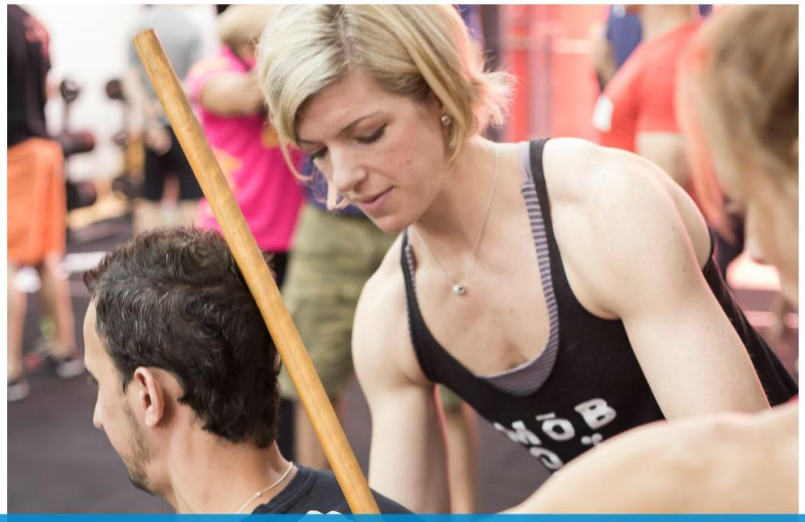

The Low Back Fix

A Starting Point for Anyone with Low Back Pain

E-Book Guide

Dr. Theresa Larson, DPT | Anders Varner

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INTRODUCTION

Congrats on taking this step!

In this introductory guide, expert Strength and Conditioning Coach Anders Varner and expert Movement Physical Therapist Dr. Theresa Larson, DPT will explain the systemic problems that are causing your back pain, a way to alleviate the pain, and how to feel confident in your movement.

As you will see, the fix for your back won't be a simple one. But there is a fix.

You're taking a positive step by reading this guide.

In this guide, you'll learn the following

- Why your brain and your back aren't as connected as they should be
- What a good spinal position is to be in (you'll be surprised how often you're NOT in this position)
- What the Hierarchy of Health is
- A handful of easy-to-do activities that give you a chance to relieve low back pain

The Low Back Fix

1. **Get the tools and knowledge to fix your pain**
2. **Get your freedom back**
3. **Choose the do-it-yourself (DIY) option**
4. **Choose the done-for-you (programming) option**

To learn more about how you can eliminate back pain for good, click here

If you're already signed up for our Perfect Movement Guide or our 8 Week Low Back Fix Plan, you've taken another major positive step. We look forward to seeing your progress. If you haven't signed up for either, take that next step for yourself.

Read on to learn why we have created this series.

THE AUTHORS' *'WHY'*

COACH ANDERS VARNER

I've been a book-nerd of a Strength and Conditioning Coach for nearly 15 years. It took me 13 of those years to get to that lightbulb moment when I connected the dots of fixing Low Back Pain.

Coach Anders Varner

Founder, San Diego Athletics

Master Programmer

Crossfit Coach since 2007

It started with a Pro Athlete

As catcher for the University of San Diego and the Gulf Coast Tigers, Sam Assael spent thousands of hours behind the plate: standing up, sitting down, blocking balls, and calling the shots for some of the best pitchers in the game. Athletes at Sam's level are often viewed as the healthiest people on the planet. However, when he hung up the cleats, Sam began battling chronic back injuries. In 2006, he had his first back surgery at age 26. In 2014 he had a second back surgery. Two back surgeries under the age of 35 is devastating. Sam realized he needed help, and so he came to my gym, San Diego Athletics.

We started with what I thought was a basic movement, the squat. The squat is a very fundamental human function. Watch a baby try to stand. As they lose their balance, they drop into a perfect squat.

I quickly learned that Sam, like most adults, had lost this ability.

We spent the better part of our first nine sessions trying to get him to properly push his hips back and to get his knees tracking over his toes.

> ***I tried every trick in the book…(but) we made very little, if any progress. I told him…everything would be very experimental.***

I tried every trick in the book. I had him stretch to try to open his hips. We tied bands around his knees to help him drive his knees out. I put a light barbell on his

back hoping we could slowly begin to incorporate box squats into his program. Every time we tried something new, we added stress to his low back and we made very little, if any, progress. The frustration became too much and I pulled him into my office for a meeting. I had to admit I had done everything in my playbook to help him and nothing was working**. I told him from here on out everything would be very experimental, but we would fix him.**

I had been missing one key connection…

A catcher sits on his toes for every single pitch over the course of a nine-inning game. At a minimum, this is more than 200 incorrect squats over a four to six-hour period, every single day. Sitting on your toes pushes all of your body weight to the front half of the body (anterior), which is controlled by the quads. If you do this for 20 straight years, your body completely forgets what the hamstrings and glutes are used for and it begins to shut down the back half (posterior). Being anterior dominant leads to an inability to fire the largest muscle in your body, your glutes, which are in charge in of properly bending over, sitting down, standing up, and even walking.

Eighteen months after we started experimenting, Sam is now pain free with little to no physical limitations. What I discovered while coaching him is that his brain and his posterior chain did not communicate. In essence, I would tell him to push his hips back, and he would think he was doing it, but nothing ever happened. It was as if his brain and his butt spoke a different language

Through this process, I learned how the brain commands the musculature to create movement. I learned that the term **"glute activation"** means very little if your brain is not aware of the actual function of the glutes and has not used them in years.

I then applied this to 'everyday folks' with even better results.

Around the same time, I noticed my friend Jesse Ibanez had not been to the gym in over a month. I gave him a call and we talked about how he had tweaked his back. It was so debilitating that getting out of bed was a daunting task. We started working

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together and I began implementing the system I used to fix Sam. Now, a year later, Jesse continues to train three days a week, pain free.

Jesse is in real estate. He's never played professional sports, but he suffered from the exact same issues as Sam. Neither of them had properly developed the musculature in their posterior chain and the imbalance caused very serious low back issues. As I focused on fixing them, more people showed up and they all had the same imbalances and pain. I began to refine the way I approached fixing them. There is no real secret. The overwhelming majority of back issues are caused by the brain's inability to communicate with the posterior chain. This imbalance places an incredible amount of stress on the low back. The question becomes less about low back pain and more creating programs where structural balance is the base.

The overwhelming majority of back issues are caused by the brain's inability to communicate with the posterior chain.

So I teamed up with an expert movement doctor that specializes in getting people back to optimal health (not average health).

Dr. Theresa Larson, DPT

I treat in gyms. I treat in corporate settings. I've taught courses around the globe on proactively avoiding pain. Having tools and knowledge to help maintain yourself is the only way healthcare can ever work. That's why I've joined Coach Anders on this Low Back Fix quest.

Fixing low back pain is a multi-billion dollar industry. Between chiropractic, physical therapy, spinal surgeries, and exercise physiologists, there are a lot of people getting treated for low back pain or getting paid to treat low back pain.

Dr. Theresa Larson, DPT

Doctor of Physical Therapy

Founder, Movement Rx

Instructor for CrossFit Mobility Trainer Course

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Back surgery has a dismal success rate. With the right treatments, pain can be eased, but a complete cure is unlikely. Unfortunately for most patients with bad backs, there is no easy solution.

This is not okay.

The reason why many people are in pain even though they were "fixed" with surgery is because their movement pattern was not fixed. Their spine is still under the same threat it was under prior to the surgery. That is why pain happens. Your brain perceives a threat, creates a pain response (which is a little different in everyone), and warns the body protection needs to happen. As motivated humans we often push through pain because there is no time to stop. Pain is a sign we must stop and take care of the threat.

The reason why many people are in pain even though they were "fixed" with surgery is because their movement pattern was not fixed.

People get re-injured, stay in pain, and do not heal because their movement pattern has not been fixed. As Anders wrote, it is a brain-body connection.

- How do you breathe when you move, how do you set up your spine?
- How does your brain perceive your movement?

All these things help keep your spine healthy for life. You tweak your back once, twice, three times, and then you blame the three-ounce pillow that fell on the floor during the night or the ten-pound bag of groceries.

It's not the fault of the groceries—your trouble started long before you picked up that bag.

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YOU ARE A REAL-LIFE BOBBLEHEAD DOLL

Do you remember bobblehead dolls? They are figurines, usually athletes, with giant heads attached to the body by a spring. When you touch the head of the doll, the head bounces around on the spring. It's actually a pretty fun thing to watch.

Unfortunately, this is how the majority of people suffering from low back pain move.

The top half of their body is no longer connected to their lower half and it places strain right where there is the least stability, your low back.

Are you a bobblehead?

There is a very simple test I use to establish a baseline of movement and connectivity.

Bobblehead test

- If you are sitting, move to a standing position. Once you are standing, place your palms on your quads, and bend over and touch your toes. Observe yourself as you reach down. Are your hands in front of your feet and away from your body? If so, you, my friend, are a bobblehead doll. Your upper body and lower body do not communicate with each other.
- Now, come back to a standing position. I want you to squeeze your butt as tight as you can. Before you bend over to touch your toes, push your hips back so that your palms stay in contact with your legs as you reach down. You may notice you feel a large stretch in your hamstrings well before you get even close to touching your toes. If you currently have back pain, you may have noticed that the pain was less significant the second time we tested the exercise. What we are testing here is movement patterns, load sequencing, and neurological recruitment.

The human body is designed to carry out **five very basic functions: push, pull, carry, hinge, and squat**. All these movements use the spine, but two of them, the squat and

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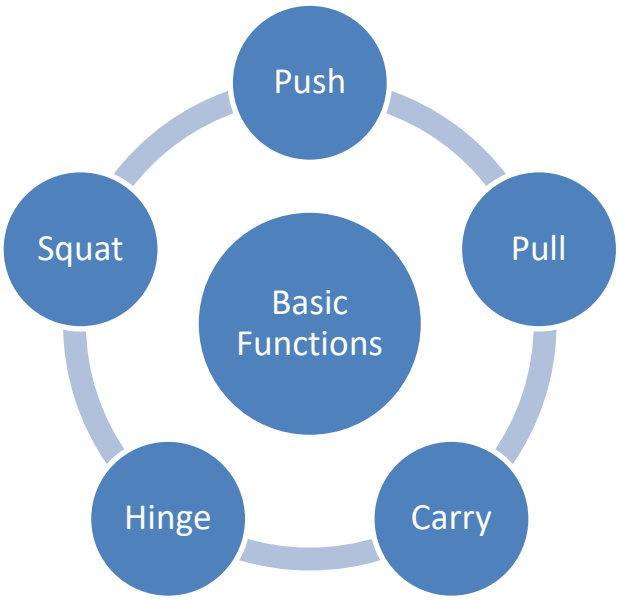

hinge pattern, incorporate the full length of the spine. **A lot of stress is placed on the spine if the squat and hinge are not executed properly.**

Consider this…

As you sit in your chair throughout the day, your shoulders round and your back softens. You slouch a little and you no longer use your glutes. This inactivity of the glutes rounds the lower back. Instead of your spine being straight and strong, it begins to bow.

And since nothing happened the first time you sat in this comfortable position, you do it again the next day, and every day after.

By sitting in this position, you are practicing, for hours on end, to create a bow in your spine. The pressure is so little for so long you never notice it. But day after day, the muscles get tired, the pressure grows and then one day you are at the gym, or picking up your laundry, the muscles quit, and you tweak your back.

For anyone who has ever tweaked his or her back, you know that this is not a little injury. It is debilitating. You never know if the next step you take is going to shoot pain down your leg and put you on the ground. Confidence in your movement dissipates and you are left virtually paralyzed. This paralysis is by design. The spine is no joke. There is a massive current of electricity that is flowing through our bodies from our brain to our extremities. These currents deliver every message and action our bodies are designed to carry out.

If there is a break in that electrical current, paralysis is exactly what happens. So instead of taking that risk, your body sends shooting pains through your low back and legs to very quickly inform you that the movement you are performing is putting a ton of stress on your spine.

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THE NEUTRAL SPINE

Our spines are the chassis for our shoulders and hips. The spine carries all the important wires. It gives our extremities energy to move. It is the connector between our brain and extremities. So taking care of it means your body will function better for life. Low back injuries are debilitating for a reason.

Once you tweak your back, you are injuring one of the most important systems in your entire body**: the central nervous system**. Even if you just strain a muscle, you are still straining a muscle that is designed to protect, move, and help your back perform.

When you strain your muscle, your body immediately goes into protection mode. Muscles shorten and spasm because they are guarding against further injury and pain. So now your back squat looks different, you shift your weight away from the pain, your neck starts to hurt, your anterior hip starts to hurt, then it's downhill from there.

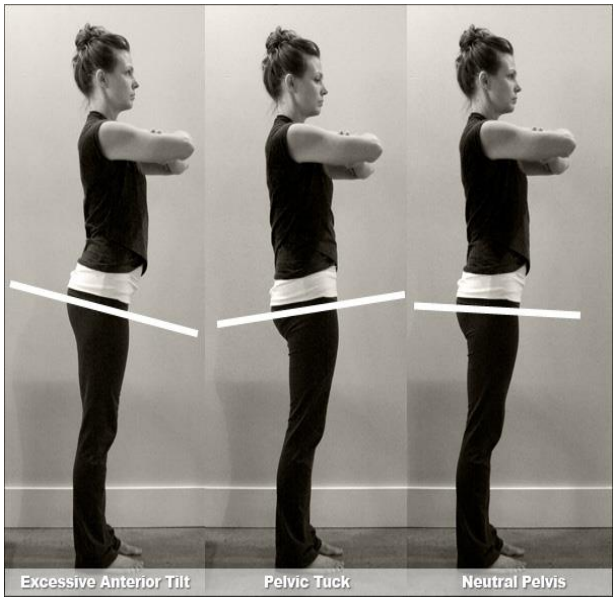

Figure 1: Neutral pelvis and spine

What you need to do is figure out why this low back injury happened, respect the healing time, which does involve movement, and progress appropriately back into training. You may need help with this process, though, and this is why we are here. To help you understand how to fix your own low back.

As you can see, the fix for your back won't be a simple one. But there is a fix.

When you are in a neutral posture with your spine, your tissues have an optimal length-tension relationship.

To begin, your body needs to know what neutral is. When you sit—which you don't want to do for very long—stand, lift, or carry, you're going to want a neutral spine.

When you are in a neutral posture with your spine, your tissues have an optimal length-tension relationship. You need to be strong

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and stable in all ranges of your shoulders and hips or your spine will suffer. Your spine needs to be neutral for it to effectively distribute force to your hips and shoulders.

So what's a neutral spine?

Figure 1 gives you an idea. To add some color, go ahead and stand. Then squeeze your glutes slightly by trying to gently dome your feet while screwing your feet into the ground. When the glutes have some tightness, bring your ribcage down so the lowest ribs are in line with the abdomen. There should be almost no arch to your back in this neutral spine position.

While many problems come from movement errors in your spine, there can also be mobility restrictions. Your mobility restrictions can show up in the form of tight joints, tight muscles, connective tissue, degenerative joints, or muscle guarding from a former trauma that has never been rectified. This is where soft tissue and joint mobilizations (hip, shoulder, elbow) come into play.

Next, realize that rolling around on mobility tools and stretching with bands are awesome, but this will not fix your problem, because it always comes down to movement. Underlying every mobility restriction is a motor control (movement) deficit. Once you fix the mobility restriction you learn to move in your new range.

Finally, the low back holds emotional tension. Our low back and mid back are home to the sympathetic nervous system. It is the *fight or flight* center. When you are in a state of stress all the time (elevated cortisol, little sleep, lots of caffeine, zero down time), you better believe your spine will hold onto that emotional tension and it will come out in the form of stiffness, pain, and tenderness. Sleep, eating (gut health), how you manage your stress, rest, and recovery all matter in keeping your low back healthy.

To learn more about eliminating back pain for good, click here.

HIERARCHY OF HEALTH

When most people hurt their backs, their first instinct is to stop everything and rest. Soon a month turns into two and before they know it they've lost that vigor and activity level they loved before the injury.

There is a better way.

Stopping is not the answer. Stopping does not fix the systemic problem. Stopping allows some healing to take place, but it does not fix the root cause of the problem.

The problem is your brain and your posterior chain do not communicate. No amount of rest that will turn on your hamstrings and glutes. Stopping will not rewire movement patterns and it definitely will not permanently heal you.

Starting at the most basic level,

1. The body needs structural balance. The brain must communicate with the posterior chain just as well as it communicates with the anterior.
2. Next, you have to strengthen your musculature so that once the communication has been established the body is capable of performing physical function.
3. You THEN need to develop power and the body's ability to exert force. This can be as simple as correctly standing out of a chair and as extreme as practicing Olympic lifts.
4. Finally, once you have created structural balance, developed musculature, and learned how to exert force on an external object, then we can add a conditioning element and some intensity to the training.

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This hierarchy: balance, strength, power, and conditioning, outlines the basic path to the road to recovery for a healthy, pain-free life.

The beauty is that the basic level is all you need. If you spent every day focusing solely on structural balance, you would have met virtually all the requirements for healthy living. In fact, once we start adding elements from higher up in the hierarchy, we begin to expose ourselves to additional risk.

Not only do we need to focus on the hierarchy of health but we also must understand how to apply the hierarchy to basic human functions of push, pull, squat, hinge, and carry. You can take each of these movements and apply them to the hierarchy above and see the progression.

For example, pulling is a basic human function. To establish structural balance, we must ensure that the lats and scapula initiate movement. This can be accomplished very easily with band pull-aparts. As you develop strength, a ring row or pull-up variation fits the bill. The third step in the hierarchy, power, can be seen in a muscle-up or kipping motion. Finally, conditioning comes in, which may be adding higher repetitions, like 30 pull-ups for time.

You will notice the squat and hinge function are very connected to spinal function and cause a ton of pain when even the base level of movement is applied. Too often, we see athletes who don't understand the basic levels of structural balance and move directly into movement with external load and strength.

Unfortunately, many athletes never fully master the basic level on the hierarchy—balance—because it is never taught to them.

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The basics are so unglamorous that you would never pay money to a trainer to teach them to you until you find yourself unable to get out of bed in the morning with a bad back.

Everybody wants a big back squat, but they never want to take the time to turn on their hamstrings and find out what it feels like to squeeze their butt.

The secret to healing your back is going back to the basics, doing the things you were never taught, and rewiring your brain to move properly. Imagine your brain is a gigantic circuit board. There are wires that run all throughout your body and your brain is the command center. You want to squat so your brain adds a little electricity to the squat wire and your butt goes down and you stand up. If you can believe it, your body is dying to do these movements perfectly. Sadly, most people have developed some really bad wires.

The secret to healing your back is going back to the basics, doing the things you were never taught, and rewiring your brain to move properly.

Our goal is to rewire the way your brain communicates with your body. Go back to the beginning, fix the root cause of the problem, and heal yourself for life.

"I get it; can we fix my back yet?"

It would be nice if there were a one-stop shop for fixing low back pain, but there isn't. Instead, we have to put a plan together to fix the systemic problems that will allow for healing and allow you to live pain free forever. There are three main areas of focus in fixing your low back: thoracic spine (upper back), glutes, and hamstrings. It also helps to understand how the hierarchy of health plays into these three areas. The base layer is in balance. Our focus on the thoracic spine is to offset the imbalance of an overdeveloped chest and internally rotated shoulders.

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So what is the fix?

Here's an introductory set of exercises to focus on.

Banded Pull-Aparts

Banded pull-aparts are a great exercise to develop musculature in the thoracic spine, help external rotation in the shoulders, and create balance between the chest and upper back.

Begin with your arms extended straight in front of your body. Hold a thick rubber band in each hand, and without bending the arms, pull the band apart so your arms move to the side and your body finishes in a "T" position. Slowly bring your hands back together in front of you, but do not take all of the tension off of the band. Try to complete 15 to 25 repetitions multiple times a day.

Sumo Kettlebell Deadlift

The next step in solving low back pain is developing balance in your glutes, hamstrings, and quads. To allow your brain to communicate with your posterior chain—your glutes and hamstrings—you must isolate the posterior chain and create a movement pattern that forces the glutes and hamstrings to perform the work.

The best fix for developing balance in the glutes and hamstrings is the sumo kettlebell deadlift (SKD). This lift is performed with a medium-weight kettlebell, about 35 to 53 pounds. Stand with your feet wide, outside your hips, and your toes pointing out at a 45-degree angle. Hold the kettlebell close to your body with the arms extended down. As you descend downward, focus on maintaining tension in the glutes. Try to squeeze your butt as you drive your knees out and sit your butt down towards your heels. Be sure your butt drops straight down without hinging at the waist. Allow the weight of the kettlebell to pull you down as you fight to maintain proper position. As you ascend, squeeze your glutes and drive your hips to the kettlebell. Perform 8 to 12 repetitions four times a day.

Split Squat

The split squat is the best tool to focus on hamstring development and balance out quad dominance. The beauty of combining the SKD and split squats is the manner in

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which we load the musculature using different joints. In the SKD, the hip is the primary mover, whereas in the split squat, the knee joint does the majority of the work.

To complete a split squat, place a chair or bench about three feet behind you. Raise one leg and place the top of your toes on the bench. One leg should be on the bench and one on the floor. To complete the movement, send the elevated knee down and back without bending at the hip. All of your weight should be in the heel of the foot planted on the ground. Descend until your knee touches the floor or as low as is comfortable. Stand by driving out of the heel and squeezing your butt. Split squats should be done for 6 for 8 repetitions per leg, four times a day.

90/90 Breathing

In addition to the exercises above, you can do two simple calming drills to help your back relax.

The first is an exercise under the umbrella of something called 90/90 breathing. Lay on your back with your feet up on a chair or against the wall with your knees and legs bent at 90 degree angles. Dig your heels into the chair and feel your hamstrings tighten as your butt tucks slightly. Gently tuck your ribs down and start to breath into your belly, then your chest. Make sure to keep your back on the ground and fill the belly and chest without moving the back from ground. Perform deep slow breathing keeping your spine flat on the ground and your hamstrings and butt turned on slightly. You will feel tension in your hamstring, not in your hip flexors, and you will feel your diaphragm work really hard. Do this for two minutes twice a day.

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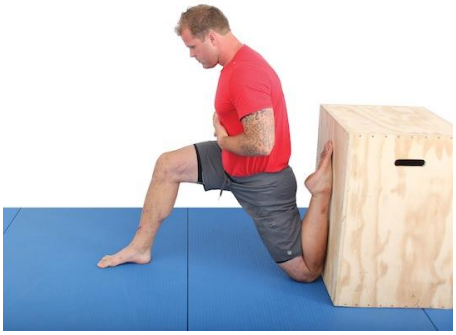
Hip Flexor Mobilization

The final exercise focuses on your hip flexors. Why the hips? These thick pieces of muscle and fascia connect to the low back. When they're tight, your low back feels it.



Place your knee up against the back of your couch, in a hip flexor stretch position. Tuck your butt under (tuck tailbone under) and bring your hips back toward your foot that is resting on top of the couch. You should feel this stretch in the front of your hips, not your low back (especially when your butt is tucked). Perform this two minutes per day on each leg.

To make these two drills work you must perform them every day for at least three weeks to see if you feel or see a difference. They must also be done for more than 90 seconds. To re-train your brain and body, you must slow down, focus on what your body is doing and take the time to pay attention to what you feel before, during, and after the exercise.

So what's next? Read on..

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CONCLUSION

As you can see, the fix for your back isn't simple. **But there is a fix.**

You've taken a positive step by reading this e-book. Let's envision your future after a couple more steps.

1. How would you feel if you were completely rid of pain?
2. What will you choose to do when you don't have to worry about your back?
3. What new activities will you try?

To do more to eliminate back pain for good, choose from one of these three options:

Things aren't so bad. I'd like to learn some more on my own.	**Click for Low Back Fix Workshop [Video]** ~~**Regularly $39 |**~~ **Limited Time $7**
Things aren't so good. I need something to do now. I'll start with this DIY option.	**Click for DIY Perfect Movement Guide [Video Series]** ~~**Regularly $69 |**~~ **Limited Time $37**
I want help NOW. I'll use this daily guide to follow until I feel pain free.	**Click for The Low Back Fix Plan [Video Series + Written Programming]** **$49/month (or $499 annually)**

Or go to www.thelowbackfix.com

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