

YOUR FREE LOWER BACK PAIN GUIDE

LOW BACK PAIN SECRETS

Uncover the most simple and overlooked secret

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THE MOST COMMON PAIN IN THE WORLD

Lower back pain is one of the leading physical health conditions in North America. In fact, according to Statistics Canada, 80% of people will experience lower back pain at some point in their lifetime. . Every year roughly 25-30% of the United States population are currently experiencing low back pain!

The prevalence of low back pain in North America leads to people becoming more inactive or potentially leading people to believe they need to completely stop exercising altogether. Instead of using lower back pain as an excuse to do absolutely nothing, the better alternative is to proactively learn to work around the pain and to exercise in a way that helps alleviate symptoms. There are a multitude of reasons as to why lower back pain is rampant in North America but according to leading back expert

Dr. Stuart McGill, for the vast majority of chronic non-specific lower back pain cases, it boils down to motions, postures and loads (more on this to come).

So what does this mean for you? Well, not only could a huge amount of your clients show up with some kind of back pain one day, but also many of your friends, family, and colleagues too. Are you likely to be their go-to advisor? Do you know the best advice to give?

If not, don't panic! The Low Back Pain Secrets gives you the key questions to ask and two gold medal spine hygiene strategies endorsed by DTS Fitness Education and leading back health expert Dr. Stuart McGill.



THE DIAGNOSIS DILEMMA



"When a label is created around a sensation or feeling, like pain, it has the potential influence the degree with which you experience pain."

Before we dive into spine strategies, it's important that you first learn how to communicate with your client. Often, low back pain clients will approach you after seeing other practitioners who have decided to give them a label (a.k.a a diagnosis). While diagnosing is an excellent tool and can aid a skilled practitioner in their journey to assist a client, it also has the ability to create mental blocks.

Categorical labeling is a tool that humans use to resolve the impossible complexity of the environments we grapple to perceive. Researchers began to study the cognitive effects of labeling way back in the 1930s when linguist Benjamin Whorf proposed the linguistic relativity hypothesis. According to his hypothesis, the words we use to describe what we see aren't just idle placeholders, they actually determine what we see.

Over the last few decades, the science has expanded beyond labels only determining what we think. When a label is created around a sensation or feeling like pain, it has the potential influence the degree with which you experience pain. It's important to not create labels around pain because the label often does more harm than good - enter the nocebo effect.



The nocebo effect occurs when negative expectations regarding a treatment or activity causes the client to have the negative experience they were anticipating. For example, when a patient anticipates a side effect of a medication, they can suffer that effect even if the "medication" is actually an inert substance. Both placebo and nocebo effects are presumably psychogenic but they can induce measurable changes in the body. What does this mean for a Personal Training client? Well, when a client anticipates pain when performing a specific motor pattern, they will likely tense and create the pain out of anticipation.

What can you do when a client approaches you with a label?

Step #1: You're Normal

Many spine issues are abnormally common. Meaning that yes, it is an abnormality but those abnormalities are so common they might be considered normal.

Like everything else in your body, your spine ages. As the spine ages, a certain amount of wear and tear is considered normal. A systematic literature review by Brinjiki, 2014 looked at 33 studies with over 3100 asymptomatic individuals.

Imaging Finding	Age (yrs)						
	20	30	40	50	60	70	80
Disk degeneration	37%	52%	68%	80%	88%	93%	96%
Disk signal loss	17%	33%	54%	73%	86%	94%	97%
Disk height loss	24%	34%	45%	56%	67%	76%	84%
Disk bulge	30%	40%	50%	60%	69%	77%	84%
Disk protrusion	29%	31%	33%	36%	38%	40%	43%
Annular fissure	19%	20%	22%	23%	25%	27%	29%
Facet degeneration	4%	9%	18%	32%	50%	69%	83%
Spondylolisthesis	3%	5%	8%	14%	23%	35%	50%

Notice that imaging showed that by the age of 40:

- 50% of asymptomatic individuals had disc bulges
- 68% of asymptomatic individuals had disk degeneration
- 33% of asymptomatic individuals had disc protrusions
- 32% of asymptomatic individuals had signs of facet degeneration

So what does this mean? If your 50 year old low back pain client's imaging shows that they have a disk bulge and degenerative disk disease, they are so common that they are "normal". This supports Dr. McGill's opinion (based on 30 years of research) that postures, motions and/or loads are the key drivers of back pain - not the presence of degenerative discs, a disc bulge or herniation.

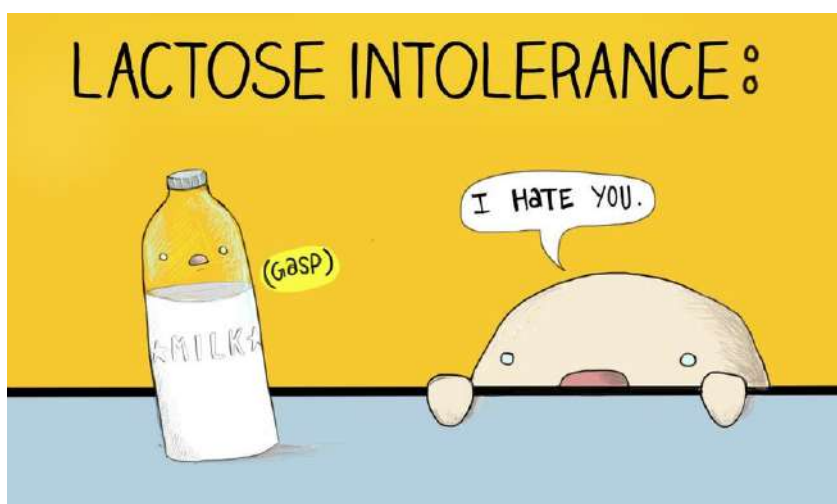
Reference: Brinjiki W, Luetmer PH, Comstock B, et al. Systematic literature review of imaging features of spinal degeneration in asymptomatic populations. AJNR Am J Neuroradiol. 2014;36(4):811-6.

Step #2: You're Not Broken

Now that you've helped the client feel more normal, it's time to discuss their pain. It's important to distinguish that it's not the diagnosis that's causing the pain, it's specific posture, motions and/or loads that cause pain. If a client has a disc bulge, this may create a specific movement or posture intolerance. When the client goes to perform the specific movement or posture they are intolerant to, the pain triggers.



Here's another very simple example: Approximately 65% of humans develop a lactose (dairy) intolerance. When they consume dairy products, they experience bloating, abdominal cramps and diarrhea. Therefore, the problem isn't the stomach, but rather how the stomach reacts when exposed to a food it is intolerant to. The grudge is against dairy, not your stomach.



The key is to make sure that your client understands what drives their low back pain.

THE LOW BACK PAIN EQUATION

IDENTIFYING PAIN DRIVERS

Motions

Actions,
Movements

+/-

Postures

Stance,
Position

+/-

Loads

Weight, Force,
Burden

Essentially, a combination of a person's movements and positioning combined with force can generate lower back pain.

Most people tend to have poor movement mechanics as they lose much of these skills as they age. As a young toddler, people commonly moved in an array of different ranges but with every passing year, they move a little less. Think about it, once a child turns 5 years old and starts attending school full time, they are now sitting for roughly 30-35 hours per week.

Technology also has us constantly seated as well as forcing us into poor postural positions. Compound that over time, along with hours of desk work, scrolling through social media feeds, constantly not exercising, and *BOOM*.... there goes your back!



THE QUALIFYING QUESTIONS

The background features a large black triangle pointing downwards from the top, which overlaps a white triangle pointing upwards from the bottom. In the bottom-left corner, there is a solid orange triangle pointing towards the center.

Question #1: "Do you have good days and bad days with your back?"

The aim of this question is finding out the nature of the pain. Is it acute or chronic? Is it better or worse after activity? Start getting to the root of the problem.

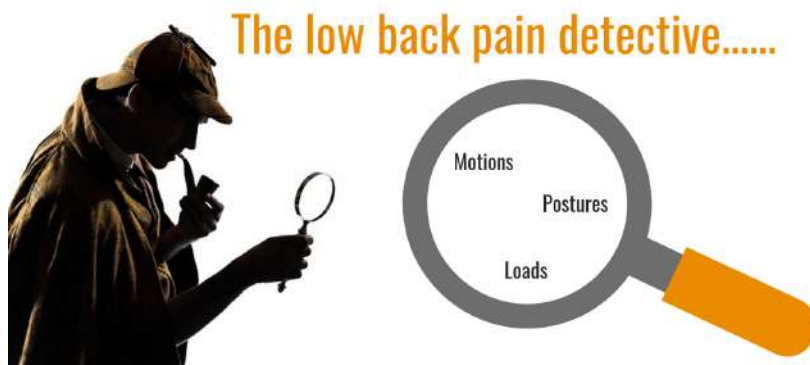
If the person says yes (they do have good and bad days), great! They are likely NOT a candidate for surgery and you have an opportunity to help them. Your challenge is to make every day a good day.

If they answer no, please refer them to someone in your allied healthcare professional network.

Question #2: "Do you know what triggers your back pain?"

The person might not know exactly what triggers the pain but what they do need to know is that they will play a key role in identifying, modifying and eliminating the root cause of their back pain.

Remember, the drivers of all back pain can be boiled down to specific postures, motions and/or loads. Your second challenge is to determine what postures, motions and loads are behind your client's pain.



A common example of posture driven back pain can be seen in clients who sit all day in a slumped, rounded back, flexed spine position. If you were to ask what causes their pain, this type of client might mention everyday tasks such as putting on their shoes, picking up things, brushing their teeth or sitting for a long time.

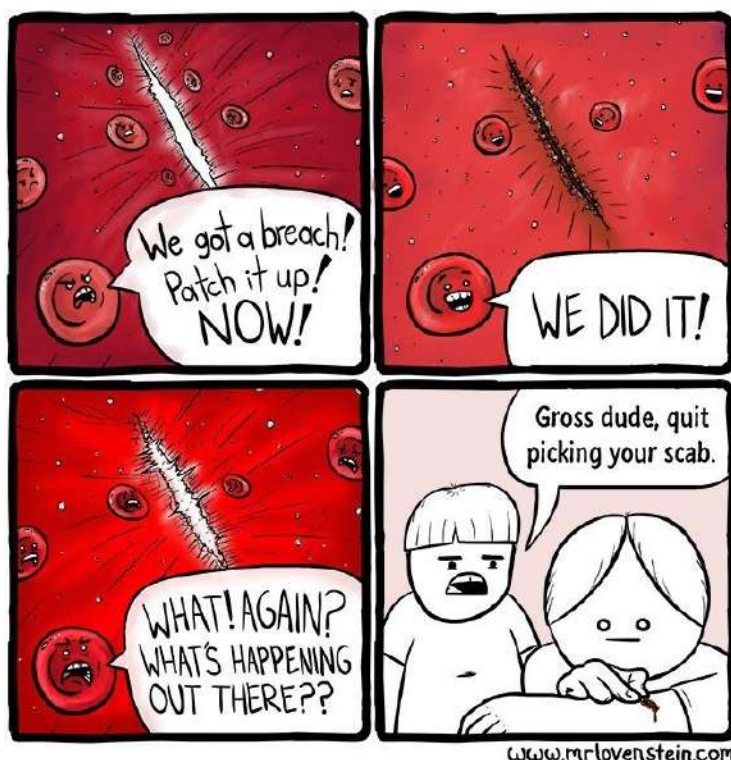
In those cases, exercises driven by spinal flexion such as sit-ups, medicine ball slams and Jefferson curls should be avoided as they can make their pain worse. Remember, spine flexion is not the enemy, in fact, it is a natural motion of our spine but excessive spinal flexion is a potent mechanism for developing a disc bulge or herniation. In these cases, the disc is the victim of the posture, motion and/or load which causes it to move posteriorly and irritate a spinal nerve.

Question #3: "What takes the pain away?"

A common answer is "moving". As fitness professionals, we know that "motion is lotion" and in many cases, back-pained individuals have figured out that moving around can be very helpful for reducing the level of pain, tightness and discomfort.



Ironically, some common strategies like stretching and/or self-manipulating or joint "cracking" can actually be the pain drivers. These approaches can provide a temporary analgesic effect primarily due to activating the "stretch reflex" (a neurological stimulation that can temporarily reduce pain sensitivity). Like picking a scab, it may feel good at the time but the long term impact is negative. Unfortunately, a lot of people with back pain get caught in a cycle of stretching and self-manipulating to reduce pain not understanding that this temporary relief is in fact a long term pain driver.



LOW BACK PAIN SECRETS

THE POWER OF WALKING



One of the best approaches to help relieve lower back pain is to just simply walk! As simple as this sounds, it is one of the most beneficial activities in regards to alleviating low back pain. More often than not, regressing back to the foundations of human movement will help correct functional problems. Almost always, dysfunction can be traced back to a foundational issue and by simply focusing on the fundamentals, you can help guide your client to a life of longevity and pain-free living.

"Fancy doesn't always mean effective!"

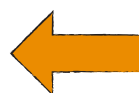
Walking ensures proper spine stability because the entire core complex, including the rectus abdominis, abdominal wall, quadratus lumborum, latissimus dorsi, gluteal group, and back extensors, are engaging at low to moderate levels to support the body and actively walk (1).

High levels of inactivity combined with chronic sitting tends to cause dysfunction in both the gluteal group and quadratus lumborum (QL). These areas tend to become overly tight and shortened. One of the best ways to battle this is addressing postural patterns and adding in more reciprocal movement, a.k.a, walking!

WALKING 101

Although walking is very simple, most people do it wrong. Proper technique is crucial for you to be able to yield the benefits and to protect the back and reduce risk of injury.

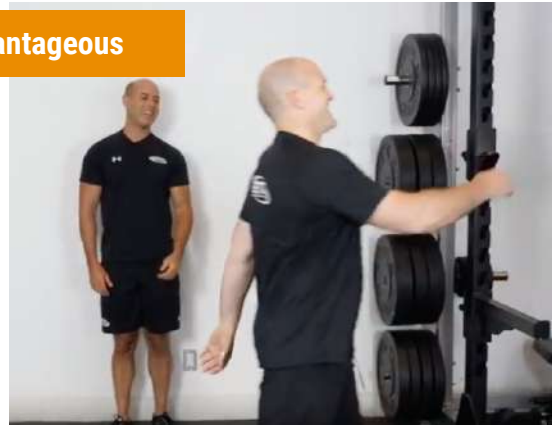
In his book *The Back Mechanic*, Dr. McGill describes walking as "nature's back balm". In his clinical practice, he prescribes walking to almost every back pain client. The act of lifting and swinging a leg during a walking stride challenges the lateral parts of the spine, core and hips in a way that spares the spine. The coordinated movements of the arms and legs during walking stimulate the energy storing fascial slings, reduce muscle tension, and unload the spine.



Video Link

THE TECHNIQUE:

- Posture - look up, look proud
- Arm swinging - swing the arms from the shoulders (not the elbows)
- Pace - walk at a moderate to brisk pace (Avoid slow walking - it encourages poor posture and reduced arm swing which increases spinal loads and may trigger low back pain)

Advantageous**Disadvantageous**

“Walk proud, with a bounce in your step and swing your arms”

Walking is low risk and very easy to start. The American College of Sports Medicine recommends light to moderate walking for roughly 30 minutes, 5 days a week which equates to a total weekly volume of 150 minutes (2). This is an effective starting point for building a cardiovascular foundation, as well as working some of the muscle groups responsible for maintaining a strong lower back. If a client is currently completely inactive, it's probably more ideal to begin with a shorter distance and time period - 10-15 minutes maybe more reasonable. It's important to start slowly and gradually increase the intensity by increasing your time and/or distance in order to avoid aggravating the low back from overuse.

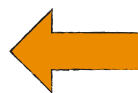
LOW BACK PAIN SECRETS

THE POWER OF BRACING



Prior to engaging in any load bearing movements, it is imperative that a person first master “the brace”. Why brace? Remember that the spine is an inherently unstable structure. Nature designed it that way to give us a variety of movement options. Nature also provided us with a kind of guy-wire system so that we can generate enough spinal stability for a given task. For tasks such as lifting a heavy external load, like a 1RM deadlift, our body creates a high level of stability. Compare this to picking your keys up off the floor - the body knows you need much less stability. Too much muscular tension can crush the spine and too little will allow the spine to buckle.

BRACING 101



Video Link

The Technique:

- Have the client simulate how they would react to someone punching them in the stomach. The tension they create is an abdominal brace.
- Ensure they are bracing by pushing out. Do this by wrapping a band around their waist (you should see it expand when they brace).
- Have them “tune” the brace. With permission, poke them in the lateral part of their abdomen with your fingers and ask them to tune their bracing strategy to meet the strength of your fingers. Ask them for examples of their everyday activities and aim to help them develop the relevant level of brace. A gentle poke for picking up a light load such as car keys from the ground and a firmer poke to stimulate picking up a child from a car seat.**

MAKE SURE YOU UNDERSTAND BACK PAIN

Back pain will impact 80% of the population at some point in their lives. You are in a powerful position to really help many of these people get out of pain and avoid future discomfort. Start with determining if they have good days and bad days. If the answer is yes to good days, then you can help them.

Your goal as a fitpro is to stop clients from “itching” their back pain every day, and instead coaching them through effective long term strategies.

Ready to add back pain assessment and guidance to your skill set?

Yours in fitness,

Your friends at DTS Fitness Education



References:

- (1) McGill, Ph.D., S. (n.d.). *Designing Back Exercise: from Rehabilitation to Enhancing In backfitpro.*
- (2) American College of Sports Medicine. (2011). *Starting a Walking Program. In American College of Sports Medicine.*
- (3) Brinjikji W, Luetmer PH, Comstock B, et al. *Systematic literature review of imaging features of spinal degeneration in asymptomatic populations. AJNR Am J Neuroradiol. 2014;36(4):811-6.*