# What You Need to Know: Low Back Pain

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# Contents

# Introduction

The goal of this book is to have the most relevant and usable book to provide you with knowledge, tools and tricks to give you a foundation to stay active, keep moving and enjoy your life from now all the way up to the end.

If there is anything that doesn't make sense to you: the explanations, exercises, logic – anything, please let me know at the email at the end of this section: what it is and if there is any way it could be made to be more user-friendly or understandable for you.

**The Scope of This Book**

This book is based on many years of experience helping hundreds of people regain -or avoid losing- their independence, continue to stay active and keep doing what they love doing – like golfing, tennis, gardening or keeping up with the kids and grandkids.

If you're like me, you don't want to waste time on useless (or even partially useless) activities. There are hundreds – if not thousands - of ideas on what you can do to get yourself out of pain and back to being active.

Every one of those bits of wisdom needs to be tweaked for you in your particular case. I'm going to share with you ***the patterns of what I've seen people do - to successfully take the information that they are given – and how they interact with it so that it actually works for them***.

This loosely falls into 3 categories. Depending on where you most closely fit, you can see where your results might be. This is at the beginning of the book because, depending on where you fall, this book might not be the greatest benefit to you so it wouldn't be worth your time to work through it.

<u>The Get-It-Done Person:</u> This person is determined to maintain their fitness level and

independence over the years. She wants to know what she needs to do to get stronger and healthier, and she just does it. She seems to defy the odds and is perhaps a little bit of a mystery to those around her, often considered "lucky" by those not realizing the conscientiousness and work put into maintaining such health. She is going to take the instruction, communicate if something doesn't quite work right and ask the question "How can I take the information given to me and use it so I can get the result I want?" This person has excellent results.

The It's-Good-Enough Person: She dabbles a little bit with ideas here and there, does some exercises but not a lot, has to reduce activities and limits what they can do, plays around with different diets, is still active, may or may not be taking pain pills regularly and has the typical decline of health expected for people as they age, but is likely doing a little bit better than some of their peers. This person expects that suffering is a part of getting older, but will do a little bit here and there to try and get better. This person has moderate results.

The I'm Too Busy Person. Someone just tell me what to do, and I'll consider it. This person does what they are told, often when convenient or if it doesn't interfere with their life. They rarely or loosely investigate solutions, focusing mostly on the problem and the pain. When considering solutions, they look

to see how convenient it is to them. They tend to be on ever increasing medications and rarely look at what they personally can do to reduce them. Instead, they want someone outside of them to give them an answer that they don't have to take too much action on. They frequently bounce from possible solution to possible solution, rarely committing 100% to anything. This person is best served getting the cortisol shots, possibly surgery and probably not really messing around with the information in this book.

Obviously, the results are going to be different for each person. And these are obviously sweeping generalizations. Most people are somewhere along a gradient. And none of these is the right way or wrong way to do it. Each of these ways of doing things are perfect for the person doing them. The ones that will benefit most from what I am writing in this book are in the first two groups.

The more you are willing to do for yourself, the better your results. If you are in the first group, you will likely get excellent results.

**At the end of each chapter is an area for you to take notes based on what was presented in that chapter. Sometimes there will be questions to help you think about how to approach your healing and recovery process.**

This book is about what has been successful for people. Having things you can integrate into your life makes the difference. The level of willingness to integrate them is what makes the difference between the different groups as well.

If you see something or find something that you want to delve more into, the internet and books are a great resource. If you would like a "Part 2" with more detailed information on something, please let me know at the email below.

Also, be sure to check in with your personal chiropractor, physical therapist or medical doctor if you have any concerns about any of the recommendations. They will work for most people. But if you're like many of the people who work with me, **many of these may need to be adapted to your personal situation**.

Your safety is of the utmost importance, so if you are a 'mature' person whose body is starting to do it's own thing in spite of what your brain tells it to do, (If you've been fortunate to reach this phase of life – you know what I mean.) then please be sure to have a professional or a caregiver watch you to make sure that you continue being as healthy as possible and make great progress.

**Mis~~S~~takes**

We've gone over this book more times than you can imagine – trying to make sure that all the mistakes are found before publishing. But… we realized that if we wait until it's absolutely perfect, you'll never get the information. Hopefully we got them all, but we make no guarantees. If you do find something, please send an email to: LowBackPain@drbonniejuul.com

CHAPTER 1

# My Body Is Starting to Fall Apart

If you've picked up this book, it's likely that you have come to the realization that…

**your body doesn't recover like it used to.**

It doesn't twist and turn like it used to. Or if you twist one way, untwisting becomes an odd challenge. Or you are getting pains that aren't going away like they used to.

You've perhaps learned to be more careful about how you move. **Moving the wrong way could lay you low and cause you to have more pain or cause you to not be able to move at all.**

So, you move carefully. This is called 'guarding.' It's a natural protection that your body does to prevent further injury.

Aches, pains, pain-killers, cortisol shots and inevitable surgeries – these are the things that most people associate with being active, especially as they get older.

All of these are being done in the hopes to keep moving and stay active for a longer period of time.

While they act as a band-aid – and often a much needed band-aid – they allow you to ignore the declining process of your body so you can stay active, but they don't solve the underlying problem.

The worst part of all of the pain (besides not being able to keep up with your kids or grandkids), is having to give up the fun things in life.

Fortunately, there are things you can do to slow -and, yes, sometimes even stop or reverse- the decline of your body. With a strategic and knowledgeable approach, thousands of people have

been able to get back to what they enjoy doing most.

Just be honest with yourself about what you are willing to do.

**Armed with the right knowledge**

The symptoms don't magically disappear, but you can be armed with the right information, knowledge and mindset to increase your chance for longevity and activity.

There are things that you can understand and do to help you:

- Recover faster
- Prevent injury

Picking just one thing out of the recommendations in this book will help you. Trying them all out – that will help you a lot.

**None of the recommendations here are theory. They tried and true.** They are all things that have been used by hundreds of people to get active and stay active.

Consider them 'tricks of the trade' or even 'your secret weapon to keep moving.' **While those around**

**you are slowing down -you'll keep on going.**

The strategy is to **understand what your body needs to function well, and then give it to it.** You will be given the groundwork to understand ways that you can keep as active as possible – for as long as possible.

## End of Chapter Notes:

1. **What are some things that you would like to see changed in your low back pain? If it were possible, what would you like to see?** Examples of answers: waking up and able to move better when getting out of bed, able to lift weights without pain, able to walk a mile, able to run a mile.

2. **What would you be willing to do if you thought that might be possible for you?**

CHAPTER 2

# WHAT'S WRONG WITH ME?

Since you have low back pain, we know that there are muscular and structural imbalances in your body.

There are likely some chemical imbalances leading to increased inflammation in your back and possibly other problems. Chemical imbalances come from stress, toxins and lack of appropriate nutrients.

Exploring that fully is not in the scope of this book, however a later chapter is about foods that can help.

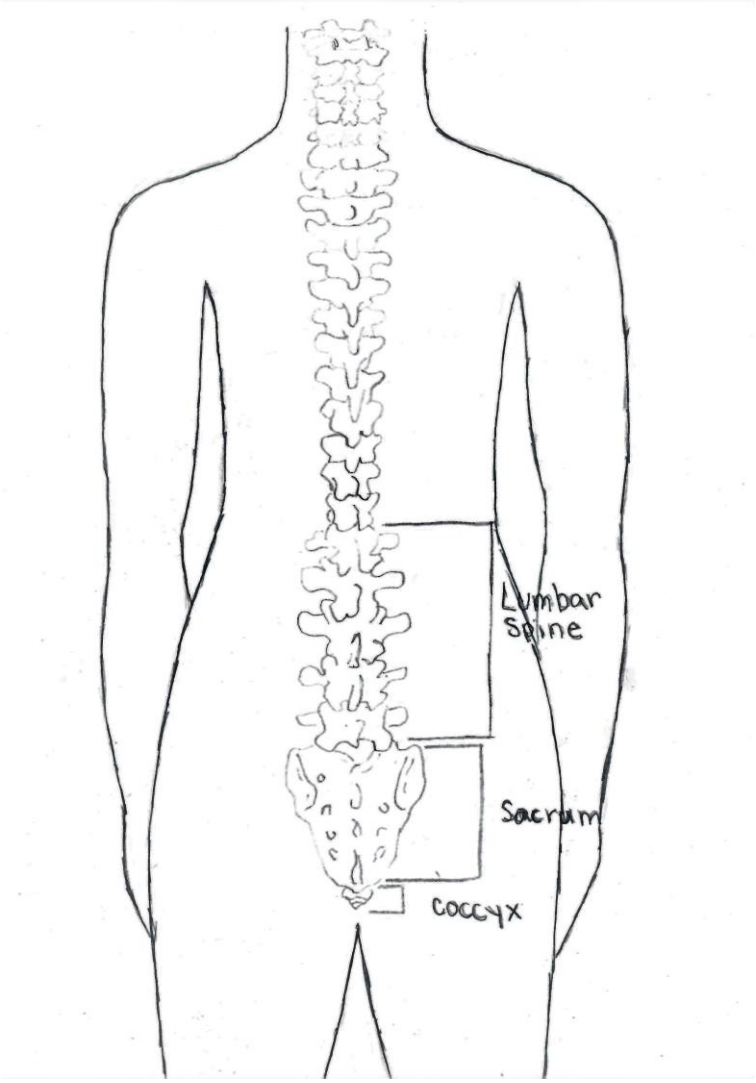
In this book, we are going to make the assumption that your diet is good enough to support your body, that you aren't on medications that have a side effect of low back pain (they exist) and that you are ready and willing to do what needs to be done for your low back health.

First, it's important to understand the structure of your low back and what you are dealing with.

We'll take a peek inside. It's important for you to know what is happening so that when you are presented with solutions, they make sense to you.

When people talk about their low back, they are generally talking about the arched part of their back at and just above the waistline. This is called your **lumbar spine.**

They are probably also talking about the part of the back just below the waistline. This is called the **sacrum and tailbone (coccyx).** Your tailbone is between your butt cheeks and your sacrum is on top of the tailbone and below the lumbar spine.




**The lumbar and sacral spine**

Depending on where your pain is and how long it has been going on, it can be a really good idea to get an x-ray.

The x-ray gives insight into what is actually happening. Is it degeneration? A fracture? Just misalignments and muscle spasms? (In this case, it would be what I call a 'boring' x-ray. That's what you want.)

## Low Back: Lumbar Spine and Sacrum

Your lumbar spine has 5 segments called vertebrae. The vertebrae have a very important job in that they surround your spinal cord and all the nerves coming down before they go off to the different parts of your body such as your legs, knees, ankles, feet, toes, 'private area' organs, bladder.

**The lumbar spine sits on top of the sacrum**. It allows you to bend forward, back, side-to-side and twist left and right.

**The sacrum** is more like a **stable shelf** that the rest of the spine sits on top of. Nerves come out of it as well, so of course slight misalignments in the sacrum can also cause neurological issues.

When something goes slightly off with your low back, it can limit the flow of information in your nerves and can cause anything from slight weakness to numbness or tingling.. It can also affect how well those 'private area' organs operate. (I'll just let you mull over that one.)

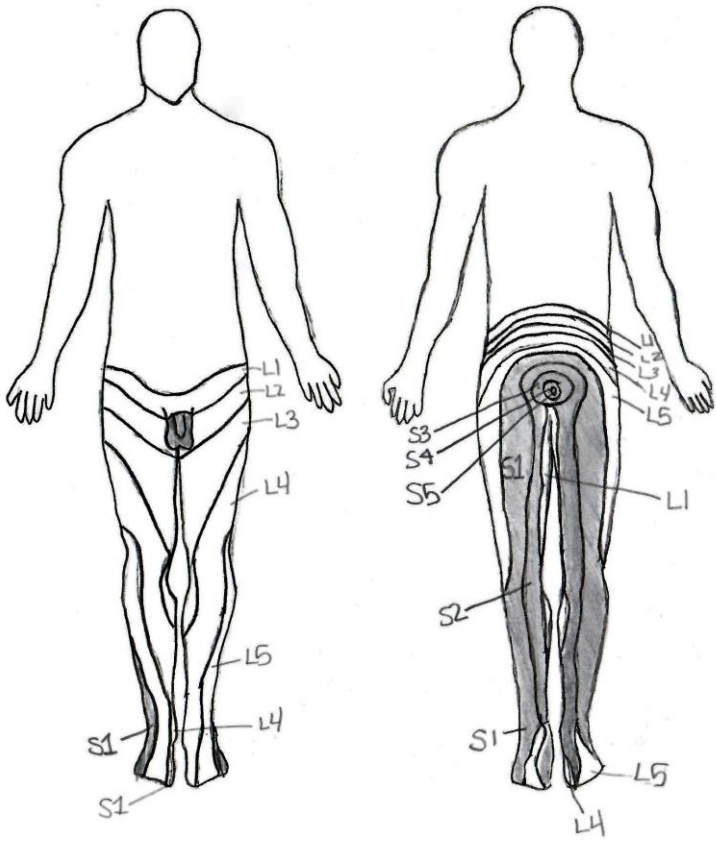
It should be obvious by now that your spinal column is a very, very important part of your body. And its care should be a top priority.

## How to figure out where the problem might be

The nerves come out of the spine between the different vertebrae (segments).

If there is a problem between any two segments, the issue may 'refer' – or go - to other areas. This might be experienced as pain, lack of sensation, sharp nerve sensations, weakness, tingling or numbness.

Before we get into it, go ahead and look at the dermatome maps of the front and back of the body, and mark the area with a pencil where you are having pain, numbness, tingling or other sensations.




**Dermatome Map of the Low Back**

You may have noticed while marking it that there is a letter and number that is labeled for the different sections. These indicate the nerve that affects those areas.

The "L" is for Lumbar or Low Back.

The "S" is for Sacrum.

And the number indicates the level within the "L" or the "S."

If you have a problem outside of the spine, like with your upper leg or foot, there may be something going on with your spine related to that area, or the nerve's pathway through your other joints to the area.

To figure out where that is, you can look at your x-ray report. If you don't have an x-ray to look at, you can look at the information below keeping in mind that some of this may be happening with you.

## Deciphering the X-Ray Report

To get more information about what is happening inside of you, you might get an x-ray.

This guide is here to help you figure out what the report is saying and how that might apply to you.

The most common things seen on x-rays for (1) Lumbar Spine and (2) Sacrum and Coccyx will be

explained.

This will be followed by an explanation of what the nerves do from those areas and what other symptoms you may be getting.

## Lumbar X-Ray

**LUMBAR SPINE VIEWS:** This is the 'view' of the camera when it takes your picture. Each angle can show something different.

AP

Anterior to posterior aka front to back. The picture was taken with you facing the camera.

Oblique

The picture was taken with you standing at an angle to the camera.

Lateral

A side view picture was taken.

Extension

You arched back so they could see what is happening with that movement.

Flexion

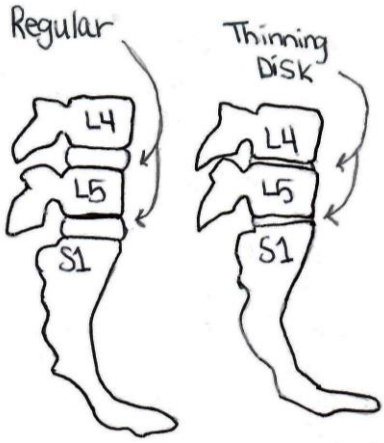
You leaned forward so they could see what is happening with that movement.

## Most Common Findings on Lumbar X-Rays

Disc space narrowing

Your discs are the cushion between the vertebrae. As you age, they tend to shrink and that's where you can get your stiff back.

When these narrow, the gaps that the nerves come out of narrow as well. (The nerves come out the space or 'holes' just behind where the disks are.)




**disc space narrowing**

The narrowing ("thinning") can be mild, moderate or severe. With severe narrowing, you may also have bone spurs.

Bone Spur

A bone spur (spurring) is when your body lays down extra bone to create stability in your body.

Your body is always trying to create stability and balance for you. When it is unstable, it will find a way to create stability.

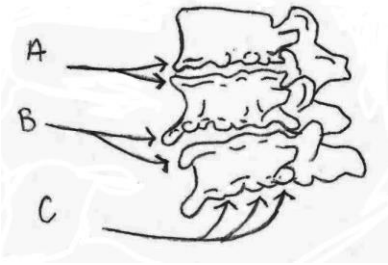
With your spine, it creates stability by laying down bone. Remember, it is protecting your spinal column – and when the spinal column gets in trouble, the rest of your body gets in trouble.

The bone spurring of laying down of bones has varying level of severity.

*Tip: If you are hearing clicking, popping or crunching with movements, there is a strong likelihood that there is instability in that area. This is true for all joints. You may also be deficient in essential amino acids or other nutrients.*

Vertebral body spurring

This is when the spurs jut out from the front part of the vertebrae, usually seen on the top and bottom.




A. Bone spurs starting to grow towards each other
B. Bone spurs overlapping
C. The ridges are little ones forming

**Vertebral body bone spurs**

At a mild level, they look like little bumps or a platform sticking out.

At a severe level, they start arching towards each other to connect. The closer they are to connecting, obviously the harder it is for you to move that part of the spine and the more trouble the nerves have coming out.

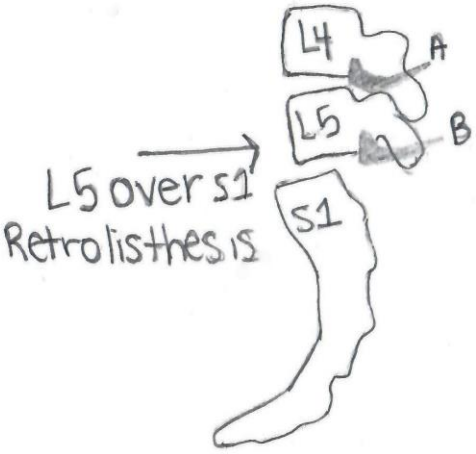
Vertebral body spurring is one of the most common type of extra bone growth seen on the lumbar spine x-rays. It comes with age and/or trauma.

Retrolisthesis

*Retro* means backwards. *Thesis* means out of place.

It is usually written as "Retrolisthesis of L5 over S1" as an example. This means that L5 is not straight above S1, but is slightly ***backwards*** from it. It is often listed as a grade or mm measurement. (mm = milimeter)

2mm is mild and 9mm is severe. It may also be graded from 1 to 4. 1 is minor and 4 is severe.




A. L4 nerve
B. L5 nerve (most likely affected here – can be cross referenced with the dermatome map.)

**Retrolisthesis**

Anterior Listhesis or Anterolisthesis

*Anterior*, or antero, means forward. *Thesis* means out of place

It is usually written as "Anterior listhesis of L5 over S1" as an example. This means that L5 is not straight above S1, but is slightly ***forward*** from it.

It is often written as a grade or mm measurement (mm = millimeter)

2mm is mild and 9mm is severe. It may also be graded from 1 to 4. 1 is minor and 4 is severe.


Back of spine

C. L4 nerve
D. L5 nerve (most likely affected here – can be cross referenced with the dermatome map.)

**Anterolisthesis**

Spondylolysis or pars fracture

*Spondy* – means spine. In this case think of it as referring to the bony part that you feel on your back that lets you know that you are touching your spine.

*If you reach your hand behind you and touch your back, you should be able to feel the bony bumps. If you can't feel the bumps, or if your muscles next to the bony bumps feel like a tight wire, your muscles are way too tight. This indicates a problem with your spine and you should see a professional about it.*

*Lysis* - means break or fracture.

**Pars fracture**

Spondylolysis means that the back part of the spine has broken off from the rest of the vertebrae. (the body of the vertebrae)

It is also called a Pars Fracture, which just indicates more specifically where the break is.

You should be concerned, but don't freak out. People can have this for a long time and never know about it.

(IMPORTANT NOTE: Spondyl***o***sis is a different word and means there is aging or degeneration. It looks very close to spondyl**oly**sis. But it is different. Be sure to check the spelling.)

## Sacrum and Coccyx X-Ray

Lateral view – the picture is from the side.
AP view – the picture is taken from your front.

**SI Joints** – This is where the sacrum and the pelvis come together. Movement is important there. It tends to have the following problems as you get older if you haven't taken care of it.

Symmetric – is the right side similar to the left side.

Degenerative spurring – new bone is being laid down to create stability

Sclerosis – the area has had bone laid down and now it's getting harder for the joint to move and is likely more painful

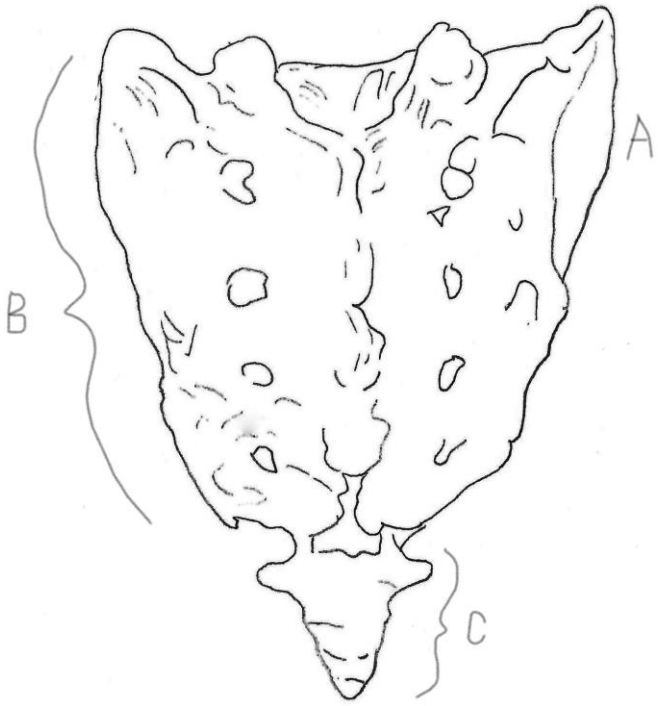
Ankylosis - the joint has fused together, so it is more like the most advanced degeneration.

Peri-articular erosion - the space around the joint is narrowed.

**Coccyx -** it may be to the side or forward. For example:

There is anterior *(towards your front side)* displacement *(out of place)* of the distal *(furthest away from where it connects to the sacrum)* most coccygeal *(of the coccyx) segment (part)* on the lateral view *(when your picture was taken from the side)."*

Translation: The coccyx is out of place. The tip of it is pointing forward. That could be seen from the side.




A. Location of the S.I. Joint (sacro-iliac joint). This can be an area of pain and inflammation. If you hook your thumbs on your hips with your fingers behind you, then slide your fingers down as far as you can, keeping your thumbs where they are – this is right about where your SI joint is.
B. Sacrum
C. Coccyx or tail bone

## How Problems Between Segments Might Feel

(The entire system is far more complex than this. If you want more information, I recommend that you get a book on neuroanatomy.)

Often a problem shown in an x-ray lists two vertebrae. The nerves that come out of the vertebrae are related to the dermatomes. {*Derma = skin. Tome = area.*}

If your x-ray lists, for example, disc narrowing at L2-L3, then the nerves coming out from between them are the ones affected.

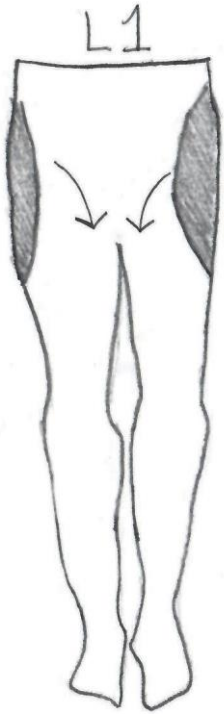
The nerves that come out of the different areas of your low back are shown below along with some of what they do. You can cross reference this to the dermatome map on page 10.

They are broken down here so that you can look at them and reflect on your experience to see if you have any trouble with any of these areas.

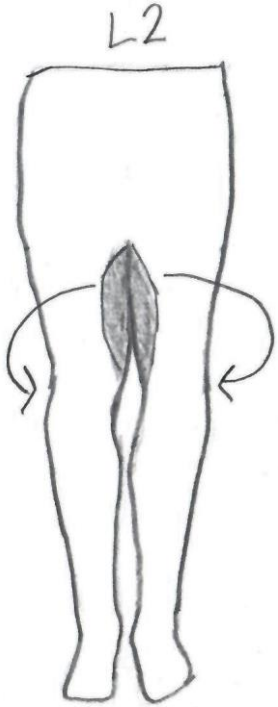
For example, Nerve L1 is the first nerve on the list. It is in the front-middle thigh and the pelvic area and the stomach muscles. If you have a problem with the nerve to this area, you could

experience anything from pain, achiness, numbness or even shingles or rashes.

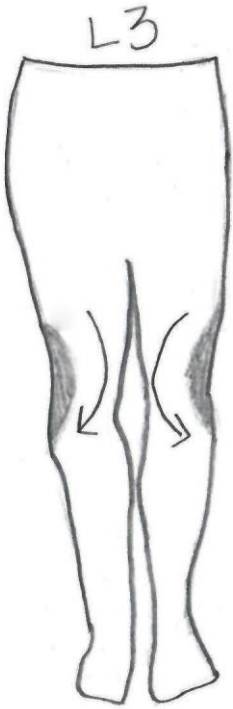
**L1-L2 - Nerve L1.** This feeds your front-middle thigh and pelvic (genital) area. It also goes to your stomach muscles.



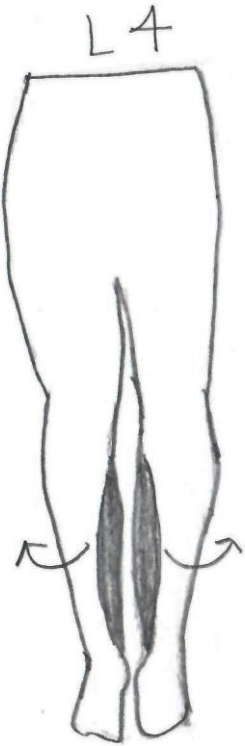
**L2-L3 - Nerve L2.** This feeds to your upper thighs and hips. It links to the movement of flexing your hip, like when you lift your leg to walk up a flight of stairs.



**L3-L4 – Nerve L3.** This goes to your lower thighs and knees. This nerve helps you straighten your knee when you are walking or standing up.

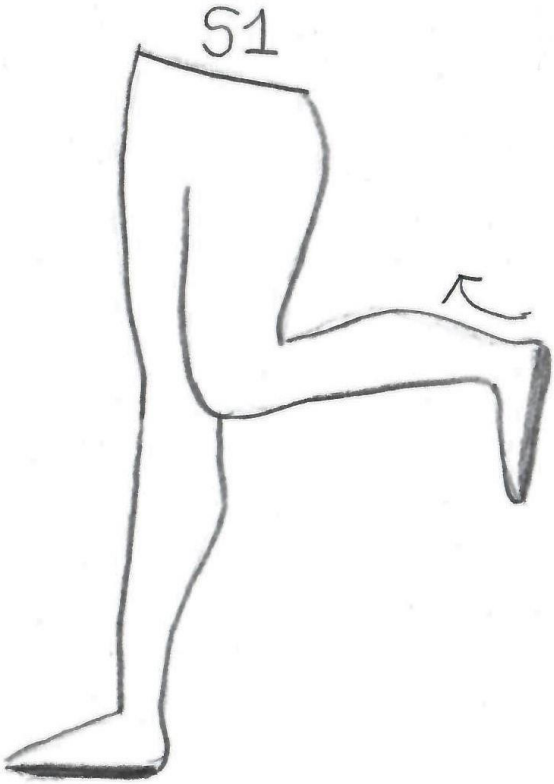


**L4-L5 – Nerve L4.** This goes from your front thigh and inner leg down to the floor. This helps the movement where you lift your ankle as if you are pointing your toes towards your face (dorsiflex). It is an important movement for when you are walking.

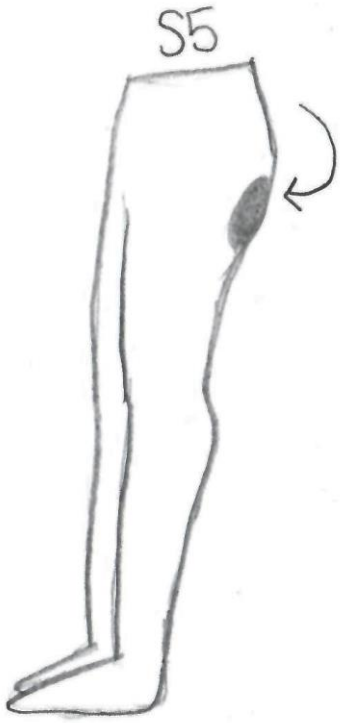


**L5-S1 – Nerve L5.** This goes from your outer lower leg down to your big toe and your 2nd and middle toe. This allows you to move your big toe.

**S1-** This nerve travels down to the toes and to the outside of your foot.



**S2 –** This nerve goes to your back and middle thigh.
**S3, S4 and S5** all go to the perianal area.
*Peri* -means 'around' and anal is… your anus or butt hole, so it's the area around your butt hole. This means that they are important for your sexual organs, defecation (pooping) or urination (peeing).

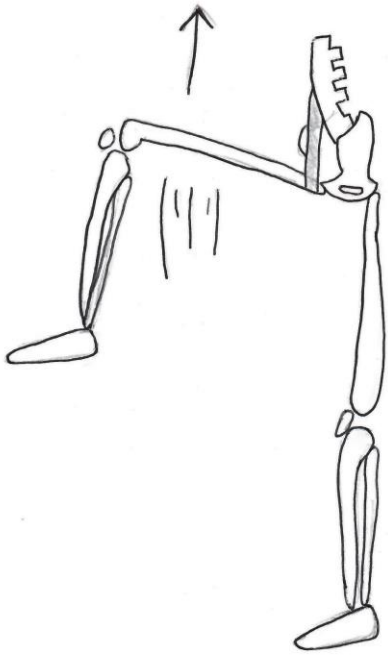


**A note about SCIATICA -** The nerves from L4 to S3 join together to create the big sciatic nerve. You can have sciatica if there is a problem in any of these segments. You may also have a 'spasm' in a muscle in your rear end that squashes this nerve and creates pain.

## Movements affected by the nerves

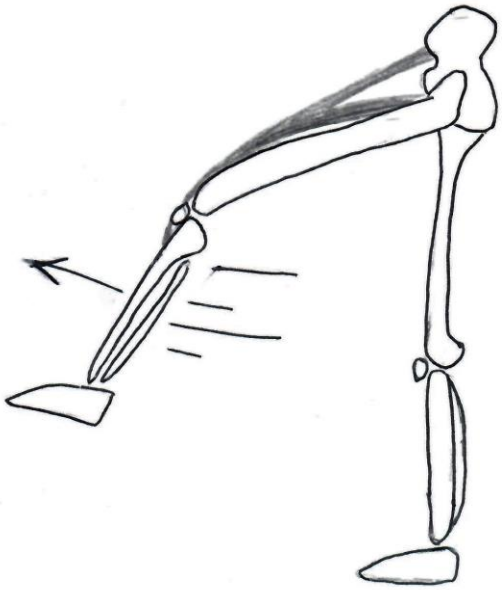
These are the main movements, there are others as well, but it gives you a baseline idea.

**L1 and L2 – flex the hip**
This is when you lift your knee up and it's the movement at your groin area. It can make it hard to go up stairs.



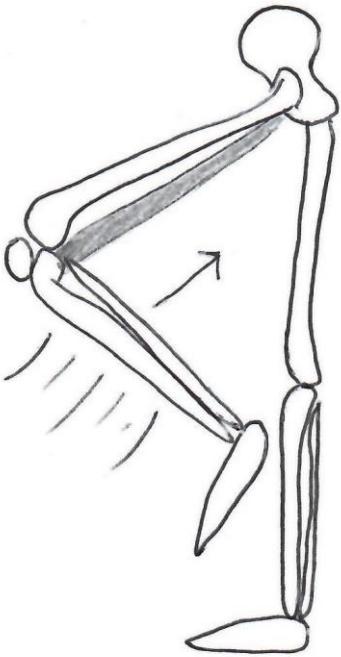
**L3 and L4 – extend the knee**

These nerves help when you are walking and you kick your knee out forward. If not working optimally, it might contribute to feeling weak when you are walking.



**L5 and S1 – flex the knee**

This is when you bend your knee.  If not working optimally, this might contribute to feeling weak when you are walking.



## End of Chapter Notes:

*You can use this section to decipher what your x-ray results mean and what you think any related problems might be. You can also just note what you have learned about your low back so far.*

## *End of Chapter Notes Continued.*

CHAPTER 4

# MUSCLES AND JOINTS

The skeleton is the foundation of the body. The muscles attach to the skeleton and move the joints.

There are different types of joints that do different types of movements, but for our purposes here, you need just a basic idea to understand how to get the results you are looking for.

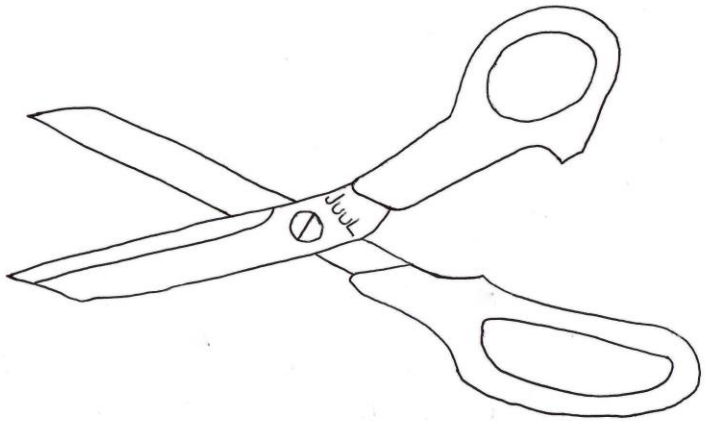
**How joints work**

This is a simplified example of what a joint is and its importance in the movement.

Let's talk scissors. You have probably used scissors.

It has two parts. If they are lined up correctly, they open and close nicely and make a nice, clean cut of a piece of paper.

If, however, the little screw that attaches the two parts in the middle (at the hinge) is too big or gets loose, it is harder to cut the paper. You have to work your hand a little more to get the scissor to cut properly.



(If that isn't fully clear, you can grab a pair of scissors and check it out for yourself. If they are a good pair, you might just need to use some imagination for it.)

You could, every time you use it, pay a lot of attention to your hand and how it is working so that you make the two sides of the scissors line up well.

Or, you could tighten the screw. Then you don't have to work as hard with your hand because the hinges are working properly.

Getting the hinges lined up properly is what chiropractic does.

Making the hand work properly is physical therapy. BOTH are needed to get the best results.

In this analogy, in case it wasn't clear – the hinges represent your joints and the hands represent your muscles.

By tightening the screw, you don't have to work as hard to cut the paper.

**Lining up the joints and muscles**

Having a chiropractor line up your joints correctly is like tightening the screw.

Strengthening exercises for the muscles around the joints keep the joints in place.

Once the muscles are aligned, it is important to re-train your body's muscles and postural habits to help hold the bones in the correct place.

The better the *integrity* of the muscles, the longer the bones will be held in the correct place.

Integrity of the muscles means how well the two or more muscles that hold a joint into place are balanced and working together.

There are two main things that contribute to this:

(1) the appropriate balance of strength of the muscles working together, and

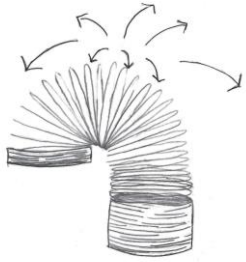
(2) the biochemistry of the muscles (the chemicals related to your muscles -more of this in the chapter on nutrition.)

The joints in your arms and legs are more like the scissors. So, the example isn't perfect for the spine, but it is a bit easier to understand.

## About the joints in your spine

The joints in your spine also act like the swivel on an office chair. Like a **swivel chair,** the spine rotates to the left and right. But unlike the swivel chair, the spine also goes side to side and back and forth. It's probably more like a **slinky.** But a slinky is another not perfect example, but hopefully it gets the point across.

The proper lubrication of the joint (for the discs in your spine) is important, just like it's important in the chair. This is done with *movement* and *proper diet.*



A note about 'do it yourself' -

I'm a big fan of 'do it yourself' and independence. I *prefer* working with people who take charge of their health.

Unfortunately, even chiropractors can't properly adjust themselves. Trust me, I've tried. I have my own chiropractor.

Many physical therapy exercises can be done at home. But, to get the most out of them, you have to make sure to manage your form 'like a drill sergeant.' Sloppy form causes sloppy joints… which can make the problem you're trying to get out of… worse.

So be careful. Trust your instincts.

## End of Chapter Notes:

## What insights do you have about your own low back from this chapter?

CHAPTER 5

# POSTURE, PAIN and FEET (?!)

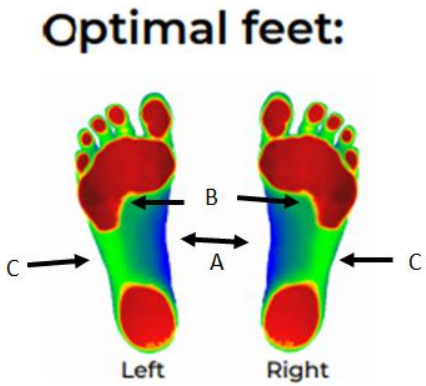
One question quiz:

How many **arches in your feet** are you supposed to have ***for optimal function***?

Circle your answer: 1 2 3 4 5

The answer is *3*.

A. We all know the one big arch. We don't necessarily think of the other two.
B. You are also supposed to have a slight arch under the ball of your foot.
C. You are supposed to have a very slight arch on the outside of your foot.




A. Medial Longitudinal Arch
B. Transverse Arch
C. Lateral Longitudinal Arch

**Picture of bottom of a perfect foot with 3 arches**
**(Adapted from Footleveler reports)**

**Arches in your feet**

When you have the optimum arches, everything above lines up to about as perfect of an alignment as you can get.

For example, your shin bone sits on top of your feet and lines up to your knee. If your arch is flat, that ankle will be slightly turned inward. This is how we become 'knock kneed.'

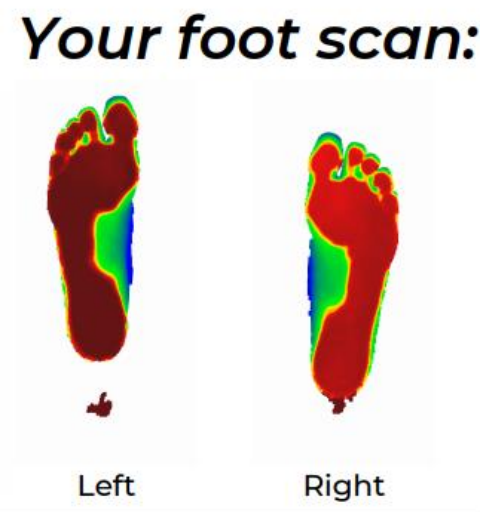
Obviously, we are all suspect to gravity. This causes the arches in our feet to drop. When walking on flat surfaces and cement floors, it is natural for our feet to adapt and spread out. When they spread out, the arches drop more.

This can lead to foot pain, bones spurs, plantar fasciitis and bunions.

When seated, our feet relax and we can see the arches in our feet.

But what happens when we stand up?

Below is a scan of my feet. Compare it to the perfect feet above. Can you see what is happening to the arches?



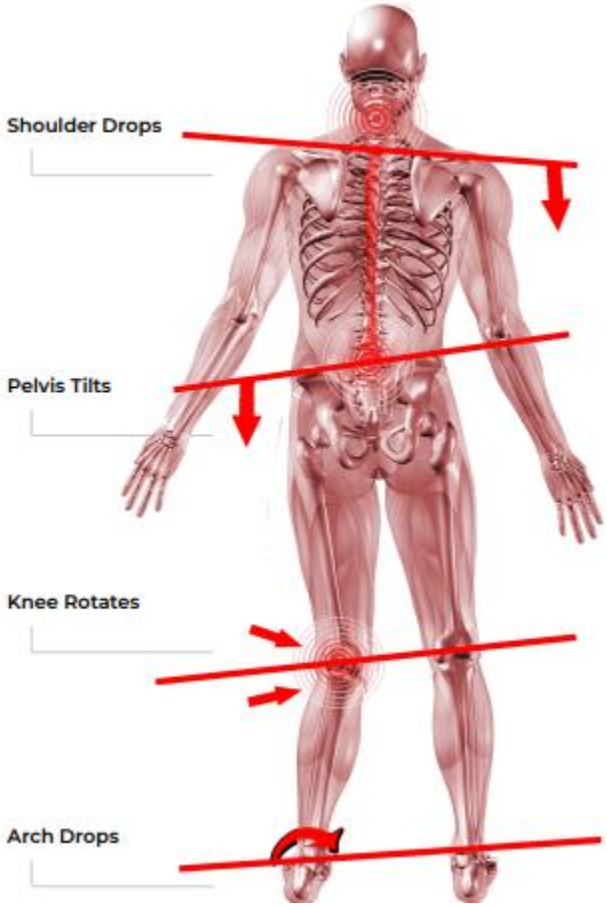

**Picture of the bottom of my feet.**
**(Adapted from Footleveler reports)**

A. The big arches in the middle is pretty small for both feet.
B. The slight arches under the ball of my feet are completely missing.
C. The arches on the outside of the feet are completely missing.

When those arches drop, it causes imbalances throughout the entire body.

## Crooked body

Here is a picture of some of the areas that can have problems.




The four main areas of imbalance are labeled in the picture.  The low back is one of the main areas.

For another perspective, below are two pictures of me. On the left, I'm not wearing my customized orthotics with the three arches. On the right, I am wearing them.

Notice my shoulders in both pictures.

You should be able to draw a straight line across my shoulders. Without the orthotics, one shoulder drops.

Without them you might also be able to see that my one side by the hip 'scrunches' a bit.

With that level of imbalance, if I go walking or running without my orthotics in, my joints get like the scissors before tightening them.

**Pain from being crooked**

Without my customized orthotics, my pain areas are: Midback behind the left shoulder blade, left hip, right ankle. Right knee will buckle. The sensation in the back is tight and gripping – sometimes I lose my breath. The sensation of my left hip is an unrelenting burning. I can only go on short walks and if I try to run or do any kind of sport, I'll be laid up for a couple of days from the pain.

With the orthotics, I do cross training, tennis, jogging. I am able to do the things that are both fun AND make me healthier.

I've been trained in the making of standard orthotics. There are two things I see with standard medical orthotics:

1. They mold to the foot so the arches don't drop more than they already have. But they **don't** *lift them to the optimal positioning for the functioning of the foot as well as every joint on top of them.*

2. There may be a lift to raise one leg to even the hip. This doesn't take into account the knees and ankles and the subtleties of the entire kinetic chain from the bottom up.

You're better off having some orthotic than none, but why not go for the things that's going to keep you active longer?

When you look at *true prevention*, the more you can do on the optimal end of things, the more you can truly prevent the need for surgery and medications.

Every time you wear your customized orthotics, it lifts your feet up and all the bones above them. (Which is literally – all the bones in your body.) When you don't wear them, all those bones above them -they start dropping back out of alignment.

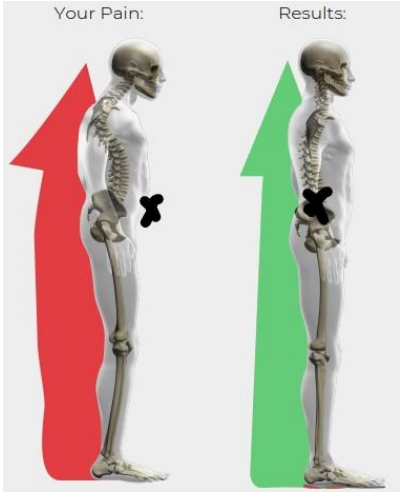
It's just logic. There is no rocket science here.

## How Your Feet Affect Your Posture

Your body has a wonderful ability to do it's best to find balance. When you are standing, your body's job is to keep you upright.

When those arches drop, all the joints above rearrange themselves to keep you upright.

When the arches are dropped, your center of gravity is slightly in front of you. (The "X" on the picture on the left.) But your body is still going to keep you upright. To do that, it is going to have your head jut forward. (Picture on the left.)



This keeps you upright. So no matter how much you try to stand straight, you are working against yourself.

In the picture on the right, the arches are lifted. This means that it balances everything out from the feet up. Your center of gravity moves, quite literally, to your center.

Most people say that they feel that they are 'standing straight and tall' when the put on their orthotics.

As you can imagine, there is a period of adaptation. Those dropped bones are now being pushed upwards.

Regular adjustments of the bones eases the transition process of using the orthotics. It can take up to 45 days to gradually adapt to them.

Once everything is realigned, you will notice that you are able to do more and are in less pain. Sometimes, you'll even forget how much discomfort you used to have!

## End of Chapter Notes:

## What do you notice about your posture and how do you think that might affect your low back? How might it affect other areas?

## Are there any other things that you noticed in regards to yourself after reading the chapter?

CHAPTER 5

# FOUNDATIONAL LOW BACK EXERCISES

Your body works as an entire system. There are four exercises for this system that are the foundation for helping you get stronger and be out of pain.

**Understanding your muscles and your low back**

To understand this, take your hand and place the palm in the small of your back.

Now, move your fingers and press in to try to find your spine. That's the knobby parts.

Now feel the muscles to the left and right. There should be at least a little 'give' to the muscles on either side.

If you can't feel the bony parts, there is likely excess tightness there. (And it doesn't matter your size, you should be able to feel it.)

You may be feeling something a ridge on either side or two ridges of really, really tight muscles.

They may feel hard – like what you might imagine with the string on a bow and arrow. (The bow part.)

The muscles on one side might be tighter than the other.

These are just a couple of indications that there is a significant imbalance and your muscles are 'hanging on for dear life.' They are working way too hard, non-stop. No one can work that hard without a break. (No wonder you're in pain!)

## Things you do to create low back pain

One reason for the imbalance in our low backs is our lifestyle that we live. We are hunched over computers, books, phones and tablets.

Usually our stomach muscles, which are part of the system designed to hold our low backs upright, are really weak.

When you do your exercises, the goal is to get more balance between the stomach muscles that hold up your back and your back muscles.

Since your body works as a system, you'll need to understand all parts of what is contributing to your problem.

There are 4 exercises that are foundational for getting your body back to proper alignment. You may have seen these before if you have been to a chiropractor or a physical therapist.

1. Abdominal core stabilization
2. Upper back and neck stabilization
3. Abdominal core stabilization -with a tuck
4. Yoga belly breathing

**Exercise 1: Abdominal Core Stabilization**

Stabilizing the stomach. There are many versions of this. My favorite is a simple one.

Lie down on your back.

Bend your knees.

Relax your shoulders.

Place your hands – one on your stomach and one under your back

Pull your belly into your spine.

Exhale sharply, paying attention to using your stomach for the exhale.

You should feel it tighten up. This is an exercise that contracts the core muscles that go around your body.

Pull it in and hold it for 3 breaths or about 5 seconds. You should be able to breathe with your stomach while doing this. But it usually takes practice.

This exercise is adapted from the Activator Methods exercise protocols.

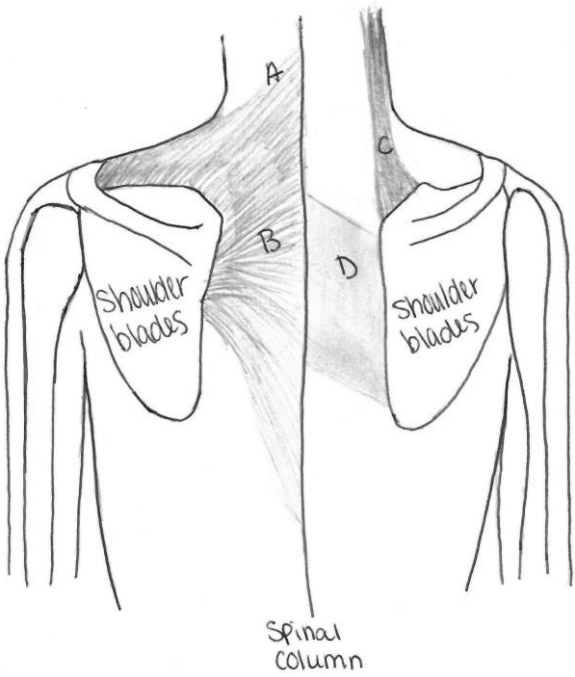
**Exercise 2: Brugger's**

Upper back stabilization is best achieved with Brugger's exercise. If you have been in therapy, you have likely seen it before.

There are two main components to it.

1. Engage your core (exercise 1)
2. Stand up straight and bring your shoulder blades back, together and DOWN.*
3. Tuck your chin. This means you slide your chin backwards. For those of us prone to double chins, it's basically going to be an unpleasant experience for you. But it's good for you overall, so just set that vanity aside and put your health first. I sometimes call it 'ugly face.' Because – well – the double chin. If you're feeling ugly, you're probably doing it right.

*This is where it's good to have someone watching you. I can't tell you how many people say "But they are back and down!" Then they make a micro movement and it goes a little further down. Your inner drill sergeant is important to consult in this case. He or she will see the difference.




A. Upper Trapezius
B. Middle Trapezius
C. Levator Scapulae
D. Rhomboids

**Important upper back muscles**

The picture shows the muscles that you are working. The Rhomboids and the middle trapezius should be working to bring those should blades together.

Because of slouching forward, they are stretched and weak. They are what you are working on strengthening.

As you're doing this exercise, continually go through your head and check in with your body: |
* tuck chin back
* shoulder blades in and down
* tuck chin back
* shoulder blades in and down
* tuck chin back
* shoulder blades in and down
* tuck chin back
* shoulder blades in and down
etc.

You are retraining your body in how it should be positioned while sitting at a desk, driving, standing in line at a grocery store.

**Exercise 3: The (Abdominal) Tuck**

Once you have mastered exercise one and two, add a tuck to exercise one.

You can do exercises 2 while mastering the first exercise.

The tuck will engage the front muscles more, giving the back muscles more of a break.

To understand the tuck, you'll need to know where your pubic bone is.

The pubic bone is the bone that is just above your private parts. Stand up or lie down. Then, take the base of your palm and put it at your belly button, then have your fingers facing towards your private area, the tips of your middle finger should land right at your pubic bone.

With this exercise, you'll do Exercise 1 and then add a little tuck of the muscle just above this bone.

Most of my patients agree that **this is a game changing move**. Lots of therapists and chiropractors and trainers have you pull your belly in, but only a few of us do the 'tuck.'

Exercise 1 starts strengthening the muscles. This exercise opens up the spine in your back, allowing for more nerve flow and a bit more relief.

## Exercise 4: Belly breathing

Belly breathing, yoga style, helps relax your nervous system and also lubricates the muscles in the hips and low back with the subtle movement.

The lubrication is your internal WD40 system for your body. The lubrication occurs with movement.

This is a fairly simple transition if you have ever taken a yoga class.

Put one hand on the middle of your chest.

Put another hand over your belly button.

When you breath in, the hand on your belly should go out and the hand on your chest should stay relatively still.

If you are a normal person today, the opposite will happen.

It just takes practice.

Your lung has lower lobes and upper lobes. When you breath in and your belly expands, you are using your lower lobes.

For most people, these muscles haven't really been used in years – so have patience with yourself.

The lower lungs relax the body.

The upper lungs are great for activity.

So – back to it.s

Here is the full exercise:

1. Put one hand on the middle of your chest.
2. Put another hand over your belly button.
3. When you breath in, the hand on your belly should go out and the hand on your chest should stay relatively still.
4. Breathe in – belly out.
5. Breathe out – exhale all the air, push it out and then TUCK your abdomen like you did on Exercise 3.

Repeat 10 times.

**Adapt the exercises to you**

This is the baseline of the exercises necessary to stabilize the core and help with posture and pain reduction.

When the back is 'very out of balance' – these exercises can be too much for you. So, make sure that you start gently and carefully and consult with a professional to make sure they are right for you.

It is important to adapt them to you, but also watch out for adapting them so much that you don't have the proper form (posture).

You are a unique person, so your situation might require more finessing of the exercises.

We have found that these help 99.9% of our patients as baseline exercises. Sometimes we need to tweak them to the individual person's structure and condition so they can progress. And other times, they work perfectly just as described.

For most people, this is the foundation. The best program for posture I have found is the Perfect Posture program that we use in our office.

They have done a brilliant job of taking these basic exercises that we were already doing in our office and putting them together with other exercises into a system optimizes the combination of exercises in such a way to help make a lasting change. It is proprietary information so cannot be shared here.

**Bonus:** I have recorded these exercises to help make them more clear for you. You can access them at **www.drbonniejuul.com/videos**.

## End of Chapter Notes:

## How did the exercises go for you?  How well did you keep your form?  Is there anything else that you noticed?

CHAPTER 6

# INFLAMMATION, DIET and PAIN

Your body works as an entire system. There are different pieces of the puzzle that makes it work the best. Diet is one of them.

There are always a lot of fad diets out there and some work better for some people than other ones.

The trick is to find what works well and is manageable for *you*.

People who have experienced the drastic effect of diet on the inflammatory process in their bodies are often amazed at how little effort and importance they put on it in the past.

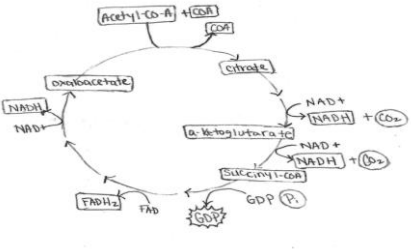
**You know your body better than anyone**

Once you connect what you put in your body to how you feel – no amount of theories, research or ideologies can ever take that away.

There are many experts in many fields, but there is only one expert on you. And that is the person sitting in your chair and walking in your shoes. (You.)

Your body operates on complex chemical interactions and reactions.

For anyone who has taken biochemistry, you've been faced with learning the complexity of the Kreb's Cycle. This is just one example of the complexity of the chemistry of your body.




**Kreb's Cycle**

Fortunately, this book is about what works. Understanding the Kreb's cycle doesn't help make anyone healthy. There are lots of people who understand the Kreb's cycle and are terribly unhealthy. Understanding it just helps you understand the complexity of the body's chemistry. And there are even disagreements of how the body works among experts.

Some people say regular sugar is exactly the same for the body as honey. When becoming a keen and expert observer of your own experience with foods, you will discover that this is not true.

There are many books that can be used to delve into the science of the body. This book is just about what works.

Let's start with the types of foods that make up a 'life giving' diet. Basically, you can make food choices that are going to move you either towards greater health or away from it.

**What to include**

Include 'real' foods and mainly stay with those that help balance the chemistry in your body.

While it is possible to pick things apart and get

really specific and careful about it, just keep in mind that the best food is one that is closer to nature.

What I've seen over the years is the closer to 'nature' your food is, the better it is for your body.

There are plenty of things you can eat, but just remember that the more 'natural' your foods, the healthier you will be.

I'll start with the healthier sweeteners.

Real Sugars

These are still sugar, so too much causes inflammation, but they are the options to help take care of having a little bit of a treat. And most people experience less inflammation from these than fake sugars or the standard white table sugar.

*Coconut palm sugar* has a lower glycemic index than other natural sugars and can be used as a one-to-one replacement with regular sugar in your recipes.

*Honey and maple syrup* are natural liquid sweeteners. Make sure to read the labels. Some honey has corn syrup in it which is on the 'not good for you list.'

Local, raw honey is the best and has medicinal properties, like helping with seasonal allergies.

Grade B maple syrup has medicinal properties, but can be hard to find. Usually you'll find Grade A maple syrup in your local store.

Protein

Your muscles are made of protein. To fuel them, protein is one of the nutrients needed. Healthier proteins are 'grass fed' or organic. A homemade beef burger is better than a processed hot dog.

*Most people* do not absorb enough protein. It's not enough to just eat protein, because your body still needs to ingest it and utilize it.

The older you get *or* the unhealthier your diet, the less nutrients, including protein, your body is able to ingest and then utilize. To support your body in ingesting proteins, *proteolytic enzymes (proteo – protein; lytic – break down)* are very helpful in helping your body use it.

Healthy fats

Omega 3 fats help lubricate the joints. Most people don't get a high enough ratio of Omega 3 fats. They can be found in the fats in some healthy meats including buffalo, salmon, sardines and kippers. It is

also in grass fed butter.

Grass fed butter actually has more Omega 3s in it than regular butter. It also has vitamin K2, which helps with heart health and the utilization of vitamin D.

Vegetables

These do not include the starchy vegetables ie. regular potatoes. Vegetables help your body reduce inflammation *if you are not sensitive to them.*

Night shade vegetables can be a problem for some people. Kale can be a problem for some people. It's very individual, so pay attention to what is happening after you eat.

Some vegetables include lettuce, cucumbers, zucchini, onions, tomatoes.

If you want more information on this, my book What You Need To Know: Eating for Health offers guidance and resources.

Fruits and starches

These are carbohydrates and are needed for building muscle. Too much will cause you to gain weight, but it is necessary for fueling the muscles.

Starchy vegetables are corn, peas and sweet potatoes.

Most fruits are fine for most people. Again, pay attention to if you feel bad after eating something.

Organic or sustainably raised

Chemicals in your foods put stress on your body and contribute to inflammation. Local fresh foods are better than organic non-local foods. So just do the best you can.

Examples of ideal healthy meals

- A buffalo or beef pattie with lettuce, tomato, pickles, real butter and mustard.*
- Side of parsnips cut up like French fries and baked with sea salt and curry powder.
- Slow cook oatmeal (2 min in the microwave) with real butter, honey and sea salt
- A bowl of fruit with yogurt.

*Ideal is organic, free range beef, Bubbie's pickles, ketchup without sugar

## What to avoid

Sugar

The number one inflammatory food is regular sugar. It is in 99% or more of the processed food that you get. It is often not even called sugar. So if in doubt… it's probably in there.

Fake Sugar

Any of the man-made sugars have problems with them. There is a lot of evidence that they lead to neurotoxicity (nerve toxin). This is a big deal, because obviously your nerves control everything in your body. And if there is a toxin in your body that affects your nerves, it could contribute to pain.

Some people think that it's healthy for them because it is FDA approved. Just because something is FDA approved doesn't mean that it's good for you. It just means that it's not going to cause an immediate problem for you.

What we consider while exploring foods are the subtle things that slowly chip away at your overall health. These subtle ingredients can seem like they aren't causing a problem in the moment, but over time can be a problem.

Processed Foods and Additives

Additives can be in the form of chemicals or

metals or hormones. The more you can stay away from them, the better for your body. 99% of processed foods have additives in them.

Any manmade chemicals that enter your body cause stress in the short term and inflammation in the short or long term.

These enter your body through air, food, drinks, what you put on your skin and if you inject anything into your body. In this case, we are talking about your food.

The best way to figure this out is: If you don't know what the word is, it's probably a toxin.

Most of these are approved for consumption, but in the world of getting really healthy – it's best to have a goal of having no more than 5% of what you eat include the additives.

<u>Examples of foods to avoid</u>

-potato chips

-fast food

-sodas (especially diet sodas)

-hot dogs

-frozen meals not made by you

**Supplementation**

Most people don't have a perfect diet. By the time most people figure out the importance of eating right, their bodies are exhausted from all the work of trying to keep the body going on foods that are not good for it.

Appropriate supplementation helps support your body in doing it's basic function – which is keeping you alive and moving.

Proteolytic Enzymes

Proteins feed our muscles. If tour body can't break down the foods so it can be used, then we aren't making the most of what we are eating. Proteolytic enzymes help break down proteins. This way your body can use the proteins and send those nutrients to your muscles. This helps with strength building and recovery after too much exercise.

Essential Amino Acids

Proteins you eat have something called 'essential amino acids.' When a food is 'essential,' it means that you have to eat it to get the nutrient. Essential Amino Acids are especially important to supplement if you are aging or don't eat meats. Make sure your source doesn't have a lot of 'waste

products.' Waste products put stress on the kidneys.

Omega 3 Fatty Acids

There are different types of omega 3 fatty acids and they come in different proportions. The details and explanation is outside the scope of this book.

One of my favorites to recommend is Tuna Omega 3. Not only does it help lubricate the joints, but this particular ratio of Fatty Acids also has a calming effect on the body. It can be taken at night to aid sleep or reduce anxiety.

**Final comment about diet**

There are many diets out there. Many things work for many people. It can be confusing and overwhelming.

It's important that you find something that works and that works for *you*. Work with someone you trust and someone that has gotten great results with healthy eating.

Keep in mind that there are many 'fit' people who have incredibly unhealthy diets. One example is runners who have 'carb loading' days that include visits to the local ice cream and cake store. This person is fit, but not healthy.

A healthy runner will have a carb loading day that includes honey and banana treats. If they have brownies, they are made with garbanzo beans and maple syrup or coconut sugar.

There are also thin people who use a lot of strategies to stay thin. Thin does not mean healthy, either. An example of this is someone who smokes cigarettes to suppress their appetite or who uses fake sugars to keep the calories down.

That person might look really good on the outside, but on the inside, the organs are struggling.

Because of this confusion, we started a nutritional coaching program helps people navigate their options and offers a solid foundation to work from.

## End of Chapter Notes:

## What might be one thing that you can start to change?  What might your biggest challenges be, and how might you start overcoming them?

CHAPTER 7

# GET YOUR MIND IN THE RIGHT PLACE

We have all heard about mindset. Having your mind in the right place makes a difference in your results in anything that you do. It's often easier said than done.

When in pain, we all want to know "What is wrong with me?" There is a follow up question that is also asked.

The follow up question, and the context around it, is the one that will determine the likelihood of you getting better or not. **There are different variations on these, but there are three basic underlying questions.**

As an experiment, just take a moment and answer each of these questions regarding your back pain.

**1. What is wrong with me?**

**2. Why is it still not better?**

**3. What can I do to make it better?**

**Basic Question**

The answer to the question "What's wrong with me?" might be one of these three things (or some version of them):

- "I don't know."
- A diagnosis, which is the 'fact' about your condition. There is comfort in a diagnosis because it at least gives an answer. A diagnosis lets you know definitely what is wrong with you.
- A description of the symptoms.

This question is a good starting point to get facts; however, more needs to be investigated to find a solution.

**Underlying Question 1**

If you are constantly asking "Why is it still not better?", you will constantly be getting this answer. If you look for a problem, you will get a problem. And more problems and evidence as to why it's still not better.

If this person is presented with a neck exercise and it causes a tweak, they might say "it's not working for me, there was a pain in my neck when I moved it. Why is there a pain in my neck? Why isn't it better? Why isn't it working for me?"

This this type of questioning focuses your attention on the pain and the symptoms. It focuses the attention on the problem. Doing so creates a delay in recovery.

I've seen them presented with relevant possibilities of a solution, but they just push those aside, argue against them and talk more about their painful condition.

The person who asks Underlying Question 1 is putting themselves in a loop of non-recovery. Recovery is harder and longer for them. If you find yourself asking this, realize what you are doing, and then do your best to change over to Underlying Question 2.

**Underlying Question 2**

The person asking: "What can I do to make it better?" is giving themselves a way out of their pain and suffering.

A person with this mindset who gets a tweak in their neck during the exercise might say "I have a tweak in my neck. What am I doing to cause this and how can I do this so that I don't get a tweak in my neck? How can I safely adapt this to my situation so that I can make it work for me?"

They are looking for the answer to what they can do to make it better. They approach the same information in a different way.

They look at the solutions presented to them and explore them. They have follow-up questions such as:

How can I use this information to make myself better?
Is this relevant to me exactly as it is presented?
How can I tweak it to help my personal condition?

The people who ask the question of "How can I make it better?" are the ones who do what needs to be done to reach their goals.

## End of Chapter Notes:

## What question do you notice yourself asking?  Do you recognize what mindset you are in?  How can you maintain or get into the mindset for Underlying Question 2?

CHAPTER 8

# WHAT TO DO NEXT

- Find someone trained in working on posture *as it relates to movement and optimal functioning of your body.* It's nice to have posture that 'looks good.' But you'll want to have your posture not just look right, but also prepare you for dynamic movement and control.

- Find a chiropractor who can work with you not only on realigning the *specific, small joints in your feet and other joints*

*(most easily accomplished with an advanced trained Activator chiropractor)*, but who will also work with you on your specific weaknesses so that you can turn them into strengths.

I personally have limited set time in my calendar to personally meet with new patients and lay out a customized plan to get them that ***ability to be free of the back pain***.

During your time with your doctor, you should expect to have:

- **The Initial Consultation** which means to you that you will complete a comprehensive history and will sit down with your doctor where you will begin uncovering what exactly is contributing to your problem.

- **The Initial Exam** which means that you will receive an individualized exam based on what you have shared in your consultation. If it would benefit you, you will be referred out for x-rays, so that you can find out if your problem is also related to degeneration. (If you already have x-rays or other imaging, please bring them in on your first visit.)

- **The Foot Scan**, which is an arch analysis, so that you can know if you would benefit from customized, functional orthotics to support you in your activities. Our patients enjoy specific ones designed for walking, cross training and even golf. The decreased pain reduces fatigue and increases stamina.

- **An individualized Report of Findings** so that you can understand what was found in your exam, what is contributing to your pain and what you can do to make it better. You will receive information on the time and the costs to get the results you want in reaching your goal.

## What to look for in a chiropractor

1. An initial exam on the first visit- NOT treatment on the first day. You want your doctor to think about your case and help you reach your goals.
2. She will consider x-rays, but not necessarily for everyone. It isn't always necessary, especially if you are younger and just starting to have problems; and if you have no history of flipping over a four wheeler, off your bicycle, fender benders or any other major events.
3. Your feet are assessed – no matter where the problem is in the body. If needed, she recommends orthotics as part of your plan and the orthotics have THREE ARCHES. Not one, not two…three.
4. You are presented with a plan *based on your condition* with an anticipated ending.
5. There are exercises in your plan that include a foundation of postural strengthening exercises.
6. Nutritional supplements and diet are advised.
7. If you don't like the 'cracking' of chiropractic, make sure you find an Advanced Trained Activator doctor. **www.activator.com**

8. They have a plan for you that is long term to cover all the phases of care. Coming in for a few visits doesn't work for long term results. It starts in the healing phase and goes to the wellness phase. All phases should be considered, otherwise they are cutting you short. They should explain this to you. It is not covered in this book.
9. Pay Plans are available. If you have insurance, often things are not paid by them. Insurance only covers what they deem necessary, which isn't necessarily what is in your best interest for long term care. Ideally your doctor will have a ChiroHealthUSA discount plan available so that if your insurance doesn't cover something, you can at least get it at a discount. The pay plan makes it so that you can budget realistically while getting the care you need and the results you are looking for.

## End of Chapter Notes:

## What are some things that you will do to help yourself get better results with your low back pain?

# ABOUT THE AUTHOR

*Dr. Bonnie Juul* is a chiropractor who helps women who are scared of the chiropractor to finally relieve their pain without having to crack anything.

Her goal is to take away any fears, frustration, or confusion as you through the process of getting to feel better.

She has helped hundreds of people figure out what is wrong with them and has helped them find the solution and given them the tools in how to manage their personal health condition that is preventing them from enjoying activities that they love.

This is her story:

Hi, I'm Dr. Bonnie Juul and I definitely didn't think I'd ever be a chiropractor. My original plan was to have adventures around the world and then settle down into being a teacher.

When I was younger, I loved being active. And I bounced easily. I fell down stairs a lot and earned the nickname Bouncing Baby Bonnie. After I learned to ride a bicycle, I remember the wind going through my hair, arms open wide, as I let my bicycle fly down a hill….and a couple of times hit a bump, fly over the handle bars and land on my face. Before graduating college, I had fallen more times than I could count.

My first job after college was at a ski resort. Snowboarding was brand new, and I decided to try it. I'd been skiing since I was 3, so my body had muscle memory from almost 2 decades of skiing.

When I took a fall, my legs went open, but my feet were locked in – and my knee made the loud and dreaded 'pop.' My leg was never quite right again. I took pain killers and just kept going.

In my 30s I was still taking pain killers regularly but started having significant, unrelenting pain in my low back. My medical doctor gave me an MRI. There was nothing wrong with me, so he referred me to a psychiatrist for hypochondria.

I was beyond frustrated. And I was angry. Not only did I feel I hadn't been listened to, but I wanted a solution, not a life sentence of pain and drugs. So I decided to think outside the box.

I found a chiropractor who gave me a thorough exam. She asked about my entire history of accidents, which no one had ever done before. The seemingly small and insignificant injuries through my life added up creating the perfect storm.

I'm now in my 50s and at that point where you realize that you can't take your body for granted. I know that our bodies have an amazing capacity to heal if given the right ingredients. Structural knowledge and care is one of those ingredients.

The path of many is to accept that we are just going to feel significantly worse when we get older, have surgeries and use pain killers. Just like I rejected the hypochondria diagnosis, I also reject the life sentence of pain and inactivity.

I've chosen another route and I invite you to join me here. It is just plain glorious to be able to step outside, breathe in that fresh air, feel invigorated and not only walk but *run* when everyone else is slowing down.

*"I am able to walk further distance with less pain."*

I was having a lot of neck pain. It was difficult for me to turn my neck when backing up the car. In addition, I have arthritis in my feet and it was painful walking. Now, my neck pain is much improved. Dr. Bonnie identified a trouble spot which she adjusts. The foot orthotics have helped a great deal. I am able to walk further distance with less pain. In addition, Dr. Bonnie has given me ways to manage the pain through exercises, foot baths, etc. I highly recommend the pillow she has available.
-Julie Bohnsack, retired, Carbondale, IL

**"I've gained relief form my major complaints and am making progress on smaller issues."**

My SI joint "went out" so I had muscle spasms and pain in my lower back. I also had multiple issues with bad posture, aching feet, numbness in one arm, and various other aches and pains. Within several weeks of treatment Dr. Bonnie ordered orthotics for me and between regaining balance in my arches, and seeing weekly chiropractic adjustments, I noticed huge changes for the better. Dr. Bonnie gave me home exercises that improved weak muscles. I followed her advice carefully and now 5 months later, I've gained relief form my major complaints and am making progress on smaller issues. I've gradually developed a lot of trust in Dr. Bonnie's knowledge and approach. She's a caring professional with a lot of skill, intuition, and passion for her practice.

- Satya Selah, Caregiver, Carbondale IL

# SOURCES and RESOURCES

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