelvis is not balanced.

Treatment for Sciatica: Tip D.

Move – You need to keep moving, not too fast, but move. If you sit for too long at a time, your muscles will tighten much quicker. Have you ever noticed that your pain is worse in the morning after sleeping all night? When you are able to move, this helps your pain ease a little. This is why moving is an important treatment for sciatica.

***Let pain be your guide. If you are in pain, you listen to your body and stop. Do not ever let anyone tell you to push through the pain. You are the only one who knows your pain threshold.**



3. What's What?

The first step in understanding disc problems is to define terms commonly used by doctors to describe the patient's condition. Doctors are often not very good at explaining things to their patients, and some do not even make the attempt. Let's begin with the explanation of commonly used terms that you might hear your GP say, or you might read in a medical report.

Disc (or Disk - either spelling can be used)

The disc is a soft-tissue structure that lies between the bones of the spine (the vertebrae). It has two components. There is an outer ring of cartilage fibres, similar to the tissue that makes up the ear. This outer ring is firm but flexible and it is called the annulus. You might hear or read terms like "annular bulge" or "annular tear", and these terms refer to this outer "retaining wall" of the disc.

The second part of the disc is an inner core that is a gel-like material that is normally the consistency of toothpaste. This inner core is called the nucleus pulposus, or simply the nucleus. The nucleus is what gives the disc its shock-absorbing quality.

Disc Herniation or Bulge

When the disc is damaged and the retaining wall (the annulus) is weakened, the pressure from the gel in the center (the nucleus) will cause the retaining wall to bulge outward. Technically, the term "herniation" and "bulge" can be used interchangeably, but many doctors will call larger bulges "herniations" and smaller bulges "bulges". For particularly mild bulges, you may see the term "diffuse bulge". Another term that is sometimes used to describe a bulge is a disc "protrusion". Many doctors will use the term "protrusion" when the disc bulge is very focal - where the distance the bulge sticks out from the disc is about the same or is more than the width of the bulge.

"Slipped" Disc

Although a commonly-used term, a disc does not actually "slip" - the disc is very firmly attached to the bones above and below it and it would take a complete dislocation of the spine to displace it (in which case, you have far greater problems than the disc itself). A "slipped" disc is actually a herniated or bulging disc as just discussed.

Ruptured Disc

When a disc is damaged to the point where the retaining wall (the annulus) is breached, the disc is said to be ruptured. This is sometimes called a disc "extrusion". This is a more severe injury than a herniated or bulging disc, although some doctors will tell patients they have a ruptured disc even when it is only bulging/herniated. In the case of a true ruptured disc, the inner gel (the nucleus) actually leaks out of the disc. In some cases, part of the gel will come all the way out of the disc and separate from the main part of the disc. This is what is called a "sequestrum" (also called a sequestered fragment or a sequestered disc).

"Pinched" Nerve

Like the term "slipped disc", "pinched nerve" is also a commonly used term that is not really an accurate description of what actually happens.

Most people imagine a nerve being trapped between bone surfaces and being "pinched". It is extremely rare for a nerve to become pinched between bones.

In the case of a bulging or ruptured disc, the disc material may push up against the sensitive part of the nerve where it branches off of the spinal cord and cause sufficient compression to cause pain, tingling, weakness, and possibly other symptoms. It has been shown that the part of the nerve right where it branches off of the spinal cord (the "nerve root") is so sensitive that just the weight of a dime can cause changes in the nerve's function. In some cases, the nerve may also have pressure placed on it by swelling caused by the body's inflammatory response to the disc injury. If you have ever hit your finger with a hammer or stubbed your toe really badly, you know all too well how much pressure (and pain) swelling can create.

Disc Degeneration

Besides bulges and ruptures, the other main problem that can occur with discs is degeneration. Degeneration is a gradual loss of fluid from the disc over a long period of time that results in the disc becoming thinner and stiffer. This is the long-term effect of a disc injury and can be seen with or without a disc bulge or herniation.

Degeneration is characterised by a loss of fluid from the disc gel and is sometimes referred to as disc "desiccation" (meaning a drying out of the disc).

When discs degenerate, other problems often occur as a consequence. As the disc gets thinner, the joints at the back of the spine (called the "facet joints") start to get compressed and the joint surfaces rub together more than normal. This can cause damage to the joints and can in turn result in extra bone growth around them. This extra bone growth can cause bone spurs or ridges around the spine. When this occurs around the spinal joints, it may be called "facet arthrosis" ("arthrosis" simply means "abnormal condition of a joint").

When this occurs, it will often be called degenerative arthritis.

Stenosis

Stenosis simply refers to a narrowing of an opening. This term is also used to describe changes in blood vessels as well as changes in the spine. In the spine, there are two main types of stenosis that describe which openings are being narrowed.

"Spinal stenosis", which is also called "central canal stenosis" refers to a narrowing of the opening where the spinal cord passes through a section of the spine.

"Foraminal stenosis", also called "neural stenosis" or "neuroforaminal stenosis", refers to a narrowing of the openings where the nerves exit the spine.

Stenosis can be caused by a few different things. One cause is disc bulges and ruptures, where the disc material takes up part of the opening in question (as shown in Figure 2). Stenosis can also be caused by additional bone and/or soft tissue formation seen with degenerative arthritis. Finally, although rare, stenosis may occur from a tumour, or anything else that takes up space in the openings of the spine. One other term that relates to stenosis is "patent", and this refers to the openings of the spine being normal.

Miscellaneous Radiology Terms

There are various terms you may see on X-ray or MRI reports that have little to do with the condition of the spine. MRI reports in particular often make reference to the techniques used to produce the images. For instance, you may see reference to "T1" or "T2" "weighted images", or "spin echo". These have nothing to do with the condition of the spine. Be careful not to confuse references to "T1" or "T2" "weighted images" or "views" with the spinal bones T1 and T2.

Spinal Numbering

The adult spine is usually composed of 24 movable bones (vertebrae). There are 7 cervical (neck) bones, 12 thoracic (upper and mid back - the bones that have ribs attached to them) bones, and 5 lumbar (low back) bones.

The bones are numbered starting at one at the highest portion of each section. In other words, the top bone in the neck is C1 ("C" for cervical) and then they are numbered down to C7 at the base of the neck. The first bone in the upper back is T1 ("T" for thoracic, or sometimes "D" for dorsal) and then down to T12 (the last bone in the spine with ribs). The first bone in the low back is L1 ("L" for lumbar) and then down to the last movable bone at the bottom of the spine, which is L5. In adults, there is a single triangular bone that lies right below the last lumbar bone. This bone is called the sacrum. In children, the sacrum is actually 5 separate bones, with the top of the sacrum being S1. This numbering system for the sacrum remains in effect in adults even though the 5 bones are fused together as one piece. There are a few exceptions where a given individual will have more or less of one or more types of spinal bones, but they usually are numbered as just described.

Discs are numbered by the spinal bones that they lie between. The lowest disc in the spine lies between L5 and S1, and so it is called the L5/S1 disc. The next disc up would be L4/L5 (alternately named L4/5) and so on. In the neck, although there are 7 bones, there is no disc between the first two spinal bones, so the top disc in the neck would be C2/C3 (or C2/3), the next would be C3/C4 and so on down to where the section of the spine changes name and the disc becomes C7/T1.

4. Avoiding Disc Injury

If you are reading this book, I realise that you probably already have a disc injury and the information in this chapter may seem like it comes a little too late. Even if you do already have a disc injury, there are ways you can help keep it from getting worse, as well as prevent injuries to other discs.

In the last chapter we discussed the common causes of disc injuries. Obviously, the first step in preventing disc injuries is avoiding as much as possible the positions and activities that cause them.

So, here's a list of common things to AVOID as much as possible:

Avoid carrying or lifting something with your arms extended out in front of you.

Avoid bending forward at the waist when standing or sitting.

Avoid working with your head down for prolonged periods of time.

Avoid sitting for prolonged periods of time; particularly in a slouched position or in an un-supportive seat.

Avoid trying to lift something that is very heavy for you.

Avoid twisting repeatedly or while holding something heavy when standing or sitting.

Avoid carrying anything heavy on top of your head.

Avoid lifting weights with poor form or body position, or "cheating" a lift by jerking a weight up to gain momentum. Lifting the appropriate amount of weight for your strength level with good form and slow, controlled movements will build muscle much faster than using momentum to lift a heavier weight that you cannot control.

In addition, if you already have a disc injury, it is a good idea to avoid or at least limit high-impact activities like running, jumping, contact sports, off road driving or cycling, snow skiing on uneven terrain, and boating or water/jet skiing on choppy waters.

Now, certain activities like sitting or working with your head down for prolonged periods of time may not always be avoidable. When you simply have to engage in such activities, you can do a lot to reduce the negative effects of them by simply taking frequent breaks. The breaks do not need to be very long. Just taking a stretch break (or do some of the exercises shown in the next chapter) for 30 seconds to a minute every 20 to 30 minutes can go a long way toward preventing problems.

When you need to lift something, it is a good idea to test the weight by lifting with low to moderate effort to find out how heavy it is rather than grabbing it quickly and pulling up without knowing if it is more than you can handle safely. When it's too heavy for you, get help to lift it. It is far better to swallow a little pride and ask for help than to risk an injury that could permanently disable you.

One other thing that applies specifically to preventing disc injuries in the neck is to avoid lying down with the head propped up on pillows, or on the arm of a couch.

This position, particularly when one maintains it for an extended period of time (for instance when reading or watching television), places significant pressure on the discs in the neck and can gradually weaken the disc wall enough to cause a bulge or herniation.

Although commonly used to supposedly prevent low back injuries, back belts, whether they be the elastic kind often seen in industry, or the wide leather belts used in weightlifting, are rarely an effective means of injury prevention by themselves. In fact, some studies on the use of industrial back belts have shown no benefit whatsoever when the back belts were dispensed without any education or training for the users. Back belts are usually helpful as a part of an overall back injury prevention program because they act as a reminder to the user to bend and lift properly (when the user has been educated on the importance of proper lifting techniques).

There are some special back braces that can be used in the course of back treatment that provide stabilization and partial decompression of the spine, but these are usually only dispensed by licensed healthcare providers as a part of an overall treatment regimen. Such doctor-prescribed braces are much more restrictive to movement than the typical industrial back support.



5. Self Treatment and Exercise

A disc injury is very serious and usually requires some type of professional treatment, but there are things you can do to help yourself and speed up your recovery.

Sleep Position

Sometimes simply lying or sleeping in certain positions will help reduce disc-related symptoms. For most cases, there are two suggested sleep postures. One is on the back with a pillow under the knees (keeping the knees bent reduces tension on the spinal cord and nerves).

The other is lying on one side with a pillow between the knees.

Ice or Heat?

One of the common confusions people have with self-treatment is the question of when to use ice and when to use heat. There are all sorts of recommendations out there but a simple rule of thumb is to base the decision on what the symptoms are.

If you have sharp or intense pain with or without swelling, this usually indicates that there is inflammation present, and this is a time to use ice.

On the other hand, if your symptoms are mostly stiffness or mild soreness, there is usually not significant inflammation present, and in this situation heat is a better choice. As a precaution, anytime you have experienced a trauma, or think you might have injured yourself, it is best to avoid using heat for at least 48 hours to make sure that the inflammatory response has not been activated and the inflammation has simply not had enough time to set in.

When in doubt, avoid using heat!

Although heat may feel good while it is on (because heat causes pain signals to be partially blocked from reaching the brain), heat also increases the inflammatory response of the body. Increased inflammation means increased pain when you stop using the heat.

Although ice may not feel as comfortable as heat, it is one of the best anti-inflammatory measures you can take. The short-term discomfort of applying ice usually pays off in long-term relief. Although some experts recommend alternating ice and heat (for example, 10 minutes of ice followed by 10 minutes of heat), I have not seen any particular advantage in doing this. For most situations, choosing one or the other based on the symptoms as was just discussed is usually the simplest approach and in my opinion works just as well or possibly better than trying to alternate the therapies.

Regardless of whether you are using ice or heat, you should always separate the ice or hot pack from the skin with a layer of cloth to prevent skin damage.

It is also important to avoid applying ice or heat on an area that has been recently treated with Theragesic, Icy Hot, Biofreeze, Ben Gay, or any other topical analgesic - wait until the sensation of the analgesic has completely worn off, otherwise the ice or heat could cause skin irritation or damage.

Also when using either ice or heat, you should only apply the treatment for about 10 to 15 minutes at a time, allowing the skin to return to normal temperature (to be safe, wait 1 to 2 hours) before re-applying the treatment. If you have impaired circulation or decreased skin sensitivity due to nerve damage, diabetes, etc., it is best to check with a doctor first before using ice or heat.

Topical Analgesics

There are numerous lotions, creams and gels you can apply to temporarily reduce pain. Different people prefer different products. Some like those that create a burning sensation such as Theragesic, while others prefer the cooling effects of menthol-based products like Biofreeze or Icy Hot. Regardless of the type used, the basic effect of most of these products is to stimulate nerve endings that will distract the central nervous system's attention away from pain. I suggest experimenting with different ones to see what works best for you.

A Home Treatment Trick From Chiropractic

One of the chiropractic techniques mentioned in the chapter on Professional Treatment, Sacro-Occipital Technique (SOT), can be used in a very basic manner for "do-it-yourself" treatment for disc problems in the lower back and can provide nearly immediate relief of low back pain and sciatica in many cases.

Over The Counter (OTC) Medication

There are a variety of OTC medications that can be used to decrease pain and/or inflammation. Because of individual variations in body chemistry, one product may be more effective than another for a given person. In general, if you do want to try an OTC medication, I suggest using one of the NSAIDs (non-steroidal anti-inflammatory drugs), because these products will reduce both pain and inflammation. Most of the OTC pain medications are NSAIDs.

The one notable exception is Tylenol (acetaminophen), which is strictly a pain-killer and does not reduce inflammation. Regardless of what product you use, it is important to adhere to the package dosing directions, as overdosing on these products can cause serious (potentially fatal) side-effects.

The other recommended precaution is to only use these products for a few days at a time because long-term daily use of anti-inflammatory drugs can actually interfere with healing by suppressing the body's ability to produce collagen.

Ironically, although aspirin and ibuprofen are commonly-used to treat the symptoms of degenerative discs and degenerative spinal arthritis, these medications appear to actually speed up the progression of these conditions when used daily for extended periods of time.

Bed Rest

Although once the main recommendation for injuries of all kinds and still a common recommendation, extended bed rest has been shown to be counterproductive in most cases of disc injuries. While it may be necessary due to pain to lie down a lot during the first few days of an acute disc injury, it is recommended to be as mobile as possible as soon as possible. Extended bed rest results in accumulation of swelling in the injured area as well as muscle de-conditioning, which ultimately delays recovery. Unless specifically prescribed by a doctor, bed rest should not extend beyond a few days.

Exercises

The type of exercises that are recommended for disc-related problems will vary depending on the phase of the injury. During times of severe pain and inflammation, exercises should be limited to those activities that provide gentle movement to reduce the accumulation of swelling and help shift pressure off of sensitive neurological structures.

Walking and/or gentle water exercises are best when there is a lot of pain. During times of mild symptoms, or for the purposes of trying to prevent injuries, exercises should include muscle strengthening and stretching and should be customised for an individual patient's needs and activities.

Because it is imperative that strengthening and stretching exercises be done properly to get the desired benefits and to avoid injury, it is strongly recommended that you work directly with a professional to learn the appropriate exercises at first.

Exercises for times of significant pain and inflammation

As just mentioned, by far one of the best overall exercises when there are major symptoms is walking. Walking produces joint and muscle movement and circulation sufficient to pump inflammatory fluids out of the injured area (which reduces pressure). Walking also produces minimal stress and compression on the injured area, which means there is minimal risk of further injury.

With low back disc problems, during periods of extreme inflammation, walking may cause increased pain, particularly when done for too long.

For this reason, when you have severe pain, walking should be done in short bursts of only a few minutes, with periods of rest in between.

As a general rule, it is best to lie down rather than sit between periods of walking, because sitting usually causes a lot of pressure on the discs in the low back.

Walking is beneficial in cases of cervical disc problems too, because again it improves circulation and reduces the accumulation of swelling in the injured tissues. For cervical disc problems, it is recommended to slowly and gently swing the arms as you walk.

In addition to walking, McKenzie exercises (Physical Therapist Robin McKenzie) can also be very beneficial during times of pain and inflammation (although they also have benefit as a preventive form of exercise as well). McKenzie exercises are often associated with extension (backward bending) of the spine, but in reality they are about testing for, and then exercising in, positions and stretches that alleviate or produce “centralization” of symptoms.

Centralization means that the symptoms move closer to the spine.

For example, if you have low back pain with sciatica (leg pain), centralization would be where the symptoms leave or lessen in the leg,

even if the pain stays the same or gets worse in the low back. Over time, in most cases the low back pain will also improve in situations where initial centralization is achieved. Because the vast majority of the time extension of the spine is beneficial in reducing or centralizing pain.

McKenzie exercises are often called “McKenzie Extension Exercises”, but true McKenzie Technique actually tests for the position(s) that are beneficial for an individual patient. So, although McKenzie exercises most often do involve extension of the spine, they can involve flexion (forward bending), side bending, and/or rotation - depending on what position reduces or centralizes symptoms.

The following positions/stretchers from McKenzie technique are the most common ones that are helpful. You may find other positions that work better for you. You will probably have some pain when you first move into a new position. After you get into each position, wait 30 seconds to a minute to see what happens with your symptoms.

The things to remember is that you are looking for a position that eases the symptoms the furthest away from the spine.

So, if you have pain or tingling in your hand and you find a position that moves the pain out of the hand, even if the pain gets more intense closer to the spine, you’re doing the right thing. If you have pain in your shoulder and upper arm, a good position would be one where the symptoms left the arm and shoulder, even if the neck pain got worse.

If you have sciatica all the way to the foot, a good position would be one that moves the pain out of the foot and calf, even if it intensifies pain in the buttocks or low back. If you only had sciatica in the buttock and thigh, a good position would be one that moves the pain out of the buttock and thigh, even if it gets worse in the low back.

Any position that makes the symptoms the furthest from the spine WORSE should be avoided!

In other words, do NOT continue with any position that makes symptoms either more intense or extend further down the arm or leg.

Keep testing different positions until you find the one that does the best job of alleviating the symptoms furthest from the spine. Once you find a position that works well, hold that position for 1 to 2 minutes and then take a break for 30 seconds or so in a neutral position.

Repeat the beneficial position frequently, as long as it continues to relieve the symptoms furthest from the spine.

Mind-Body Healing

One other type of “exercise” that I think bears mentioning is the use of visualisation and positive affirmations to enhance healing. While this is not physical exercise, mind-body-healing techniques do involve regimented mind exercises, and can be very beneficial.

When one has a health problem such as a painful disc condition, there is often a tendency for fear, anxiety, and depression to set in, and for one’s thoughts to be focused on the health problem and its symptoms. Negative emotions and focusing on symptoms can actually increase one’s perceptions of the symptoms, making things worse. In addition, negative emotions can trigger the release of stress hormones, which increase inflammation, also tending to make things worse.

On the other hand, by consciously focusing one’s thoughts on healing and feeling good, it is often possible to reduce the perception of symptoms and possibly even promote healing. The more consistent you are at imagining yourself as being healed - as if it has already happened, not as some future event - the greater the potential for healing to actually occur. This takes a bit of mental discipline, but the rewards can be well worth it. After all, if your activities have been limited by a disc problem, you probably have some extra time to devote to imagining yourself as healed.

One distinction I think is important is to be sure you give yourself positive messages of being healthy, not negative messages of not being in pain. For example, if you are using verbal affirmations, you want to use phrases like “I am happy and grateful that I am totally healthy and feel wonderful!” as opposed to things like “I am so happy that I am no longer in pain.” The reason for this is that if you are thinking about not being in pain, the brain still has to focus on pain - tending to reinforce it. If I tell you, “Don’t think about a pink elephant.” chances are you made a picture in your mind of a pink elephant.

For best results, you want to be focused on what you WANT - in this case, being healthy; feeling great, and doing all the great things in life you want to do. The more you can keep your mind focused on being healthy and feeling good, the greater the benefits.

At first, it may be difficult to shift your focus away from your symptoms, but with some practice, it will get easier to focus on being healthy. Use positive affirmations, imagine yourself doing favourite activities and feeling great while doing them, and be grateful for the amazing healing ability of your body.

Again, imagine yourself as being healthy and feeling great right now, instead of it being some future event. Most people who make the effort to do this are pleasantly surprised at the difference it makes.

6. Getting Professional Treatment

Before discussing professional treatments, there is one important point I'd like to address. Many patients turn to professional health care providers looking for a permanent solution to their disc problems.

The nature of disc problems is such that a truly permanent solution simply doesn't exist in most cases.

Although surgical removal of an offending disc will permanently prevent that disc from causing symptoms again, surgical excision of one disc creates scar tissue and shifts mechanical stress onto other discs, making them susceptible to injury. In fact, one of the leading statistical predictors that someone will need spinal surgery in the future is having had spinal surgery already.

Rather than thinking of treatment for disc problems in terms of "cure", it is usually more realistic to think in terms of "management". Once maximum improvement has been achieved from whatever treatment is being used, it is very important to continue to manage disc problems by means of the self-treatment and prevention measures discussed earlier, as well as by means of any recommended preventive treatment administered by your health care provider(s).

Most of you reading this book have probably been through one or more professional treatment programs for your disc problems. As many people have found out, the most commonly used approaches may not provide adequate results, even in the short-term. Let's look at the options available.

Medication

Whether we are talking about over the counter or prescription medication, there are a number of products available that may provide short-term symptom relief for disc-related problems. Unfortunately, medication is rarely an acceptable long-term solution because of side-effects (ranging from annoying to life-threatening) and diminishing effectiveness as the body becomes accustomed to the medication.

In fact, research indicates that the daily long-term use of pain relievers actually may make pain worse over time because the medications can cause hyper-sensitivity of the nervous system.

NSAIDS (Non-Steroidal Anti-Inflammatory Drugs) like aspirin, ibuprofen, and even the new NSAIDS like Celebrex and Vioxx have the additional problem that they inhibit the body's ability to produce cartilage, and may actually speed up degeneration when used continuously over time. In addition, some drugs, such as narcotic pain relievers and muscle relaxants, may not be suitable for some patients who must be mentally alert to safely perform their daily activities. Although medication can be very helpful for a few days at a time during periods of severe symptoms, they fall far short of being an effective means of managing disc problems long-term.

Epidural Steroid Injections (ESIs)

Also called "cortisone shots" because cortisone is the most common steroid used, ESIs can be quite effective at temporarily reducing inflammation and thereby reducing symptoms related to disc bulges and degeneration. Steroid injections are primarily effective in milder disc bulges because in these situations, inflammation is one of the primary sources of nerve compression.

In more severe bulges, there is more direct nerve compression by the disc itself, so reducing inflammation may not have much of an effect on symptoms, and may actually increase symptoms temporarily because the fluid of the shot itself will increase pressure around the nerve until the body absorbs it.

In any case, ESIs do not heal anything, they simply reduce pressure on nerves due to inflammation, and sometimes bring temporary symptom relief.

The symptom relief from ESIs may last anywhere from a few days to several months, depending on the case. Unfortunately, because the injections do nothing to heal the disc (and in fact actually weaken the discs further - more on that in a moment), the symptom relief they bring can give people a false sense of security. The lack of pain leads some people to be less careful with their neck or back, and this can set them up for further injury and damage down the road.

As just mentioned, cortisone and other steroids have the side effect that they significantly interfere with the body's normal healing mechanisms and may actually weaken the bones and soft tissues in the area around the injection site. This is why doctors typically limit a patient to a maximum of three rounds of steroid injections per year. In addition to the tissue-weakening effect, steroids also weaken the body's immune system, making the body more susceptible to infections.

Finally, although often promoted as a means of avoiding surgery, a study of over 200 patients published in the October, 2007 edition of **Spine Health Journal** reported that more than 2 out of 3 people initially treated with steroid injections wound up having additional invasive procedures, i.e. surgery, within two years. As you can see, although they are sometimes helpful in alleviating symptoms temporarily, steroid injections are not an ideal, or even a very effective means of treating disc problems in the long-run for the majority of people.

Physical Therapy

Physical therapy encompasses a wide range of treatments and may include everything from massage, to electrical muscle stimulation, to ultrasound, to traction, to exercises. Physical therapy can be divided into two main types of treatment: passive therapies and active therapies.

Passive therapies would include any treatment done TO the patient. Electrical muscle stimulation, massage, ultrasound, ice, and heat are among the most commonly used passive therapies for disc herniations and degeneration.

Some therapies like ice and some kinds of electrical stimulation are intended primarily to reduce inflammation, and these are typically used when there is acute severe pain. Massage, ultrasound, and heat are used with the intention of improving circulation and reducing muscle spasm and constriction, and these are used more in cases where there is stiffness, soreness, and reduced range of motion. Massage in particular can be quite helpful in alleviating muscles that have become tight and sore from disc-related nerve irritation. If you have sciatica and you do see a massage therapist, be sure to tell the therapist about the sciatica so he or she will know to use caution in the buttock area. Passive therapies can be quite helpful in reducing symptoms, but are rarely a long-term solution to disc problems.

Now, let's switch gears and talk about active therapies. Active therapies are things done BY the patient, namely various types of exercises. Most exercises for disc related problems should only be done once major symptoms are gone and there is no active inflammation. Unfortunately, for a variety of reasons (often related to insurance company demands) some healthcare practitioners may institute active therapy too soon, and this can result in a patient getting worse because of being forced to exercise before the body was sufficiently healed.

When incorporated into treatment at the appropriate time, exercise can be a very valuable means of helping a patient recover. Different types of exercise may be used. Some therapists have patient's exercise on special machines, many of which have computerised monitoring and feedback systems to customise the workout to each patient. While these machines can be excellent and have many advantages in the clinical setting, they do have at least one big disadvantage. Because any exercise program must be maintained essentially for life in order to maintain the benefits, therapy programs with these expensive machines leave patients in an awkward situation when they are released from treatment. If a patient has learned how to exercise only on the special machines, they have little opportunity to maintain the benefits of the therapy program once they no longer have access to the machines.

Because of this, many therapists have recognised the importance of teaching patients exercises they can do at home with simple or even no equipment. In my opinion, this "low-tech" form of exercise is the most likely to provide the patient with long-term benefit. Some basic exercises were covered in the chapter on self-treatment.

For more advanced exercise programs it is highly recommended to work with a health care professional who can customise the program for an individual's needs and who can provide basic equipment to facilitate home exercises when the patient is ready to implement the exercises on their own.

Chiropractic

Chiropractic treatment is often helpful in alleviating the symptoms of disc herniations and degeneration, and in some cases may actually assist in disc healing. Chiropractic has two main beneficial effects in disc problems. First, by improving spinal joint function, it can reduce abnormal mechanical stress on the discs.

In some cases, this reduces pressure on the damaged part of the disc and thereby reduces the sources of irritation and inflammation and improves the chances of healing. The second beneficial effect of chiropractic is that it produces stimulation of special nerve endings in the spine and surrounding tissues called mechanoreceptors. When stimulated, these nerve endings send signals to the brain that block the perception of pain to varying degrees.

In addition, some chiropractors utilize additional types of treatment, including the passive and active therapies just discussed under “Physical Therapy”, as well as may provide nutritional supplementation to reduce inflammation and muscle tension. Certain chiropractic techniques have been developed specifically for the treatment of disc-related problems. These include Flexion-Distraction (also called Cox or Leander technique), Sacro-Occipital Technique (SOT), and a relatively new technique called Advanced Biostructural Correction (Advanced Biostructural Correction is not a “disc treatment technique” per se, but the lumbar adjustment is one of the most effective methods I’ve found for quickly alleviating acute disc-related back pain). One other very new method of chiropractic treatment utilizes a computer-controlled adjusting device (the "Pro-Adjuster") to analyze and correct spinal joint function with minimal force and discomfort to the patient. It is a great technique for those patients who are too fragile or fearful for more traditional types of chiropractic treatment.



Although doctors of chiropractic in general have a good track record in treating disc problems in both the neck and back, in my opinion, the doctors who use techniques that are specifically-designed for disc problems have a definite advantage in getting results in such cases.

Chiro for disc herniations and degeneration in the low back and neck is fast becoming very popular. Used by doctors of chiropractic, osteopathic doctors, and medical doctors, spinal decompression has the advantages of being safe, comfortable for the patient, non-invasive, and extremely effective (over 80% effective in the lumbar spine and 70% effective in the cervical spine).

Furthermore, unlike most disc treatments, spinal decompression not only reduces symptoms but in many cases actually reduces the size of disc herniations and improves disc hydration and nutrition and thereby slows and often partially reverses disc degeneration. It has even shown to be effective in many cases where surgery was performed and failed to provide results.

There are a few disadvantages and limitations associated with spinal decompression. First, because it is so new, there is limited availability of the treatment and not all insurance companies cover the treatment. Second, it generally cannot be used in cases where metal is implanted in the spine (in the area needing treatment) or in cases where there is severe osteoporosis or spinal instability. Finally, there is some controversy as to what constitutes spinal decompression.

When the clinical studies started to come out that showed the success of spinal decompression treatment for treating disc problems, a lot of companies started marketing ordinary traction machines as "spinal decompression" machines. You see, spinal decompression machines are themselves traction machines, but they are very special traction machines that used sophisticated computer-controlled motors that allow the muscles around the spine to stay relaxed during the treatment. This is critical to getting good results with decompression. Regular traction machines often provoke muscle contraction around the spine, and this severely limits the effects of the traction pull at the discs.

Research has shown that regular traction will lower disc pressure somewhat - from a starting pressure of 90 mmHg down to about 30 mmHg (mmHg is what barometric pressure is measured in when you see it on the weather forecast). This is somewhat helpful and it stretches the muscles, but it doesn't do very much to help the discs.

On the other hand, because spinal decompression machines “trick” the muscles into staying relaxed (and therefore do not have to fight muscle resistance), there is a much greater effect on the discs - dropping the pressure to -150 mmHG (that's negative 150 mmHG - which is actually a suction). This drastic change in disc pressure literally sucks disc herniations back in, as well as pulls fluid and nutrients into the disc to help it heal. In addition, because the muscles stay relaxed during treatment, spinal decompression is very comfortable for most patients, whereas traction can sometimes be quite uncomfortable, or even painful.

As of this writing, there are arguably only a few true spinal decompression machines on the market today - the VAX-D (the first spinal decompression machine developed), the DRX9000, and the SpineMed Table.

Incidentally, as of writing this book, the only published research on the effectiveness of spinal decompression was done using the VAX-D and the DRX9000 machines. Based on what I have seen of the technology incorporated into the Spine-Med, I am speculating that it would get equivalent results. Other machines on the market now or in the future may also get equivalent (or possibly superior) results, but at this time I have not seen any other machines I feel confident in recommending.

Surgery

I've saved surgery for last because, in my opinion, surgery should always be a last resort for disc problems. Make no mistake, there are definitely times when surgery is the best option, and sometimes the only option, but in many cases there are treatment options that are considerably safer and have a much greater long-term success rate than surgery.

In some cases, I think people rush into surgery thinking that it will solve their disc problems once and for all, so they can get on with their lives and not have to worry about the disc problem anymore. This is simply not a realistic view of surgery.

Although surgery can bring about dramatic reductions in pain and other symptoms, these results do not always last. It needs to be recognized that a disc surgery does not restore things to normal, but in fact creates alterations in spinal biomechanics and/or disc stability that leave you susceptible to new disc injuries if you don't take very good care of your spine for the rest of your life.

There are a variety of surgical techniques that are used for disc problems, but they all have inherent risks that are much higher than any non-surgical form of treatment. Reactions to anaesthesia, potential infection, and "slips of the knife" make spine surgery a risky proposition.

Surgical techniques can range from "minimally invasive" procedures that are done through small incisions using a surgical viewscope to full fusion procedures with or without metal hardware implanted in the spine. If you really need surgery, the recommended procedure depends on the specific nature of your problem, as well as the preferences of the surgeon(s) you happen to consult with.

Typically, the risks of the procedure increase with the complexity, and with the use of general anaesthesia (in which case you are unconscious) versus local anaesthesia (in which case you are awake). Local anaesthesia is primarily used in the minimally invasive type of surgery. Regardless of the procedure though, any disc surgery potentially exposes the spine to infection, and other than the risks of anaesthesia, infection is the biggest risk of spinal surgery. A spinal infection is extremely serious and difficult to treat.

For all the risk, there is no guarantee that surgery will help long-term, and it is not unusual for things to get worse after surgery. Even in cases where surgery helps in the short-term, there are often problems that occur from scar tissue development in the months and years that follow the surgery. Over time, scar tissue can create as much or more compression on the nerves as the original disc problem did. Most surgeons are very up front about the risks and the uncertainties of getting the desired results, but you need to be aware that a few surgeons will give their patients unrealistic expectations that can result in major disappointments.

Different surgical procedures have different strengths and weaknesses. Minimally invasive techniques have the advantages of lower risks from anaesthesia and infection, and the fact that recovery is relatively easy.

In a minimally invasive surgery, the surgeon makes small incisions and the area is viewed through a scope, while small surgical tools are inserted. This allows for trimming of bulging disc material and/or excess bone from around nerves, and this method can yield good results almost immediately, with very little down time on the part of the patient. One potential disadvantage of this procedure is that if part of the disc is trimmed away, the trimmed area is left, at least temporarily, in a weakened state. Because many patients feel better, they may resume activities that place a lot of stress on the now-weakened disc, and this can set the stage for a re-injury.

The more invasive types of surgery usually require general anaesthesia, and also have a higher risk of infection due to larger incisions. Depending on the nature of the problem and the preferences of the surgeon, the damaged disc might be partially or completely removed, and the spine may be left to fuse naturally (the bones that were separated by the disc grow together over time), or may be fused by the surgeon using bone grafts and/or some type of metal hardware.

While there are definitely situations where this type of surgery is necessary, once the spine is fused, there are few other treatment options available if the surgery doesn't work. For this reason, it is strongly recommended that all other treatment options be exhausted before resorting to an invasive type of surgery, except in emergency cases in which permanent neurological damage is imminent.

The warning signs indicating an emergency situation in which surgery must be done quickly to prevent permanent nerve damage include when there is sudden onset of paralysis, there is a sudden loss of bowel and/or bladder control, and/or the onset of "saddle anaesthesia" (loss of sensation in the inner thighs, groin, and lower buttocks).

Except in the emergency situations just mentioned, I strongly recommend going to at least two doctors' opinions, and probably three or four, before deciding on getting surgery.

Disc Replacement

I want to briefly cover this subject as a separate issue from surgery because it is one of the latest treatments for disc problems, and is still considered experimental by most insurance companies.

Disc replacement surgery involves removing the damaged disc and replacing it with a man-made disc. Early results for this procedure have been favourable as compared to other surgical methods; however, disc replacement still has the same risks as other spine surgery, and the long-term results are still largely unknown.

One of the common problems with other types of spine surgery would presumably still be a problem with disc replacement: the development of scar tissue. Because scar tissue creates quite a few problems in other types of spine surgery, there is a good chance that disc replacement surgery, although probably an advancement over other surgical techniques, may not provide the long-term results most patients are hoping for.

Treatments For When All Else Fails

Unfortunately, there are a few cases where not much can be done to correct the causes of disc-related pain. In these situations, there are some options for pain control that offer better and longer-lasting effects than standard treatments.

One option is what's called a dorsal column stimulator. In concept, this is somewhat like a TENS unit (described earlier), but TENS units use external electrodes. The dorsal column stimulator uses electrodes that are surgically implanted in the spine and controlled by an external control box. The device administers electrical stimulation directly to the spinal cord to block the perception of pain. Because of the implantation in the spine, there are significant risks with these devices, and so they are not a first-line of treatment, but they can usually offer at least partial relief to some people with severe chronic pain.

Another implanted device is a morphine pump, which automatically releases the narcotic pain reliever drug morphine in controlled doses to suppress the function of pain receptors. Again, because the device is implanted near the spine, there are risks involved, and morphine may not fully alleviate all pain, but these devices can be helpful for some people.

Live Life, Control Your Pain, Don't Let Pain Control You!

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