



WHY IT HURTS AND WHAT TO DO ABOUT IT

MOVING PAST PAIN & RESTRICTIONS

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If you experience acute injury or persistent, chronic pains, consult a licensed health practitioner. Nothing in this document can be considered a substitute for qualified medical advice.

Table of Contents

Copyright ©2015 GMB Fitness™, Super 301, Inc., Revised 2023	2
Table of Contents	2
Introduction	7
“Why Not Both?”	7
Why You Should Listen to Us	9
The Right Mindset = Growth Mindset	10
How This Guide is Structured	11
Obligatory Disclaimer	13
Chapter One	14
What is Pain? Well It's Complicated	14
Understanding the Pain Cycle	14
Pain Is Also Emotional	14
Understanding The Pain You're Dealing With	16
Acute Vs. Chronic Pain	16
Working With Your Pain And Overcoming It	16
Local Capacity and Load Distribution	17
Chapter Two	18
How to Use This Guide	18
You Just Have To Give Things A Try	19
Chapter Three	20
Spine	20
Basic Structure and Function of Your Spine	20
What You Really Need to Know About the Spine	22
Common Complaints in the Spine	23
Common Mobility Limitations in the Spine	24
Common Strength Limitations	25
Improve Your Spine by Focusing on Mobility, Strengthening, and Motion Exploration	25
Spinal Mobility Routine - Back Stretches You Can Do Everyday	26
Prone Extension	26
Wag Tail	27
Quadruped Sidebend	28
Quadruped Torso Rotation	29
Half Pancake	30
A-Frame to Squat	31
Back Exercises You Can Do At Home (no equipment, no pull-up bar or bands)	32
Prone Swimmers	32
Hollow Body Plank Shrugs	33
Butterfly Shrugs	34
L-Sit Shrugs	36

Systematic Full-Body Exercise for Spinal Health	37
Chapter Four	38
Neck	39
Basic Structure and Function of Your Neck	39
What You Really Need to Know About Your Neck	40
Common Complaints in the Neck	40
Common Mobility Limitations in the Neck	41
Common Strength Limitations in the Neck	41
Improve Your Neck by Focusing on Mobility, Strengthening, and Motion Exploration	42
Supine Exercises (Lying on Back)	42
Rotations	42
Sidebending with Rotation	42
Sidebending with Rotation and Lift	43
Upper Cervical Flexion	43
Upper Cervical Flexion with Sidebending	43
Seated Exercises	43
Chin to Chest with Rotation	43
Chin to Chest with Sidebending	43
Rotated with Sidebending	43
Sidebent with Rotation	43
Levator Scap Stretch	44
Upper Trap Stretch	44
Quadrupedal Exercises	44
Retraction	44
Retraction with Rotation	44
Retraction with Rotation and Sidebending	44
Low Trap Raise	44
Chapter Five	46
Hips	46
Basic Structure and Function of Your Hips	46
What You Really Need to Know About the Hips	47
Common Complaints in the Hips	47
Common Mobility Limitations in the Hips	48
Common Strength Limitations in the Hips	48
Improve Your Hips by Focusing on Mobility, Strengthening, and Motion Exploration	49
8 Daily Hip Mobility Exercises to Fix Your Tight Hips	49
Hip Rotations	50
Piriformis Stretch	51
Butterfly Hip Stretch	52
Frog Hip Stretch	53

Kneeling Lunge Stretch	54
Traveling Butterfly	55
Squatting Internal Rotations	56
Pigeon Stretch	57
Bodyweight Exercises for Leg Strength - Squats, Lunges, and Plyometric Variations	58
Elevated Deep Lunge	58
Elevated Shrimp Squat	59
Back Leg Elevated Lunge	59
Side Lunge Squat	60
Single Leg Deadlift	60
Sissy Squat	61
Box Jump	61
Depth Jump	62
Box and Depth Jump Combination	62
Standing & Sitting Exercises: Creative Ways to Get Up Off the Ground	63
Chapter Six	64
Shoulders	64
Basic Structure and Function of Your Shoulders	64
What You Really Need to Know about Your Shoulders	67
Common Complaints in the Shoulders	68
Common Mobility Limitations in the Shoulders	68
Common Strength Limitations in the Shoulders	69
Improve Your Shoulders By Focusing on Mobility, Strengthening and Motion Exploration	69
Shoulder Pain Routine - Exercises to Make Your Shoulders Strong & Pain Free	69
L-Stretch	69
Shoulder Flexion / Thoracic Extension	70
Bent Arm Scaption Stretch	70
Bent Arm Thoracic Extension	71
Prone Scapular Movements	71
Prone Shoulder Circumduction	72
Scapular Weightbearing	72
Motor Control Play Overhead	73
Motor Control Play on P-Bars	73
Chapter Seven	75
Knees	75
Basic Structure and Function of Your Knees	75
What You Really Need to Know About Your Knees	76
Common Complaints in the Knees	76
Common Mobility Limitations in the Knees	77
Common Strength Limitations in the Knees	78
Improve Your Knees by Focusing on Mobility, Strengthening, and Motion Exploration	79

<u>Knee Pain Exercises - Routine to Fix Your Knees</u>	<u>80</u>
<u>Knee Circles</u>	<u>80</u>
<u>Star Pattern Step Knee Bends</u>	<u>80</u>
<u>Front Scale Quarter Circle</u>	<u>81</u>
<u>Jump Landing With Control</u>	<u>81</u>
<u>Chapter Eight</u>	<u>82</u>
<u>Feet/Ankles</u>	<u>82</u>
<u>Basic Structure and Function of Feet and Ankles</u>	<u>82</u>
<u>What You Really Need to Know About Your Feet and Ankles</u>	<u>83</u>
<u>Common Complaints In the Feet and Ankles</u>	<u>84</u>
<u>Common Mobility Limitations in the Feet and Ankles</u>	<u>84</u>
<u>Common Strength Limitations in the Feet and Ankles</u>	<u>85</u>
<u>Improve your Ankles by Focusing on Strengthening, Mobility, and Motion Exploration</u>	<u>85</u>
<u>Foot & Ankle Exercises - Calf Stretches (Part 2)</u>	<u>86</u>
<u>Stretching</u>	<u>86</u>
<u>Exercises for Ankle Mobility and Foot Strength (Part 1)</u>	<u>87</u>
<u>Foot Circles with Toes Flexed (Curled)</u>	<u>87</u>
<u>Toe and Ankle Movement Coordination</u>	<u>88</u>
<u>Rolling up Onto the Toes</u>	<u>90</u>
<u>Squats with Ankle Rotation</u>	<u>91</u>
<u>Ankle Rolling Side-to-Side</u>	<u>92</u>
<u>Calf Raises</u>	<u>94</u>
<u>Outroduction</u>	<u>95</u>

Introduction

To start, let's make one thing clear: pain, movement restrictions, and tightness throughout the body are very common.

You're not broken, defective, or hopeless.

Just because you see people on Instagram who are healthier or more athletic than you doesn't mean you should measure yourself against that as some kind of standard either. Remember that some of us get paid to do this.

In this day and age, you'd be hard pressed to find anyone that hasn't had to deal with aches and pains, at some point in their lives. Modern life has us spending the majority of our time seated in front of glowing screens and moving our bodies only in a very limited range of activities.

Because we help people improve their ability to move their body in the ways they want and need to, we've received thousands of emails and messages from people saying things like,

"I want to use your programs, but I have an old shoulder injury and I'm not sure I'll be able to."

Or,

"My back pain makes it hard enough to pick up my 3-year-old. Can I do the stuff you guys promote?"

Or even,

"I wish I could move better, but I'm too stiff/uncoordinated/old."

We understand your pain - both technically and experientially.

We made this guide to help.

"Why Not Both?"

Probably my favorite internet meme is the shrugging girl from the Old El Paso commercial that featured an argument over hard- or soft-shell tacos.

Like so much online debate, it seems completely silly.

Yet when it comes to choosing the right diet, workout, or intervention for a painful injury or movement restriction, we often find that even the most innocent questions quickly devolve into similarly farcical debates.

“You should stretch!”

“Stretching doesn’t work!”

“Mobility is the key!”

“Mobility causes laxity; you need stability instead!”

“You’re not stiff, you’re just weak. Heavy squats literally fix everything!”

“Squatting? For back pain? No, you need physical therapy!”

“Buy this \$200 massage gun.”

There’s no nuance. No recognition that your pains or restrictions might be complex or have more than one cause.

If you can parse the signal from the noise, you’ll eventually find that most of the “solutions” being offered fall into one of two broad categories:

1. Interventions aimed at fixing the specific issue
2. Attempts to address the root causes

And what I want to ask you is: *why not both?*

You’ll also see a dichotomy in terms of how tightly to focus:

1. Specific exercises targeting individual muscle groups and joints
2. Fundamental movement patterns to broadly improve function and control

Again, my question is: *why not both?*

One reason the internet echo chamber is so full of impassioned disagreement about the “best” ways to address pains and limitations is that there are *lots of really good methods!* Seriously, we live in an amazing time with astounding technology and practical knowledge.

There’s more than one way to skin a cat. 50 ways to leave your lover. And at least five different ways to help your aching shoulder.

Better yet, there’s no reason that trying any one method should preclude you from exploring others.

You don’t owe allegiance to yoga or CrossFit or anybody else.

Use what works. Use multiple things that work! Don’t let anyone sell you on some kind of idea that their specific brand of remedy is superior to other snake oils out there.

Even us 😊

This guide is focused on teaching you specific exercises you can explore to identify which kinds of movements will alleviate your individual set of painful dysfunctions and restrictions.

That's in contrast to our guided training programs, which teach a systematic method for retraining your body to work as a coordinated whole while developing strength and mobility to address the most common underlying issues.

Using both together will tend to provide the fastest combination of relief and prevention.

Why You Should Listen to Us

*"Everybody's got a plan. Then they get punched in the mouf."
~ Iron Mike Tyson*

When you're trying to determine whose advice to follow, you need to know it won't get you punched in the mouth. No matter how many popular podcast hosts may talk about some new, cutting edge way to punch, it's useless unless you can use it where it counts: *in the ring* (or in your real day-to-day routine).

We're not going to pretend we know it all or that we never get anything wrong. You're smarter than that.

But one advantage we do have over most people you're likely to meet is a combination of technical credentials with many decades of combined teaching experience and real world data.

Most of this guide was written by GMB cofounder, Jarlo Ilano.

A few of Jarlo's key credentials:

- Master of Physical Therapy, 1998 University of Puget Sound
- APTA Board Certified Orthopedic Clinical Specialist, 2011 to 2021
- Purdue University/EIM Therapeutic Pain Specialist 2020
- Clinician in various settings including outpatient orthopedic clinics, inpatient neuro rehab, skilled nursing facilities, home health, gym-based, and online consultations

In addition to the certifications and Jarlo's decade of hands-on clinical experience, we've been privileged to work with over a hundred thousand clients since 2010.

We've had countless interactions with real people using our methods in the wild, and we've discovered trends among the aggregate internal data from clients using our programs. In other words, we've gotten our "reps" in, and that's given us some unique insights into which methods work in abstract vs in theory vs in the real world.

The methods that follow have been tested and proven "in the ring."

We're not faith healers. We're not claiming infallibility or mystical powers, and you don't have to *believe* in anything to get results.

But if you approach this material with the right mindset, we're confident you'll benefit from the time and effort you invest in improving your physical autonomy.

The Right Mindset = Growth Mindset

To summarize Carol Dweck's book, *Mindset*, there are two broad mindsets one can adopt: fixed or growth.

With a fixed mindset, you see yourself as basically unchanging and defined - "this is just the way I am," "I'm not motivated enough to work out regularly," "people treat me well because I'm attractive," etc. These kinds of statements are often attached deeply to our sense of self and identity.

Adopting a growth mindset means seeing yourself as inherently capable of growth and improvement - "I can't do that... yet," "I can learn and overcome this challenge," etc. It allows us to both accept that some things are difficult for us, *and at the same time* believe that we are capable of developing the capacity to do them anyway.

This may sound subtle or like complete psychobabble, but try on some of these statements for size:

- "Must be nice to be young and flexible..."
- "I'd love to do that, but I have bad knees."
- "You're either born flexible or not. Stretching doesn't work."
- "I'm too clumsy. I'd just break my neck if I tried that."
- "My arms are too short. It's impossible."
- "Try that when you're 70."
- "This is impossible for beginners."

Those are lifted straight from our emails and social media comments, and you can see how each one represents an assumption of permanence or fixedness, making it almost impossible for them to invest significant effort into trying to change that status quo.

And here's the thing, maybe you do have real, actual limitations.

Frankly, you'd be abnormal if you didn't.

I'm short, (very) mildly dyslexic, and suffer from crushing anxiety in crowds. So maybe think twice before writing me off as "lucky" just because I find it easy to do cartwheels. I am very lucky when it comes to being able to learn physical skills relatively easily, but I have to ask for help when I try to buy top-shelf bourbon, and I have to spend several hours alone in a dark room to relax after social events.

Almost nobody is born with DNA that checks off all the boxes, and every apparent advantage comes with related challenges.

Taller people are statistically more attractive and better at basketball. They also can't fit into most sports cars or airplane seats and are more likely to suffer from joint problems.

My point is that there are some things you can't control, but with a growth mindset, there's still hope.

Having limitations makes you human. It's how you navigate them that matters.

And the way you learn to navigate your unique combination of limitations and abilities is by exploring various movements and learning which ones are completely impossible, temporarily not possible, difficult yet actually possible, pretty easy, etc.

Importantly, you'll begin to notice that there's usually no reason that "diagnosis" needs to be permanent.

Training and practice are the processes by which we take what's impossible for us today and make it possible in the future. You can increase your capacity and capability.

As you explore the exercises in this guide, you're likely to find some of them that are difficult. That's just fine.

Do what you can, as often as feels good.

Over time, you'll notice that what you can do has increased in scope.

How This Guide is Structured

OK, so let's get to the good stuff, shall we?

The rest of this guide is broken down by body area. You can skip to the section for wherever you're noticing pain or tightness and begin assessing your situation using the instructions provided.

From there, you'll find exercise descriptions for specific interventions. To make things easier, we've created a YouTube playlist including all of the exercises featured here, and you can find it at:

 [Moving Past Pain and Restrictions Exercise Playlist](#)

We'll also mention our training programs that are relevant as they'll work together with the more specific exercises to address local and global concerns.

From there, it's up to you to *do the work!*

Keep a growth mindset and remember that you are fully capable of changing some of your limitations and learning to navigate those you cannot change.

In many cases, it might take weeks or months.

In some cases, it will be difficult and frustrating.

In almost every case, it will be worth it.

The alternative is accepting pain and restriction as constant companions for the rest of your life, and I strongly urge you not to do that.

So is this just a thinly veiled sales pitch?

Yes and no ;)

GMB is a company, staffed by people who have material needs. This is our job, and we rely on it to provide for our families. That's a fancy way of saying that yes, *we like money*.

Meanwhile, there's things our programs don't address, and we need to put them *somewhere*... Even though we don't offer 1:1 consultations for pain and injuries, we do have considerable expertise in helping people overcome them, and there's no reason for us to withhold that from you.

So in the pages that follow, when we mention our training programs (which are on the broad, fundamental side of the spectrum), we hope you'll consider them as a complement to the (very effective) specific interventions in this guide.

Again: *why not both?*

~ Andy Fossett
The Boss, GMB Fitness

Obligatory Disclaimer

Before we get into the nitty gritty, here's the ever present medical advice disclaimer. We're not your doctors, and this guide and the suggestions herein are no substitute for being seen by a real-live professional in person.

If you have very irritable and reactive pain that doesn't seem to improve with a few days of rest, you really should make an appointment to see a doctor or physical therapist as soon as possible.

Especially if you have experienced:

- Pain that just keeps getting worse
- Pain that consistently wakes you up at night
- Weakness, numbness, and/or pins and needles sensations
- Trauma (falls, car accidents)

This guide is designed to empower you with helpful information about pain and what you can work on for different body areas. And, as long as you've been cleared by a doctor or physical therapist, the exercises included in this guide should help you to start addressing those nagging issues.

Chapter One

What is Pain? Well It's Complicated

Sometimes people get injured and don't realize it until a few hours later. And some injuries are immediately felt as soon as they happen. But that same type of injury can be mildly uncomfortable for one person and excruciating for another.

Our brains process pain differently from person to person, and even within the same individual at different times. But it's not necessarily all in the painful region. And it's not "all in our head", either.

Understanding the Pain Cycle

The science of how pain works is both fascinating and complex, but here's a few important points to understand when it comes to chronic back pain:

- Pain is a response to a perceived threat. Whether from actual injury or perception of injury
- Pain is relative and can change/alter based on your history, environment, and stresses.
- Pain doesn't necessarily indicate damage, and even without damage pain can happen and it is real.

Breaking out of pain requires changing the information that your nervous system is receiving. It's what is perceived as a danger more so than the actual input itself.

What this means is more often than not you'll reduce your pain more by improving your capacity and capabilities rather than just simply reducing the stresses. You may really need to reduce the stresses as much as you can, especially with the initial appearance of pain. But the sooner you work on improving your capabilities, the better off you'll be in the future.

Pain Is Also Emotional

When an injury occurs, it usually elicits an emotional response. "Is it serious? Will I need to visit the ER? Can I walk it off? Is this life-threatening?" It can make you question if you're hurt for life. If it's a severe injury, you might begin to doubt that you'll ever be capable again.

Yet pain is something we cannot avoid. It's a necessary sensation because it's a survival signal—warning you of potential danger.

For example, if you touch a hot pan on the stove with your bare hand, you pull away immediately. Or if you sprain your ankle, you'll likely feel a sharp pain, followed by some swelling. This gets you to stop moving that joint to prevent more damage from occurring.

Both of these scenarios offer insight into why pain is actually helpful. It's protective. In both cases, the pain is short-lived and won't last forever as long as you take the next steps to recover from the injury.

Even just knowing that pain is meant to be our body's way of protecting us, and that it's necessary and normal is helpful. This isn't meant to devalue your pain and your reaction to it but to help to reframe what it means and help you decrease the anxiety and fear that can accompany it.

This is also very much related to the belief aspect and how you view recovery. If you don't believe you can improve, the chances of getting better aren't in your favor. The stress of getting injured can play into how you react and how you feel about making progress. We want to point this out because you may not be aware of your attitude toward your injury.

You may have seen people get injured very badly, only to come back stronger than ever. And then there are others with seemingly less severe injuries who don't ever fully recover and always have a bad knee/shoulder/back.



So what gives? It's not that one person gritted their teeth and "willed" themselves to be better. It's more that we should give ourselves a bit more optimism, if you believe that recovery is possible and you will keep doing a bit more over time, then you have a really great shot at coming back stronger.

This mindset, along with other practical strategies, is what we want to provide in this e-book and all of our programs.

Understanding The Pain You're Dealing With

The way you go about relieving and fixing pain will depend on what's going on. Is this an injury that just happened, or is it something you've been dealing with for a long time?

Acute Vs. Chronic Pain

- Acute pain is something that happens in an instant. You feel it immediately. It's the pain you feel in your hand after touching a hot pan, or the pain from a sprained ankle.
- Chronic pain is defined as pain lasting longer than 12 weeks. Millions of people complain about sore backs, knees, necks, hips, and shoulders. If you've ever had nagging aches and pains, it's considered chronic.

Whatever pain you're experiencing, there are ways to improve.

Pain is the body's signaling of its perception of threat. In recurring and/or long lasting conditions there's something happening in the environment/habits/activities that's signaling to the nervous system that an area is in "danger" and needs to be protected. That can be in the form of pain, stiffness, buckling and other sensations.

Ultimately, you'll want the resilience to protect your body under any stresses that can happen in not just training and recreational activities but also in your day to day life. We can't predict and prepare for everything, but we can do more than just hope for the best.

Oftentimes we're told that our bodies are broken or that age has caught up to us. And while there are cases where things could actually be broken, sometimes we just need to move in the right ways and allow our bodies to free up some of the restrictions that have accumulated over the years.

Working With Your Pain And Overcoming It

Lots of times, if you're experiencing annoying aches and pains, it's a sign that you've gotten into some rigid patterns. Think about your daily life. What are you doing most of your waking hours?

You might be sitting at a desk, driving in your car, or standing for long periods. What most people need is to actively get out of these patterns and explore movements that challenge their bodies to become stronger and more flexible. But this can seem counterintuitive if you're currently in pain.

We're often told to 'rest' so as not to aggravate the area that is bothering you.

So what can you start doing differently to address any pains you have? First, you'll just want to be aware of what's causing you problems. Do you feel pain in certain positions such as sitting or standing? Do you avoid squatting down because it hurts your knees?

Does driving for long periods make your neck and back tight?

The best ways to decrease and prevent pain issues are to work on them gently and progressively, increasing your strength and flexibility in all motions, by exploring your active movement in new and creative ways, and understanding that pain doesn't necessarily mean damage from one causative factor.

We want to address the underlying issues that are responsible for many pain conditions, so you can feel strong, move with ease, and use the relationship between pain and the nervous system to your advantage.

Local Capacity and Load Distribution

This is a great way to categorize why our system "feels" like there is a threat to an area. Either there is less capacity for load/force in the painful area, or there is less of an ability to distribute load through the kinetic chain (most often both together in varying degrees). So we have to look at where we should build up capacities/resilience in specific areas and what positions and movements should be re-educated for better load distribution.

That was a lot of information! But it really does help to go through that and understand the fundamentals of what pain is. [Over the past 20 years or so, we've seen people improve their pain simply from learning about it.](#) This along with working on the actual physical activities and strategies is key to getting out of the pain cycle.

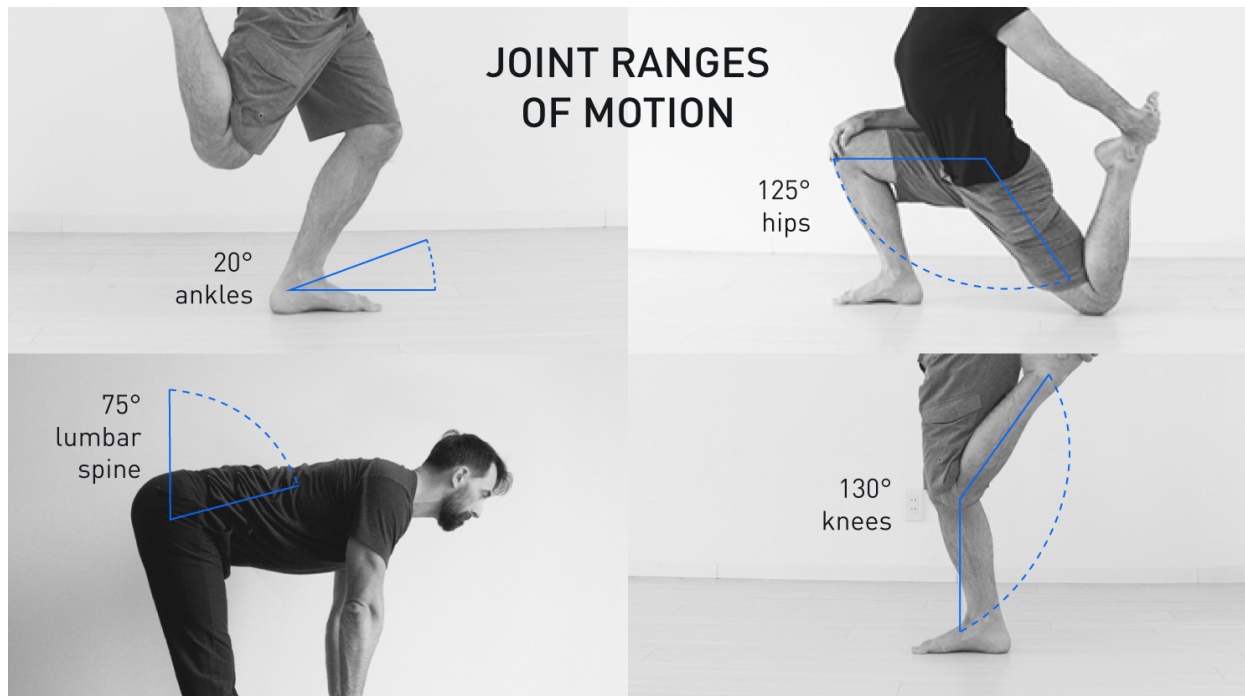
Chapter Two

How to Use This Guide

We've already given our disclaimer, so you know this guide is not meant to be used in place of seeing a qualified professional. From here on, we'll assume you've done your due diligence and are cleared for exercise.

In this guide, we'll go through the five areas people tend to have the most problems with:

1. Spine
2. Hips
3. Shoulders
4. Knees
5. Feet & Ankles



In each section, we'll give you an overview of that problem area, including some fancy-sounding anatomy - don't worry, we've made it all as easy-to-digest as possible - but feel free to skim if your eyes start glazing over. It's meant to be comprehensive but really isn't as important as practicing the exercises.

Then, we'll describe some of the common movement and capacity limitations that could contribute to the pain, and how to start addressing them.

We've separated these five problem areas into individual chapters, but it's worth mentioning that no body part works in isolation. For example, if you are having issues in your spine/back, it's likely that you could benefit from working on strengthening your hips as well.

So, we recommend reading this guide fully, you'll likely get some "a ha!" moments reading through one section even though it initially seems unrelated to your primary concern. You may be surprised by what you'll learn!

You Just Have To Give Things A Try

Yes, there is available research with "evidence-based" therapy and training that is quite good, but honestly and practically you won't know until you try.

It doesn't seem very science-y but it is actually the essence of science. Tips to remember:

- Perform an intervention over a reasonable amount of time and then measure the results – that's about as scientific as it gets. Give these strategies a try for a few weeks, then reassess. One rule of thumb I often tell my patients is that you should feel better within a couple of weeks, not 100% better but enough to know that you are on the right track.
- We've broken down the strategies into categories for both ease of understanding and integration into your current training. But you'll soon see that certain exercises match well together.
- Motor control/coordination is very important and if you can do the movements with a tolerable level of discomfort, you should include these into your program as soon as possible.

Improving your skill in these exercises and changing your habits, especially those generating pain, are the key to long lasting change.

Chapter Three

Spine

Our backs are amazing, complex structures.

The vertebrae house the spinal cord and nerves that control our every movement and process the sensations that allow us to connect with the world around us. It's also part of a system that both absorbs and distributes force, such as lifting and carrying loads through our shoulders and arms, while our legs move us around.

In order to accomplish the many tasks it's supposed to, the back has to be flexible enough to move in every direction, while remaining rigid enough to transfer heavy loads through our arms and legs, whether we are sitting, standing, or lying down.

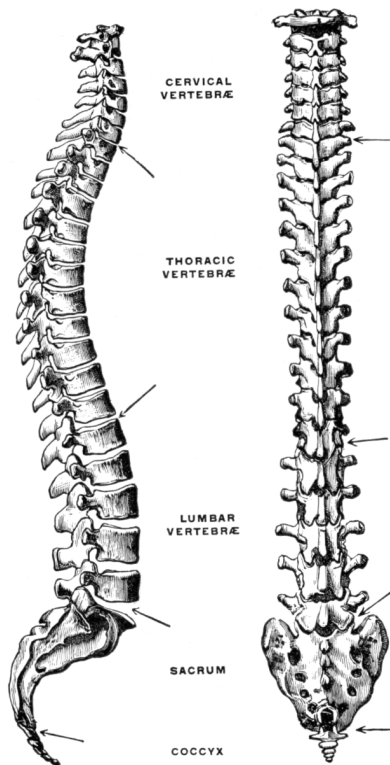


We don't really think too much of it until things start to hurt. Then it becomes very apparent how much the joints, ligaments, and muscles of our spine are used in pretty much everything we do in our daily activities.

Basic Structure and Function of Your Spine

Starting with the bony structures, the spine is separated into four basic regions:

- Cervical (neck)
- Thoracic (upper and mid back)
- Lumbar (low back)
- Sacral (between low back and tailbone)



With 7 cervical vertebrae, 12 thoracic, and 5 lumbar, the big sacrum, and all the associated ligaments and discs, the spine is such an exceedingly complex structure that people can spend their whole lives studying just portions of it. Needless to say, we're just going to be able to give you the basics here, but we'll provide you with the details that most affect you in your training and everyday routine.

We'll focus on the thoracic and lumbar spine, which comprise the bulk of what we tend to think of as our "back".

The thoracic spine, with its attachments to the ribs and as the transition point between the neck and the low back, is designed for higher levels of mobility, particularly in rotation, as we need to twist and turn to direct our upper bodies on the stable platform of our low back, hips, and legs.

Good flexibility in back bending and forward bending - extension and flexion, respectively - are also very important, both for health and for good performance in our physically challenging activities. The low back is not as well designed for rotation, but is more suited for flexion and extension movements.

In bending forward and reaching, the movements in the thoracic and lumbar regions work together to give us a great amount of mobility. In bringing our hips forward and underneath us,

proper lumbar extension puts us in a better position to use the powerful strength in our hips and legs.

We can start by describing the back from its deep structure, which are the vertebrae and joints. The bony structure of the vertebrae provides support both directly, as the bone resists compression from gravity and other forces, and indirectly, as the attachment point for various ligaments and muscular attachments.

It becomes a stable base for us to use our arms and hips/legs as effectively as we can for every movement available.

In between the vertebrae are the “discs” that you’ve likely heard can be “slipped,” “bulging,” or “herniated.” This is because it has a tough outer layer and a firm jello- like inner layer.

This unique configuration resists vertical loads well, whether it's simply the weight of our upper bodies or other stuff that we pile on our shoulders to move. The disc also acts as a kind of ball bearing, which facilitates more mobility than if the spine were just made up of blocks of bone stacked on top of one another.

As is obvious from its location, the thoracic spine has to be a supportive and mobile structure for upper extremities. There are direct connections to the ribs by joint and ligaments, and indirect muscular and fascial attachments to the shoulder blades and arms.

In the lumbar spine, we see the junction point between the hips and our upper back and arms. Here, mobility is, of course, very important, but not as much as the stability necessary to transfer force well from the hips and even the upper back and arms. This is most apparent in carrying and throwing activities.

What You Really Need to Know About the Spine

It would be far too complicated to describe every structure and function in the whole back.

And, the truth is, for most people, more details wouldn't really be much more helpful than just saying that strength and flexibility in this region is necessary for proper functioning in everything we do each day of our lives.

The muscles throughout the back are classified in layers, with the deepest ones being the multifidus - small postural and stability muscles - in the “groove” of the spine, providing stability and information. In the more shallow layers, there are the trapezius (upper, middle, and lower), latissimus



dorsi, rhomboids, and “erector” muscles which connect the spine to our arms and legs.

Our back and pelvis are literally the base for all movement in our bodies, and we are made most aware of this when we have back problems and attempt the simplest tasks.

Common Complaints in the Spine

- General low back pain
- Muscle spasms
- Mid back stiffness
- Pulled muscles

We’ve all heard lots of different ways to describe back pain in all the various areas.

Words like “pinched,” “ache,” “sharp,” “jammed,” and even “out,” as in “my back is out,” are all parts of normal conversations between high level athletes and garage gym trainees alike.

There are quite a few pain generating structures in this region: ligaments, tendons, discs, muscles, and joints can all cause separate and combined issues.

You could try to narrow it down to one particular part to blame, but that’s a tricky subject. The connectedness and adaptability of the body points to more than one cause, even in what seems like a cut and dried injury to a specific area.



Rather than focus on a particular area - not including issues after surgeries - it's best to work on everything in a "wholistic" way. For us this means looking at what movements and positions are more difficult to do, and finding ways to progressively and incrementally improve.

Common Mobility Limitations in the Spine

- Flexion (Bending Forward)
- Extension (Bending Backward)
- Sidebending
- Rotation

In the thoracic spine, it's common to see issues with extension (backward bending), simply because of the more common forward bending activities we do in everyday life. As mentioned above, most of the rotation in our torso occurs in the thorax, so restrictions can occur here pretty readily if it falls into disuse.

Between driving, and sitting, we rarely have an opportunity to extend and rotate our back to our true capability. This is when we lose what we don't use.

In the low back, there are issues with both forward and backward bending. Forward bending issues most likely occur because of the relationship to the tightness and weakness in the hips most people have, and backward bending problems most likely occur because of the same issues as described for the mid and upper back. This is why hip exercises can do a lot for improving low back problems.

I describe the hips and various ways to exercise and improve their mobility and strength in the next chapter.

This lack of mobility is often worsened after an injury, and can result in very limited movement. In this case, even the simplest rehab exercises can have such a profound effect on acute back pain. I've seen people come into the clinic barely able to move and with some gentle handling and exercise, they walk out nearly normal.

Some people live too long in such a restricted range that trauma or even just a slight overreach can cause significant pain and dysfunction. Their bodies overreact to strain and stress, whereas a more conditioned and mobile back would have better handled the pressure and tension.

"An ounce of prevention is worth a pound of cure" holds true here, as it's much better to restore and maintain our back strength and flexibility than working on regaining it after an injury. Anyone that has had back pain before can tell you that it can be a very frustrating road to recovery.

Common Strength Limitations

- Erector Spinae
- Scapular muscles
- Quadratus Lumborum
- Multifidus
- Abdominals

The rounded back posture commonly found in the seated position, where your shoulders flare out and roll forward, along with that classic “bad posture,” slumping puts you in poor alignment to use your back (and neck and shoulder) muscles correctly.

Imagine how it feels to carry a big, heavy box in an awkward position, where you have to reach around and bring your arms and shoulders forward to get your grip. It's much more difficult than having your shoulders dropped down and back slightly, with your elbows closer to your sides.

This is why even the strongest men have difficulty in those specialized competitions of picking up massive stones. It's not just the stones' weight, but also their awkward sizing forcing a compromised lifting posture. Now add on to this a long standing habit of poor posture and positioning, and the muscles will tend to be weaker, even without lifting an awkward object.

The muscles between and surrounding your shoulder blades (rhomboids, upper, middle, and lower traps and the rotator cuff) become not just posturally weak, but weak in general. The deep and intermediate muscles of the spine, which act as stabilizers and support, will also weaken from long hours of sitting and slumping.

There are quite a lot of different and great ways to strengthen the back, from weight training to bodyweight leverage exercises. We need the stimulation of active back work in a variety of activities. Lifting, carrying, and bending in all planes of motion help to improve and maintain back strength.

Improve Your Spine by Focusing on Mobility, Strengthening, and Motion Exploration

The spine and all of its related structures are easier to do in full movements versus ones done in isolation. In other words, you can start with fully flexing the spine with forward bending from your neck all the way down to your pelvis. Then reverse the direction and backward bend as far as you can as well.

As you improve, you can then start to work more segmentally, that is trying to move one or two “pieces” of the spine at a time, and explore how well you do with that. But don't worry too much

about that at first. It's very useful but can be very frustrating as well. Start "globally" and then go "locally".

These repeated motions, along with experimenting with different angles of bending and loading and unloading are a great way to realize what your back is capable of and what you need to work on the most.

▶ Spinal Mobility Routine - Back Stretches You Can Do Everyday

Prone Extension



This exercise is probably one you've seen before, but the important distinction here is that you make sure to modify the stretch to fit your current level.

- From the prone position (lying on your stomach), prop yourself up on your forearms, placing your hands at a comfortable distance.
- Scoop your chest up toward the ceiling as you squeeze your shoulder blades together.
- The motion should be happening primarily in your upper and mid back. If you have too much motion happening in the low back, this will cause unnecessary strain. Just move your hands slightly forward until you find a comfortable distance.
- If you are able to do this stretch with no problem, you can work on straightening your elbows to extend the back further. Eventually, you may end up with your hands directly beneath your shoulders and your elbows completely straight (but don't rush into it!)

Move in and out of the stretch 10 times, then hold for 30-60 seconds. Repeat 3 times.

Wag Tail

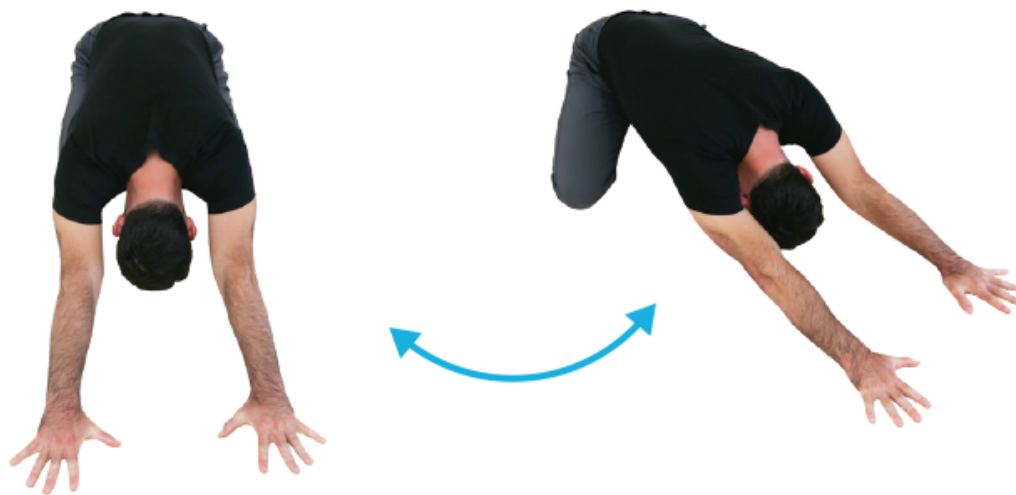


You likely haven't practiced this particular exercise before (it's not a standard exercise in most stretching programs), but it's very effective for targeting sidebending action, and it's a lot of fun.

- Start on hands and knees, with your knees together and past your hips
- Lift your feet off of the ground and swing them to the right and then to the left.
- Keep your back flat throughout the movement, so that the motion is primarily a sidebending motion

For this exercise, you won't be doing any holds. Just do 10 reps per side.

Quadruped Sidebend



This is another great stretch for sidebending, that targets your latissimus dorsi, quadratus lumborum, and spinal erectors. It's a simple stretch, but it packs a big punch!

- Start kneeling, with your hands stretched in front of you. If you have tight quads that prevent you from getting into the deep kneeling position you see Jeff in, just go as far as you can go comfortably.
- Move your hands to one side so they are at a 45-degree angle (or more) to your body. You should feel a good stretch in this position.

Move in and out of the stretch 10 times, then hold for 30-60 seconds. Repeat 3 times, then switch to the opposite side.

Quadruped Torso Rotation



This stretch will help you work on rotation in the spine, which is a limiting factor for a lot of people.

- Start on your hands and knees, so that your elbows are directly beneath your shoulders and your knees directly beneath your hips.
- Then shift one forearm so that it is directly below the midline of your chest and place the other hand on your low back.
- Rotate your body toward that elbow, looking up toward the ceiling as you do. Press down into the ground with your supporting elbow to keep the rest of your body stable

Move in and out of the stretch 10 times, then hold for 30-60 seconds. Repeat 3 times, then switch to the opposite side.

Half Pancake



This is one of my favorite exercises because it combines sidebending and rotation, which is something not many stretches can do alone.

- Start in a half pancake position, with one leg stretched out to the side and one bent into your body. Feel free to bend the knee on the outstretched leg to make this position more comfortable for yourself.
- Rotate your torso toward the bent knee, then reach up over your head toward the foot of the outstretched leg.
- Only go as deep as you can without feeling any painful discomfort.

For the half pancake, get into position and then hold for 30-60 seconds, then switch to the opposite side.

A-Frame to Squat



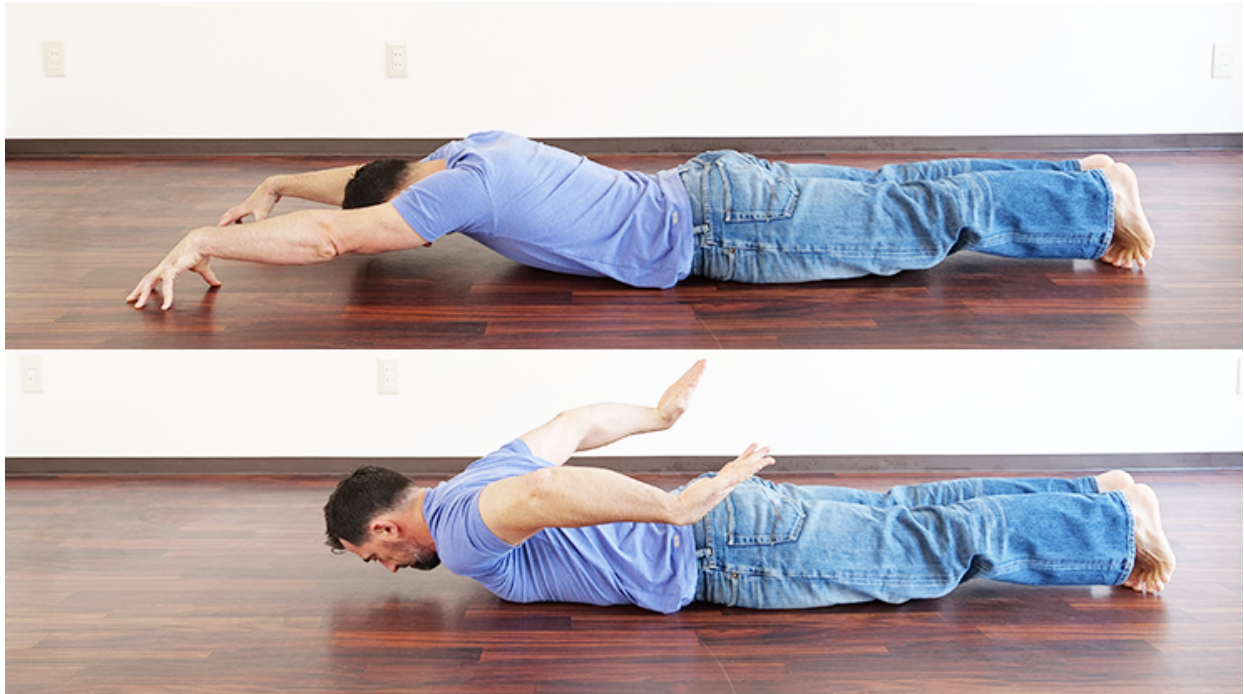
This exercise will help you work on extension through the spine, and movement into the squat. There are many modifications you can make to this exercise, depending on where you're starting from.

- Start in an A-Frame position (also known as "downward dog" in yoga). This is where you will start on your hands and knees, and then push your butt up into the air, forming an "A" position. If you can't straighten your legs all the way in this position, don't worry. Focus on pushing through your hands so that you flatten out your back as much as possible.
- Walk your feet forward and drop down into a squat. Try to keep your hands on the ground if you can. If not, don't worry too much. Just play with your weight distribution and don't force anything that feels uncomfortable.
- Return to the A-Frame position.

Hold the A-Frame for 10 seconds, then transition into the squat and hold that for another 10 seconds. Repeat this 10 times.

▶ Back Exercises You Can Do At Home (no equipment, no pull-up bar or bands)

Prone Swimmers



- Start prone (lying on your stomach) with your legs straight, forehead on the ground, and hands overhead
- Now circle your hands down to your sides and at about 90 degrees, rotate your palms up towards the ceiling and lift up as high as you can by squeezing your shoulder blades together
- Think of pushing your chest into the ground as you do this
- Move your hands towards your hip and then slide your fingers on the ground to circle back up overhead

Hollow Body Plank Shrugs



- Start on hands and knees, shoulders directly over the hands and hips over the knees. Keep your elbow pits facing forward
- Push your hands firmly into the ground to round out your back and focus on spreading your shoulder blades as wide as possible
- Relax into a shrug position and repeat. Lean forward to place more weight on your hands as you get more comfortable with the movement
- Progress to the plank position as you improve your strength

Butterfly Shrugs



- Lie on your back, with your knees bent and arms out to your side
- Lead with your chest to sit up as you drag your elbows toward each other
- Squeeze your shoulder blades together the entire time
- Lift your chest up high to keep a proper position

Bear Walk (Exaggerated)



- Start in the A-Frame position. Hands and feet on the ground and hips high up in the air
- Emphasize pushing through your hands as you progress forward, lifting off one hand as you push hard with the other
- Think of pushing the floor down and away and move your shoulder blades through a large range of motion

L-Sit Shrugs



- Start sitting up tall with your legs straight out in front of you
- Let your shoulders be shrugged up but keep your back straight
- Push through your hands and lift your chest up as you roll your shoulders back and down
- You'll get more range of motion with your hands elevated, but they can be flat on the ground and you'll still get a lot of benefit

In the video above, Ryan talks about a simple and effective way to get started right away with these exercises. In a circuit style performance, set a timer of 30 seconds for each exercise and move on to the next, either without rest or taking some time as needed. And repeat for rounds as best fits your condition.

Let's put some more details into that for you:

- First, take your time and practice each exercise for just a few reps. Don't turn those reps into a "workout" just yet, instead treat this as a learning experience. A few minutes for each one helps a lot
- Next you can either call it a day, or if you have more time and energy go ahead and get started on a circuit
- 30 seconds work and 30 seconds rest in between is a great place to start, going through the series for 2 to 3 rounds

- When you feel ready to have no rest in between exercises, we suggest a rest period of 1 to 2 minutes between rounds

Be patient and work through these concepts slowly. Over time, everything changes with smart, consistent effort, so allow yourself that time to make it happen.

Spending the majority of your time on controlled active motion into progressively bigger ranges of motion combines flexibility and motor control training. This is especially important in such an interdependent area as your spine. Understanding the basics of your back's motion and function will give you insight into what is working well and what you need to spend more time on improving.

This critical exploration process for working on your back also translates well into how you can approach other areas and your training in general. This philosophy is ingrained into the GMB method, which emphasizes skill development with strength and flexibility training tailored to your specific needs.

We should all strive for a structured process that also allows for exploration and specialization for our own individual concerns.

Systematic Full-Body Exercise for Spinal Health

We've shown you a variety of specific and localized exercises that many people have found very helpful. As we've said above, you can try and see what works best for you. But you may consider how a unified system of developing your mobility, strength, and physical control affects your symptoms and restrictions.

It's been gratifying for us to hear from our clients about how working with our programs has helped them, and perhaps these stories can inspire you to get moving past your pain and restrictions.

Drew Edwards ★★★★★ 

I had chronic low back and left shoulder problems following my stint as a college decathlete. A combination of bad pole vault form and overall lack of flexibility. 6 years after, I could barely lift a mug to drink from it with my left hand and my back was trashed.

I did the GMB elements program during med school and it completely re-wired how I move. I could suddenly put all of my fingers on the floor in a hamstring stretch, my low back pain had vanished, and my left shoulder felt like it had oil injected into the joint. No pain, full range of motion.

I've gotten several GMB products since then, but elements was the one that really turned my physicality around. My 30s feel better than my 20s did.

I routinely suggest GMB to my patients. If I could prescribe it, I would be giving it out daily.

Suzanne Fishel ★★★★★  Would recommend this product

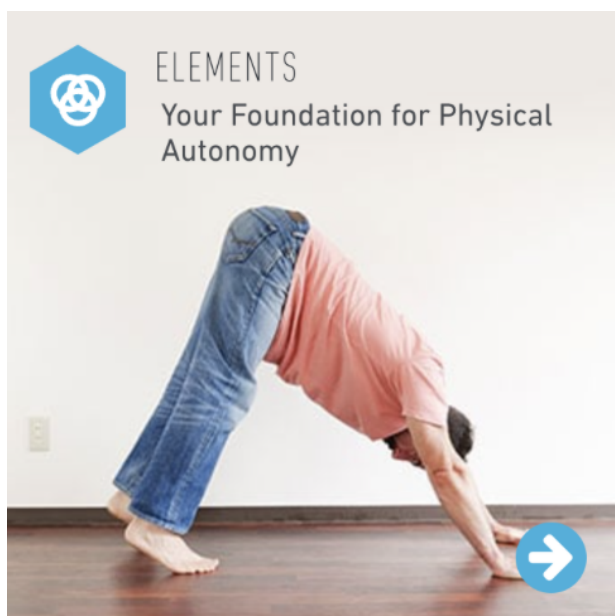
Product: Elements

I purchased Elements in 2019 after a friend recommended the program to me. I loved the movements and I found the program very easy to follow. At the time, I was an avid yogi, doing power vinyasa yoga 5x per week but I struggled with inversions. After doing the Elements program, I was able to hop up to handstands and was much stronger in my arm balances. Fast forward to April 2022, I woke up one morning with a stiff back, and when I flexed my hip and knee to put my sock on, my back "gave out." I was in extreme pain and could barely walk or move in any way. I did PT, Myofascial Release, acupuncture, OMT, but after 8 months I was still having pain, felt stuck in my low back, and was having difficulty sitting on the floor. Then I remembered Elements and started slowly going through the basic movements. After a few days, that stuck feeling disappeared and I was almost pain-free. Since January of this year, I do some form of the program every day, whether on my own or guided by the online platform. If I'm really busy, I will at least do the GMB hip mobility YouTube video. There was a time last year when I thought I was going to have back pain for the rest of my life. I'm really happy to say Elements saved my back and feeling hopeful as I keep making progress and regaining my mobility and fitness.



Casey William Milbrand I've had upper back pain my scapular region for years. I worked through 4 weeks of elements on and off and even though I stopped to complete a large mural project...the pain came back only somewhat...I can say that I can't wait to get back into elements and finish out my first round. My posture and body felt a millions times better and I recommend GMB to all my friends including chiropractors and PT's as I feel that this program helps balance out the bodies little quirks and is really effective in helping with nagging pain that sometimes other professionals cannot fix.

Love · Reply · Message · 6h



Elements is our flagship program which encompasses the breadth of our method for full body movement freedom. The integrated movements from fingers to toes improve your strength, mobility, and physical control and have helped thousands of people to move past their pain and restrictions.

You can learn more about it here [👉 Elements](#)

Chapter Four

Neck

Imagine carrying around a 10-pound bowling ball in your hand all day. This is what your neck does for you day-in and day-out. Luckily that's what it's designed for, but with all the stresses and everything that needs to be done in our lives, sometimes those demands get just beyond our capacities and we feel it in our necks.

All the coordination and control we need from our necks to help us to walk, drive, read, react to unexpected surprises, and engage in basically all physically demanding activity.

It's a lot!

And I think it's very important to reframe it in this way, we can absolutely build and bolster the capabilities and resilience of our bodies to match all of our daily physical responsibilities, as well as our recreation and sports. We are adaptable and capable, we just need to know how to improve our capacities.

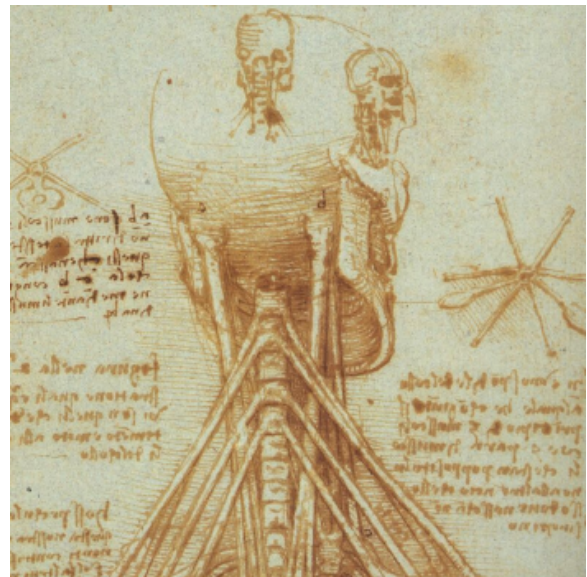
With dedicated work on improving the combination of strength, mobility, and motor control in the neck, you'll see improvements in your current issues (if you have any), and set yourself up well with better resilience in the future.

Basic Structure and Function of Your Neck

There are 7 bones in the neck, with different shapes and sizes. They comprise the portion of the spine we term the "cervical" which begins just below your skull (C1), and runs down to that big bony prominence (C7) at the top of your back.

The upper cervicals (C1-C2) are responsible for 50% of the rotation that occurs in the head, while the lower cervicals (C3-C7) are responsible for flexion, extension, side bending, and the remaining 50% of rotation.

As for the muscles, there are at least 13 that feed into the neck and allow it to function properly. These connect to the head, the shoulders, and the upper back. Forward/backward/side bending and rotation and every combination of those motions happens everyday without us thinking



about it, until we feel a problem! Here's a few example names to look at and then immediately forget :)

- Flexion and Sidebending and Rotation: Sternocleidomastoid, Rectus capitis anterior and lateralis, Longus colli and capitis, Scalenes
- Extension and Sidebending and Rotation: Trapezius, Splenius Capitis and Cervicis, Semispinalis capitis and cervicis, Multifidus cervicis
- Stabilizers: And a dozen or so small muscles between the skull and the spinal joints that help keep your head steady.

What You Really Need to Know About Your Neck

You don't need to memorize the complete anatomy and physiology of your neck to get started on improving how you feel, but it's helpful to have a good general understanding of what's happening "under the hood."

A bit of knowledge removes some of the mystery so you can visualize and be aware of the various structures and actions of your neck. Of course, health care specialists spend years studying this, but a few paragraphs and minutes of your time are all that's necessary for most people's needs. Learning is great, but we want it to help you move forward, not get you stuck worrying about all the things that could go wrong.

With so many moving parts, things can get quite complicated, as I'm sure you can imagine. There are obviously many more details I could go into and it's something I specialized in for quite a long time, but for practicality's sake, let's focus more on common issues in the neck, and how to address them.

Common Complaints in the Neck

- General stiffness
- Pain/soreness
- Headache
- Muscle spasms
- Radiating pain into upper extremities

Because the neck is made up of such a complex system of small and large intertwined muscles, ligaments, nerves, and bones, and owing to the fact that you are carrying your brain around in it, the area can become sensitized to irritations. Remember that pain is an alarm system which goes off with the perception of a threat to the stability of our bodies. Whether that's an actual trauma - getting hit or from falling - or from overdoing it a bit at your family Thanksgiving flag football game, the neck can bear the brunt of a lot of this and can be quick to sound the alarm.

It can seem simplistic but issues really do fall under the two primary categories: Tightness/Pain and Weakness.

Common Mobility Limitations in the Neck

- Flexion (Bending Forward)
- Extension (Bending Backward)
- Sidebending
- Rotation

One of the most common complaints are sensations of "tightness" throughout the neck and upper shoulder girdle. The various tensions and stresses of our daily lives can contribute to a reaction of the nervous system and muscles to "stiffen" as a protective mechanism.

This tightness can be lessened with proper exercise and stress reduction techniques. That doesn't mean it doesn't exist or is "all in your head," it simply means that it is capable of being changed relatively quickly when you begin working on it.

And one of the reasons that this self-protective tension persists is from the often limited ways we use our necks. Most people don't take their neck through its full range of motion in day-to-day activities, and as we all know, the "use it or lose it principle" is quite real. We have a tendency to hold our heads in fairly static positions, and that can cause tightness over time.

Here's an interesting phenomenon, and something that accounts for part of why so many of our clients report decreased stiffness and soreness from doing [our programs](#) even though there doesn't appear to be any dedicated neck exercises. And it's the concept of relative motion. I made this short video to illustrate.

<https://www.instagram.com/p/CvLp7lypdSU/>

When moving your head around is stiff and sore, it's normal to not want to move it! But motion is what you need to do, and switching it up so that you move your body underneath your head can help lessen that protective response. Since your head is relatively steady, it dampens the alarm a bit and lets you get that motion in a less stressful way.

This is an example of why our clients tell us that our locomotion programs, which involve full body purposeful movement, have many indirect benefits.

Common Strength Limitations in the Neck

- Neck Flexors: Particularly the "deep muscles" (Rectus capitis anterior and lateralis, Longus colli and capitis, Scalenes)
- Rotators: The muscle listed above particularly the Multifidus cervicis

While not quite as common as the complaint about tightness or pain, another prevalent issue is weakness in the neck. This is obviously connected to those cricks and tweaks, and can often be a cause of those issues.

We need our necks to be strong, primarily to give ourselves the sensation of stability, to keep all the sensitive structures feeling secure and stable. When your neck gets jerked or taken through a range of motion that feels unstable, the brain responds by tensing up the muscles to protect the neck. Often with the pain alarm signal.

Good fundamental strength in the neck is important, and the exercises below will take care of the majority of our needs. Most of us don't need necks of steel unless we participate in combat sports or football.

As mentioned before, there can be musculoskeletal origins for such symptoms as headache, pain, dizziness, etc. But there can be other causes for those issues as well, so please see your health care provider before doing anything else!

Improve Your Neck by Focusing on Mobility, Strengthening, and Motion Exploration

In the following routine, I've emphasized exercises that address, not just strength and mobility, but also the motor control aspect that is so often neglected.

As always this isn't meant for you to do forever, but if you are having some issues and regular exercise hasn't been doing the trick, working through this routine a couple of times a week, or more often if necessary, often helps people feel better very quickly.

▶ Stop Neck Pain: Neck Exercises to Build Strength, Mobility, and Control for Health Neck F...

Supine Exercises (Lying on Back)

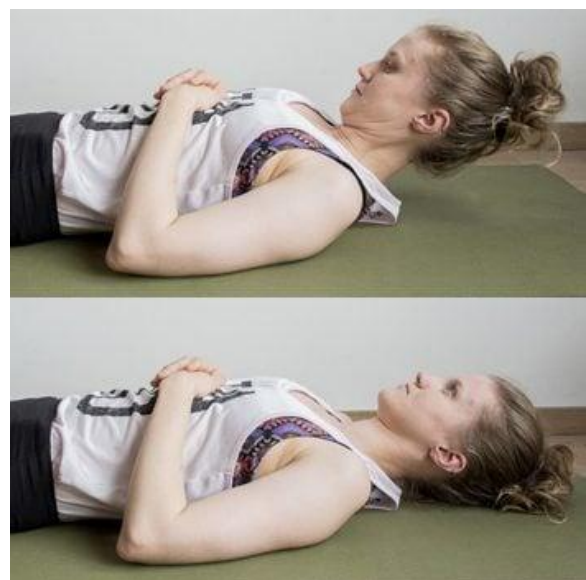
All of the exercises in this series start with you lying on your back in a comfortable position.

Rotations

Simply rotate your head from left to right, moving slowly and with control.

Sidebending with Rotation

Sidebend your head 45-degrees to one side, then slowly rotate to the left and right. When you've completed one side, sidebend to the other direction and repeat.



Sidebending with Rotation and Lift

Sidebend your head 45-degrees to the right, rotate the head to the right, and then lift the head slightly off the ground. Repeat on the other side.

Upper Cervical Flexion

Keeping your head straight and on the ground, roll your chin towards your chest to flex your upper cervicals. The axis of rotation for this movement is through your ears (think about a rod sticking straight through your ears, and you are rotating around that rod).

Upper Cervical Flexion with Sidebending

Sidebend your head 45-degrees to the right, then do the same action as the previous upper cervical flexion. Repeat on the other side.

For each of these exercises, aim for 3 sets of 5-10 repetitions.

Seated Exercises

This series of exercises should be done from a seated position, however you can do that. If you feel comfortable sitting cross legged or in a seiza position on the ground, that's great, but these can also be done from a chair--whatever is comfortable for you.



Chin to Chest with Rotation

Flex your chin down toward your chest, and then rotate from left to right.

Chin to Chest with Sidebending

Flex your chin down toward your chest, and then sideband to the left and to the right.

Rotated with Sidebending

Rotate your head to the right and sidebend to the right and to the left. Then switch sides.

Sidebent with Rotation

Sidebend your head to the right, then rotate from left to right. Then switch sides.

Levator Scap Stretch

For this stretch, clasp your hands behind your back, rotate your head 45 degrees to the right, then tuck your chin down toward your chest. Hold, then switch sides.

Upper Trap Stretch

For this stretch, clasp your hands behind your back, and sidebend to the right. Hold, then switch sides.

For the first 4 exercises, aim for 3 sets of 5-10 repetitions. For the last two exercises, hold each stretch for a total of 60 seconds, starting with whatever you can hold. So, if you start with a 10-second hold, you'll want to do 6 sets of 10 seconds; if you start with a 20-second hold, you'll do 3 sets of 20 seconds, adding up to 60 seconds total.

Quadrupedal Exercises

In this series, you'll be on your hands and knees on the ground. If you need cushioning under your knees or ankles, feel free to use that.

Retraction

Keeping the rest of your body (including your shoulders) stable, jut your chin down to the ground, then retract your head backward.

Retraction with Rotation

Go through the same jutting and retracting motion, but this time, when you retract the head, rotate it from side to side.

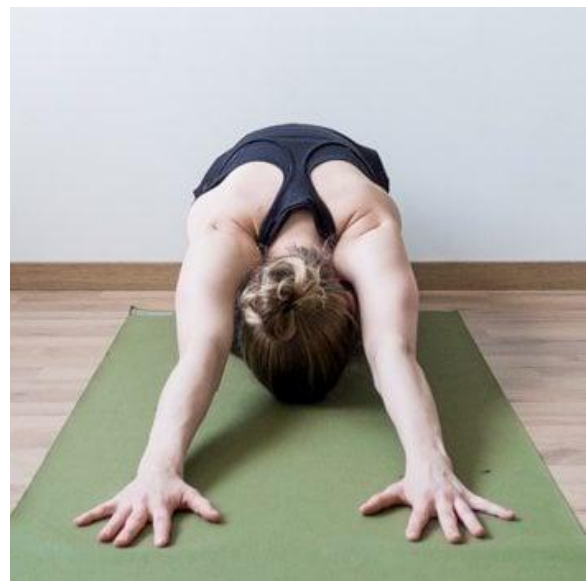
Retraction with Rotation and Sidebending

Now, when you rotate to one side, add a side bending motion toward that side shoulder. Be sure to repeat on both sides.

Low Trap Raise

For this last exercise, you'll drop down into the prayer position (or "child's pose"). Retract the scapula and rotate the shoulder outward, as you bring your hand out to the side.

For these exercises, aim for 3 sets of 5-10 repetitions.



We need to move our head in a multitude of directions and angles throughout the day, whether it's simply sitting at a desk working on the computer and looking all around in everything you need to do, or playing a pick up game of basketball on the weekend.

The straightforward motions of rotation, sidebending, Flexion (forward bending), and extension (backward bending) take your neck through its full ranges and any restrictions there can be quickly felt when you try to go through your normal routines.

But you also need the ability to combine these motions for proper neck function.

This includes:

- Rotation and sidebending together when you look up and to the side at something overhead without moving your whole body.
- Or flexion and rotation as in partially sitting up in bed to turn and glare at your alarm clock going off.

This is why the exercises we've shown above highlight different variations of combined motions. They are often neglected, so their practice will give you a good way to restore proper movement and control of your neck.

Just as we iterate in the [GMB Method](#), you want to properly address Strength, Flexibility, and Motor Control in their appropriate intensities and emphases.

Chapter Five

Hips

It's difficult to exaggerate the importance of hip flexibility and strength for every athletic activity. The hips provide most of the incredible power and force that our lower body can generate for running and jumping, and deficiencies in strength and flexibility in this area of the body can mean the difference between a winning performance or a painful end to the game. Beyond athletic activities, though, issues with your hips can negatively impact your daily life.

Possible issues include:

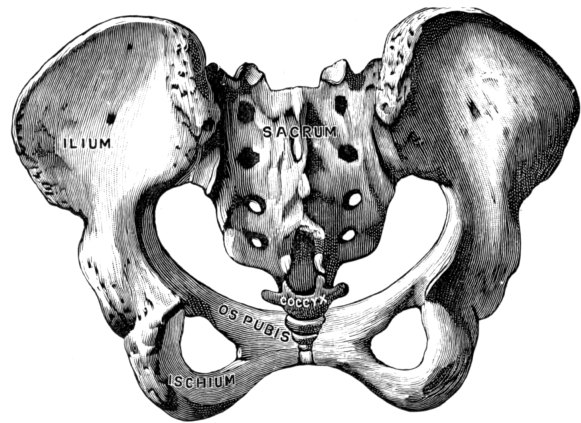
- Pain
- Decreased mobility for activities such as stooping and squatting
- Difficulty with simple daily encounters such as jumping over a puddle in the street

Basic Structure and Function of Your Hips

When our clients describe some of their hip issues to us, they can point to a pretty wide area that seems to be anywhere from right below their low back to the middle of their legs.

And actually, because of all the various muscles and structures in the region, that's very reasonable.

Though the hip joint itself refers to the femoral head (the “ball” on the top of your leg) connecting to the acetabulum (the “socket”) of the pelvis, it really is a much bigger area than you might think, especially when we account for the large amount of myofascial structures surrounding the joint.



Just to give you a picture of what's shaking in your hip, here's a list of the relevant muscles:

- Hip Flexors (rectus femoris, pectineus, psoas, iliacus, tensor fascia lata)
- Hip Extensors (gluteus maximus, semitendinosus, semimembranosus, biceps femoris)
- Hip Rotators and Abductors (quadratus femoris, obturator internus, gemilli, gluteus medius, gluteus minimus, piriformis, sartorius)
- Hip Adductors (adductor longus, adductor brevis, adductor magnus, obturator externus, gracilis)

All of these muscles support and allow the hip to move and generate force in a variety of angles and positions. Weakness and decreased flexibility in any of these muscles can compromise performance and possibly generate pain through poor tolerance of everyday and sportive activities.

What You Really Need to Know About the Hips

Compared to the shoulder joint (which we'll get to later), the hip is much bigger and sits more deeply in the socket. Because the hips have to carry the majority of our body weight through thousands of steps a day, they need to be quite stable, whereas the shoulders need to be more mobile in order to move our hands through all our daily tasks.

This isn't to say that hip mobility isn't as important as hip stability, especially when we consider that we want to do much more than just walk or stand all day.

The ligaments of the hip are also much thicker and stronger than the shoulders because of the larger amounts of strain and pressure in this area. You generally only see hip ligament issues due to high force trauma or moderate force, repetitive overuse in sports that require a lot of jumping/landing, and force production in supranormal ranges of motion (such as with dancers, track and field athletes, martial and performing artists).

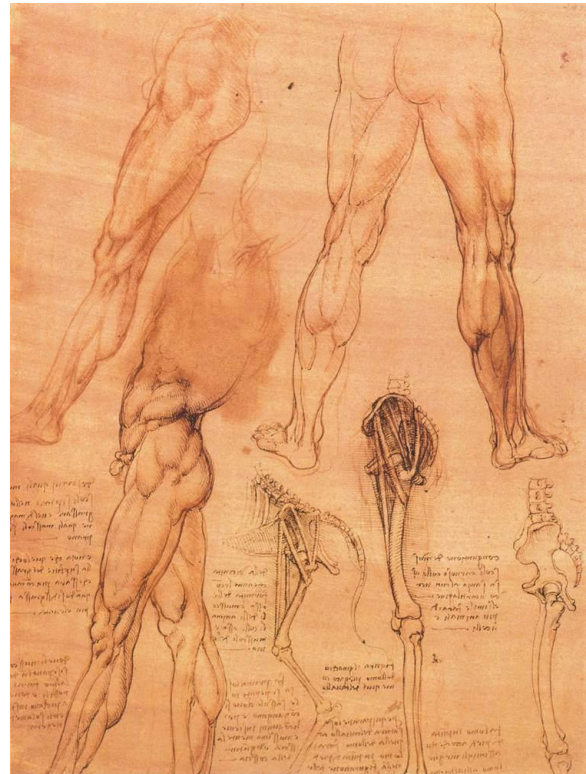
The majority of issues in the hips are with muscular capacity and mobility.

Common Complaints in the Hips

The primary complaints when it comes to the hip are:

- Muscle strains
- Hip tightness
- Lateral hip pain

Perhaps it's because of all the sitting we do, in our cars, at our desks at work, and on the couch plopped in front of the TV, but we lose a lot of the natural hip flexibility we had as children.



Unless your day job has you squatting and twisting on a regular basis, it'd do us well to take our hips through a much greater range of motion than is needed for our daily tasks alone.

The prevalence of hamstring and groin strains in “weekend warriors” is a testament to how poorly conditioned we are for more athletic activities when we spend 6 days out of 7 sitting on our butts. It would be oversimplifying to the point of error to generally identify particular hip muscles as either weak or tight. For example, most people think they have tight hamstrings, but in reality many of these people actually have weak hamstrings and weak glutes.

Tightness doesn't necessarily go along with strength, nor flexibility with weakness. It is entirely possible, and likely more probable, to be both tight and weak simultaneously, especially at the hips.

Also with specific spot tenderness especially at the side of the hip, many are quick to label this as bursitis or tendonitis, but the structures may or may not be the culprit. Often, with a few sessions of targeted mobility work the pain lessens. Don't ignore your doctors, but also give conservative care a fair trial before other interventions.

Common Mobility Limitations in the Hips

The motions at the hips are:

- Flexion (knee towards the chest)
- Extension (knee going back behind you)
- Abduction (knee going out to the side away from you)
- Adduction (knee going inwards toward the other leg)
- External rotation (knee rotating outward)
- Internal rotation (knee rotating inward)

As we've said above, there are dozens of muscles that contribute to these actions, and going through it all is a course of its own! To summarize the most common restrictions for most people, they are: extension, abduction, and rotation (both directions).

Common Strength Limitations in the Hips

- Hip Flexors (rectus femoris, pectineus, psoas, iliacus, tensor fascia lata)
- Hip Extensors (gluteus maximus, semitendinosus, semimembranosus, biceps femoris)
- Hip Rotators and Abductors (quadratus femoris, obturator internus, gemilli, gluteus medius, gluteus minimus, piriformis, sartorius)
- Hip Adductors (adductor longus, adductor brevis, adductor magnus, obturator externus, gracilis)

This is actually pretty simple, in the majority of people they have limitations in all the ranges of the hips. Primarily this has to do with occupational and daily habits, unless your job involves a lot of labor or even just walking up and down stairs a lot, the hips fall prey easily to disuse.

Squatting, stooping, lunging, moving side to side, these are fundamental movements that require and stimulate strong hips. We build up our capacities through normal growth and use into our young adulthood, and then coast along over the years until disuse catches up to us. The big (and small) muscles surrounding the hip need more stimulation than is gained from everyday walking. Use it or lose it indeed!

Fortunately, we can rebuild and improve our strength through basic exercises that we'll discuss below.

Improve Your Hips by Focusing on Mobility, Strengthening, and Motion Exploration

 [8 Daily Hip Mobility Exercises to Fix Your Tight Hips](#)

 [Beginner Hip Mobility Routine for Stiff People](#)

Hip Rotations



This exercise starts the sequence as an easy first movement to warm-up and build toward the rest of the series.

- Lie on back with both knees bent.
- Cross one ankle over the opposite knee.
- Move in and out of the stretch by rotating the hip in and out.
- For the hold, use your hand for assistance to press into the knee.
- Modified Version: Sitting on chair or bench, elevate your legs on to a stool or chair (the higher the surface, the more challenging it will be), and externally rotate one leg at a time. Then, play around with crossing one ankle over the other leg and externally rotating from that position. You can have the bottom leg bent fully, or straightened a bit more.

Piriformis Stretch



This stretch targets the piriformis (hence the name!), which is a small muscle located deep in the buttock. This muscle tends to get pretty tight from sitting all day.

- Cross one leg fully over the opposite leg, so your knee is crossed over your thigh.
- Pull the crossed knee toward your opposite shoulder, stretching the piriformis muscle.
- Modified Version: Sit on a chair with your leg bent (as much or as little as needed for your comfort) on a stool or chair, then cross your other leg over the bent leg. Rotate your chest toward your knee, pulling your body toward your crossed knee. If it is too difficult to do this with one leg crossed over the other, you can just elevate one leg onto a stool or chair and do the same motion.

Butterfly Hip Stretch



This classic stretch is very useful for the groin muscles, and for improving hip rotation to the side. Pay close attention to your back and keep it straight and upright as you move through the stretch.

- Sit up with feet together, moving the knees down toward the ground.
- Use your hand to press into the ground and move your groin closer to your heels.
- Modified Version: Sitting on a chair, lift your legs on to an elevated surface. Put your feet together, with your knees splayed outward. The key, as you move in and out of the stretch, is to keep your chest up and lean forward as you draw your knees downward.

Frog Hip Stretch



At this point in the sequence, we are ready for a bit more intensive stretching for the hips, adding some more weight bearing into the exercise.

Again, take it slow and easy and don't force a range of motion you may not be ready to achieve. The action here as you move in and out of a stretch is squeezing the knees together as you rock backward and relaxing as you rock forward. After a few repetitions you can sit back and relax into the stretch for upwards of a minute.

- Start on hands and knees, bringing your knees as far apart as is comfortable.
- Rock back and forth in that position.
- Keep the balls of your feet on the ground, with toes pointed outward.
- Modified Version: Similar to the butterfly stretch, you'll start sitting in a chair with your feet up on a chair with your knees splayed outward. This time, though, your feet won't be touching, and you'll focus on leaning backward so that you can open your groins as much as possible.

Kneeling Lunge Stretch



This exercise is somewhat deceptive in terms of how it can affect your hips. You may need some trial and error to find the best front foot positioning, which happens when your shin is upright when you lean forward, rather than being angled down or back. Keep your hips square and your upper body tall, and you'll be in the right position. Don't be afraid to adjust the back leg positioning to get the most out of the stretch to release your hip flexors.

- Get into a lunge position, with knee and foot about hip width apart from the elevated leg.
- Keep the chest tall and the hips square.
- To make the stretch harder, you can pull the back knee up off the ground.
- Modified Version: Sit with just one leg supported by a chair, with your other leg bent behind you. Keep the knee lifted off the ground if you can, and try to square up your hips as much as you can. Emphasize opening your rear hip flexor by squeezing your rear glute.

Traveling Butterfly



This movement goes from long-sitting (on your butt with your legs straight out in front), to the butterfly stretch position.

It's meant to be a dynamic motion, and you won't hold any position here for more than a few seconds. This is a great way to improve circulation and get the hips moving after the stretching you did in the last 5 moves.

- Sit on your butt with feet straight in front of you (long-sitting).
- Use your hands to push the hips forward toward your heels, so you wind up in the butterfly position.
- Move between the long sitting and butterfly positions.
- Modified Version: You'll notice there is no modified version of this exercise included in the video above. That's because it's a little difficult to do this one on chairs or an elevated surface without making the exercise more difficult! This is a good example of when it's okay to just skip an exercise if it's too challenging for you.

Squatting Internal Rotations



This is another dynamic movement like the traveling butterfly, which I've put toward the end to encourage blood flow and circulation after all the previous stretches. Don't hold the end position very long at all. Just keep moving and give yourself some time to work through the movement.

- Start in a deep squat position (as deep as you can go).
- Rotate one knee inward, down toward the ground.
- This stretch can be done sitting on a small stool if you cannot get into a comfortable squat position.
- Modified Version: For this modified exercise, you'll use a chair (or any sturdy object that's the right height for you) to support you as you lower into a squat. Then go through the internal rotations while holding on for support. This way you can adjust your depth and range of motion as much as you need to.

Pigeon Stretch



The pigeon stretch is another classic stretch that can help you work on, not just your hip mobility, but also your hamstring and spine flexibility.

- Start with your front knee bent to a 90-degree angle. The back knee can be as bent or extended as is comfortable for you.
- Rotate the back hip toward the front heel, and then toward the back foot.
- Keep the chest up tall, and only bear as much weight as you can comfortably.
- If you feel comfortable with the knee bent, you can work on straightening out the back leg into the full pigeon pose.
- Modified Version: Sitting on a chair, lift one leg up on to another chair with the knee bent in front of you, allowing your rear leg to fall comfortably to the side. Use as many supports as you need to make the front leg as comfortable as possible. Lift your chest and hinge from the hips to lean forward toward your front leg.

How many reps/sets should you do?

When doing your hip stretches, you don't need to be doing tons of reps and sets of these exercises—you're much better off doing fewer reps if it means you can practice more often.

Here's what I recommend when you're starting out:

- 5-10 contractions per side
- A 10-30 second hold
- Repeat for each exercise
- That should take a maximum of about 10 minutes.

If you have more time or you're feeling particularly tight one day, feel free to do more reps, but don't spend more than 20 minutes on this routine unless you are spending a dedicated session on stretching.

How often should you practice?

Every day, if you can! This routine is gentle enough that you don't have to worry about overdoing it (especially if you're staying in a low rep range). And the modified version of the routine gives you good options for practicing in any chair, even if you're at work or doing other things.

General principles for training frequency:

- Short, frequent sessions are best
- Make use of the chair variations at work

Bodyweight Exercises for Leg Strength - Squats, Lunges, and Plyometric Variations

These exercises work through a more stretched range of motion, which is a great stimulus for development of mobility and strength throughout the hips and thighs. Don't think you need to do these without any support or use of props. It's better to do that and do the repetitions properly and for a greater length of time than to do them sloppily and only once or twice. Two sets of 8 to 12 repetitions twice a week is more than enough to build very good strength and capacity.

Elevated Deep Lunge

- Step up on to an elevated surface with one leg, trying to get as deep of a bend in the knee as possible.
- Try to use as little momentum as you can, and emphasize strength and control.
- In the video, I show several assisted variations of this exercise before showing the full version. It's a good idea to start by holding on to a support as you do this exercise.
- In the first variation, you'll place more of the tension on the elevated leg, whereas in the second (assisted) variation, you'll shift your weight toward the back leg.



Elevated Shrimp Squat

- The key is to find the right upper body angle for your body, to keep your weight balanced in the middle of your foot as you squat up and down.
- Adding in the elevated component adds a greater test of balance.
- Be sure to use a support as needed, and focus on moving through this exercise with control.



Back Leg Elevated Lunge

- Elevate the back leg, starting out by holding a support, and push through the balls of the feet on the back leg.
- The weight should be primarily on the back leg, using the front leg as support.
- Keep the upper body upright and tall, and make sure to engage the quads and hip flexors on the elevated leg to initiate the movement.



Side Lunge Squat

- Use a support at first and start with a wide stance.
- Drop your weight toward one side, bending that knee and keeping the other knee straight. Only drop as far as you can go comfortably.
- In the full range of motion, you'll drop all the way to the side, but if you need to sit back some, that's perfectly fine.
- Try to engage the hamstrings on the straight leg to pull yourself up, rather than just pushing through the foot on the bent leg.
- In the elevated variation, if you are at the level to perform that, be sure to move slowly so as not to overstrain the muscles.



Single Leg Deadlift

- Keep your hips, chest, and shoulders square as you hinge forward.
- Make sure to lock out the supporting leg and keep your chest up, gazing forward.
- Use a support in the beginning, then as you work up to doing this without a support, you can use your fingers as “training wheels” on the floor.



The following are more advanced exercises, though they aren't inherently dangerous, they do require a good foundation and build-up in strength. Please don't try these unless you know you are ready for it. Working on the above exercises is more than enough for the majority of people.

Sissy Squat

- Try to keep your torso in a diagonal line with your knees as you bring your knees forward and your shoulders back. You'll be dropping your knees down to the ground as you push up on the balls of your feet.
- Do not worry about the myth that bringing your knees past your ankles is dangerous—it's not. This is a great exercise for the quads.



Box Jump

- You want to make sure to start in a deep squat position, with your arms pulled back.
- Raise your arms overhead and bring your knees toward your chest to create momentum.
- Land softly on the elevated surface, with your knees bent.
- It's a good idea to work on the basic jump before attempting box jumps.



Depth Jump

- Don't start on too high of a surface, as you don't want to overstress your joints.
- Make sure to land softly on the balls of your feet, driving your knees forward.
- As you get more comfortable with this, you can experiment with jumping from higher surfaces.



Box and Depth Jump Combination

- Here you will be combining the box and depth jumps, one right after the other.
- The key point is to always land softly, both when jumping up for the box jump, and when landing from the depth jump.
- Do not overdo this one. Go slow and test out how this feels for you.



It's great to have a foundation of a regimented exercise routine and plan, which along with consistent, hard effort, brings the best increases in performance and ability. This is especially true for beginners and people returning to their training after a long period off.

But at some point you'll be hitting diminished returns based upon the time spent doing the same repetitive actions day after day. When you start to feel stale, or your energy levels drop, remember the fun you had as a child just playing around, and seeing what new things you could do with your body. I shot this video, not to teach a particular exercise, but to show what I mean by 'playing around' with movement.

 [Standing & Sitting Exercises: Creative Ways to Get Up Off the Ground](#)

Take your time and give yourself room to explore all the various actions and positions your hips can handle. This is the true key to improving all aspects of your hips range of motion and power.

Chapter Six

Shoulders

Shoulder pain is extremely common, with estimates of up to 70% of people affected over the course of their lifetimes. If ignored, it can turn into a chronic problem that affects daily activities, such as carrying your groceries and reaching to put them away, as well as recreational activities like handstands and other bodyweight control moves we teach here at GMB Fitness.

We ask a lot from our shoulders – the strength and flexibility to reach, hold, lift, carry, press and pull. It's no wonder that the stress and strain of everyday life can cause as many shoulder problems as traumatic injuries. We simply use our upper extremities so much that issues are more likely to happen if we aren't prepared for the stress and load.

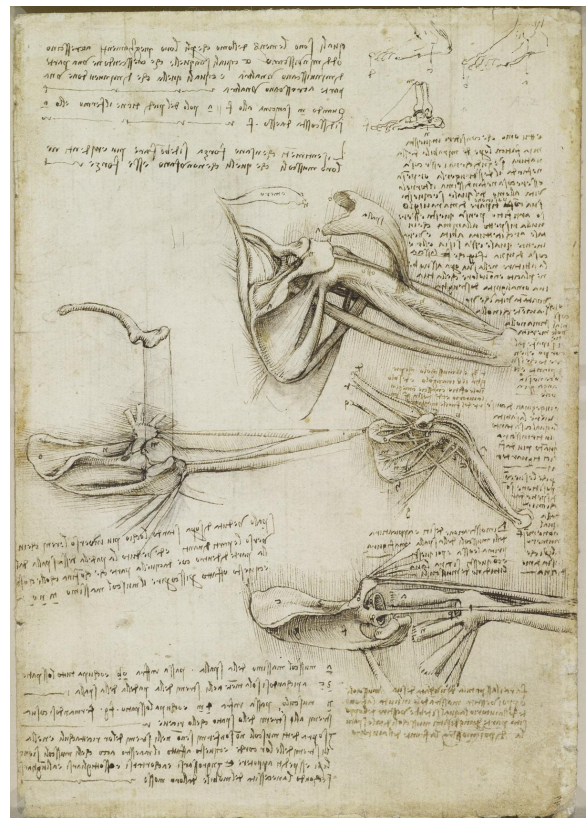
Let's take a look at how they work, and how just about every upper body movement and muscle involves the shoulder.

Basic Structure and Function of Your Shoulders

When most people speak about the “shoulder joint,” they are likely referring to the ball and socket joint formed by the humerus (the upper arm) and the scapula (the shoulder blade). It's a shallow socket, the glenoid fossa, which allows for a much greater range of motion at various angles than the deeper socket of the hip.

Another joint is formed at the connection between the clavicle (collarbone) and the acromion process of the scapula. This “A-C” joint is what is injured when someone has “separated” their shoulder. This can happen when falling directly onto the shoulder. You can actually see a gap or “step off” at that junction point in more severe separations.

In addition to these joints, there is the connection between the scapula and the ribs, the so-called scapulothoracic joint. Unlike most joints that are attached by ligaments, the scapulothoracic joint is controlled and limited solely by muscle attachments.



So with these three joint connections, along with the many muscles strapped around the area, the shoulder is a complicated structure that keeps many health care professionals in steady business.

Our purpose isn't to present all of the finer details of the anatomy of the shoulder, but to give a broad understanding of what's happening in the area. This general understanding can help to prevent and/or assist in the various shoulder injuries that can happen to us.

Because the shoulder girdle is so complex, some basic knowledge of how joints work will help you understand the recommendations that follow.

On the simplest level, any joint is the connection between two bones and determines the axis upon which those bones can move. The physical connection between joints are ligaments, which prevent abnormal motion and protect the joint from forces that would pull it apart.

The most movable joints, the ones we are most concerned about in our physical activities, are surrounded by a capsule composed of thick outer tissue and a thinner inner tissue. Within this capsule is fluid, cartilage, and other tissue, all of which protect, nourish, and assist in shock absorption and free movement – the most important qualities we want in our joints.

To simplify and provide the most amount of information with the least amount of headache, we'll focus on three major joints of the shoulder:

- Glenohumeral
- Acromioclavicular
- Scapulothoracic

Within and surrounding these structures are the various soft tissues that make the shoulder both strong and mobile.

The glenohumeral (G-H) joint is responsible for most of the range of motion of our arm through space, so even relatively minor stiffness in this joint can affect our activities quite a bit. As previously mentioned, this is a relatively shallow joint, and although it allows for a greater range of motion, it also makes the shoulder less stable and more vulnerable to traumatic forces. The G-H ligaments (superior, middle, and inferior), along with the joint capsule, work to keep the ball in the socket. When someone dislocates their shoulder, these are the structures that are damaged.

The big muscles in the upper body all converge at this joint to move our arms (or our body through our arms). The pectorals pull the arms forward and across the body, while the latissimus pulls the arms down and behind the body, and the deltoids and traps raise your shoulder girdle and arm upward. These are powerful muscle groups that work hard in all the lifting, carrying, pushing, and pulling tasks we set out to do.

The smaller muscles at the G-H joint that make up the “rotator cuff” assist in maintaining proper position of the humerus within the joint. The individual muscles have specific motions: Supraspinatus (beginning of shoulder abduction), Infraspinatus (external rotation), subscapularis (internal rotation), and teres minor (external rotation and adduction), but their main job is to hold the humeral head in position while the bigger surrounding muscles raise the arm up and overhead.

The acromioclavicular (A-C) joint does not allow as much movement as the G-H joint, but the movement it does allow is important for the last degrees of motion for reaching overhead. It also serves as a rotation point to assist the shoulder blade in moving correctly, so that we can reach across in front of our body and back behind us. Just as in the description of the G-H joint, daily exercise of working your shoulder through its full range of motion and flexibility does much for minimizing problems in this area.

Ligaments attach the collarbone to the shoulder blade, and from points from one part of the scapula to the other. They support the joint to provide a stable pivot point for shoulder blade motion, and also help to form the “roof” above the rotator cuff and humeral head.

Full shoulder motion in all directions can only be accomplished with a freely moving shoulder blade along the rib cage.

This motion is dependent upon the muscles attached at the scapula to the ribs and spine. And there are quite a few muscles – trapezius, pec minor, all the rotator cuff muscles, rhomboids and deltoids – that have attachments at the scapula.

As such all these muscles are affected and can impact shoulder blade mobility and support. The shoulder blade is essentially free-floating with no ligamentous attachments to the spine or arm, so the various muscles and fascial attachments provide both movement and stability.

This is an incredibly important area for all upper body work in bodyweight style and calisthenic training. The scapula needs to be strong and mobile in all directions and combinations of directions (forward and back in both elevated and depressed positions), to both protect the shoulder and transfer power correctly from the trunk to our extremities, and vice versa.



Unfortunately, because of our decreasingly active daily lives and the ubiquity of desk and computer work, we rarely move our scapulae in all the varieties of motion they are meant to do, and that we need for peak shoulder health.

And even in most gym and sport exercises, we often limit ourselves to repetitive common patterns rather than all the available motion. This is why the fundamental “shoulder opening” gymnastic and hand balancing exercises can be surprisingly difficult and hugely beneficial additions to our training.

What You Really Need to Know about Your Shoulders

The preceding description of the shoulder girdle shows just how complex and overwhelming this area of the body can be, and all the problems and issues that can occur with even just one structure not doing its job. Virtually all of our upper body muscles converge with the shoulder in some way and their interrelationship is key for optimal shoulder health and performance.

Though the causes and solutions to shoulder problems are certainly complex, especially when considering the contributions of the spine and even hips and lower body, it basically boils down to poorly coordinated movement at the shoulder.

Whether it is specific muscle weakness, or flexibility problems (both too much and too little) at muscles, ligaments, and within the joint itself, these all lead to impaired movement patterns. And these patterns can cause repetitive strain to the tissues in your shoulder even from simply using it in normal everyday activities. This is a good example of where improved load capacity and load distribution work hand in hand to keep our body happy and healthy.



Common Complaints in the Shoulders

Now that we've described the basics of the shoulder girdle, it's easier to understand the two most common causes of shoulder pain.

- Impingement
- Tendonitis

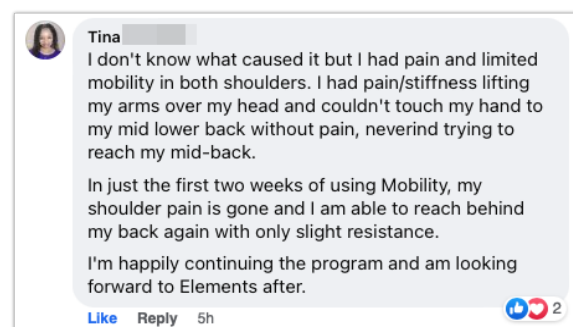
Impingement is a very general term, and it's basically to describe the "pinching" people complain about when they reach overhead. Repetitive irritation of the tendons under the "roof" of the shoulder seems to be the culprit here.

The inflammation and swelling that can occur is a critical problem because there is not a lot of open space in this region, and the expansion of tissue from swelling can further irritate the issue. It becomes a vicious cycle, which is why this syndrome is so common.

Tendonitis literally means inflammation of the tendon. It should actually be easily taken care of, with adequate rest and staying away from the painful motion, the inflammation should run its course and heal within two weeks. But, just as with impingements, there can be several reasons for continued irritation, and this condition lingers and can progress to more damage to the tissue (tendonosis).

Common Mobility Limitations in the Shoulders

- Flexion (Reaching overhead)
- Extension (Reaching behind you)
- Abduction (Reaching up to the side)
- External Rotation (Rotating hand outwards)
- Internal Rotation (Rotating hand inwards. This is most often limited when combined with extension, i.e, reaching behind and up to scratch your back)



Common Strength Limitations in the Shoulders

- Deltoids (The big muscles “capping” the shoulder)
- Rotator Cuff Muscles (Supraspinatus, Infraspinatus, Teres Minor, Subscapularis)
- Biceps (This arm muscle also crosses the shoulder joint)

Improve Your Shoulders By Focusing on Mobility, Strengthening and Motion Exploration

▶ Shoulder Pain Routine - Exercises to Make Your Shoulders Strong & Pain Free

L-Stretch

- On your knees in front of a bench or other elevated surface, pull one arm across your chest and lean forward so that your chest is resting on your arm.
- Extend the other arm in front of you.
- Lean towards the shoulder of the arm that's pulled across your chest. The movement may be very slight, or you may have more movement—it just depends on where your mobility is at. You should feel a stretch at the back of the shoulder capsule.
- Move in and out of the stretch 10 times, then hold for 15-30 seconds. Repeat on the opposite side.



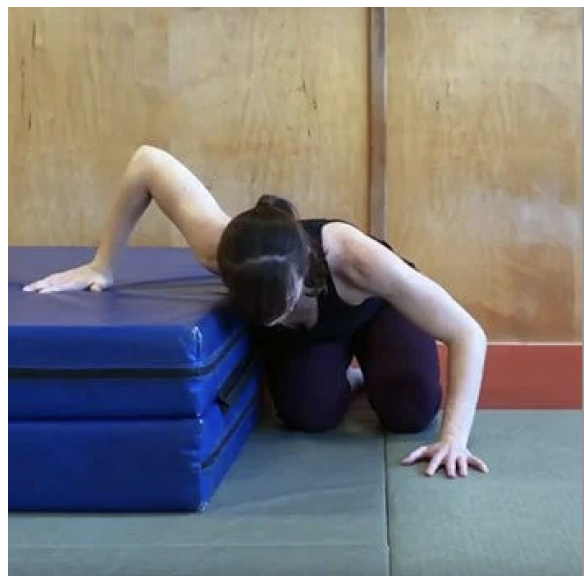
Shoulder Flexion / Thoracic Extension

- Extend your arms straight on a bench or elevated surface. You can stay up on your knees like Rose demonstrates, or you can drop into more of a kneeling position—whatever is most comfortable for you.
- Press into the bench as you bring your chest down towards the ground and forward towards the bench, in one sweeping motion. Focus on rolling the shoulders outward as you move in and out of the stretch.
- This motion puts the shoulders into a flexed position, while extending the thoracic spine, which has a tendency to get very tight on many people.
- Move in and out of the stretch 10 times, then hold for 15-30 seconds. You can also move from side to side while you are in the stretched position, as Rose demonstrates.
- Once you do both arms, you can work on one arm at a time.



Bent Arm Scaption Stretch

- Kneel next to an elevated surface, and place one palm down on the surface, with your elbow pointed up.
- Rotate the shoulder capsule in and out, as Rose demonstrates. You should feel a good stretch in your pec at the stretched position.
- Move in and out of the stretch 10 times, then hold for 15-30 seconds. Repeat on the opposite side.



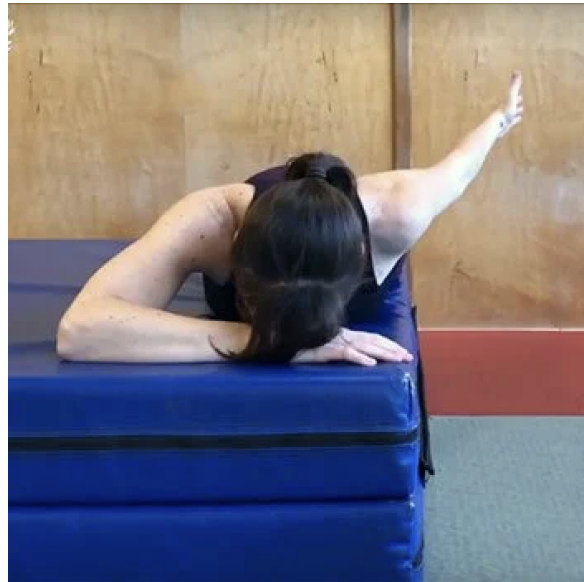
Bent Arm Thoracic Extension

- For this stretch, you will have your arms bent, with your elbows resting on the bench in front of you.
- The motion will be the same as the previous stretch, but this time, you will press the elbows into the bench to encourage a deeper stretch in the thoracic spine.
- Move in and out of the stretch 10 times, then hold for 15-30 seconds.



Prone Scapular Movements

- Lie down on an elevated surface (a bench or even a bed works), with one arm hanging off of the surface.
- Depress the shoulder of the hanging arm, then rotate the arm backwards, and hold it in the stretched position for a few seconds, then bring it back to resting. Repeat 10 times.
- Then, bring the arm forward, rotating the shoulder outward as you do so. Hold it in the forward position for a few seconds, then bring it back to resting. Repeat 10 times.
- Repeat both motions on the opposite shoulder.



Prone Shoulder Circumduction

- Next, you will put the pieces together. Bring the arm forward, then extend it outward, then behind you, then bring it forward to rest, creating a half circle.
- Go in one direction 5-10 times, then reverse directions.
- Be sure to repeat on the other side.



Scapular Weightbearing

- Here, you will add some weightbearing to your shoulders, by raising your hands up on parallel bars or dumbbells (whatever you have around), while in a plank position.
- Keep the elbows straight as you create circles with your shoulders.
- Do 5-10 circles in one direction, then go in the opposite direction.



Motor Control Play Overhead

- For this exercise, you'll want to place your hands on the ground, with your feet on an elevated surface. As much as possible, try to press into the ground to open up the shoulders. If having your feet elevated is uncomfortable, you can do these exercises from a standard downward dog position.
- The purpose of this exercise is to train motor control, so what that means is you should play around with different ways to move the shoulders while in this position. There is no set pattern of movements—just see how different movements and angles feel for you.



Motor Control Play on P-Bars

- Here, you will use dumbbells or parallel bars to support your hands. Press down into those supports, while keeping the chest up and the elbows straight.
- Following the same idea as the previous exercise, the idea here is to play around with moving your shoulders in different directions while supported in this way. Try shrugging your shoulders, doing circles, moving from side to side—whatever feels good to you.



For flexibility work, the goal isn't necessarily to stretch a particular muscle, but to open your shoulders into new positions that allow a freer movement pattern. These improved motions can decrease stress to irritated tissues and also make your chosen recreational activities/exercise smoother and easier to perform. With each of these exercises, don't be afraid to play with different angles and different lines of force – sometimes a slight variation of the basic movement can allow you to access different regions of that range of motion.

In the case of motor control and coordination, a sense of play is the right attitude. Novel movements break up your normal routine and wake up your mind and body. Physical habits and holding patterns creep up on you slowly and settle in without you being aware. New movements just for the sake of doing them give you benefits far beyond those of the actual physical effort. Every way of getting out of the doldrums and plateaus of training is a precious commodity. Especially when it concerns chronic pain.

There can indeed be a habit of pain - you can be so accustomed to pain and dysfunction that it gets "sticky." We tend to move in the same ways day after day, especially in our exercise training.

Being stuck in these same movement patterns is a big player in continuing pain complaints despite different treatments. Put an emphasis on variety and altering movement as much as possible to break free of patterns and the pain cycle.



Debs Cadden

I'm on week 3 of Elements and it's been the best training plan I've ever taken part in. Chronic shoulder pain seems to be gone, I'm visibly stronger and my range of motion and control has improved so much already!

The website is a joy to navigate too. Excited to have this as part of my life now



2 hrs Like Reply More

Don't neglect the importance of improvising and playing with movement. It's more than just fun, it's also a key to better health and fitness with less pain and dysfunction.

Take some time to examine your particular needs and play with adding a few of these techniques to your training.

- For the flexibility exercises, choose a couple of variations for the shoulder opening and see how it affects your condition over a couple of weeks.
- And the same for the strength exercises – pick two moves that seem to be the weakest for you, and incorporate them into your regimen and re-assess in a month.
- For the motor control exercises, pick a couple that look the most fun to do and sprinkle them into your sessions and daily activities, you'll be glad you did.

Chapter Seven

Knees

Knee pain, whether minor or major, is a common problem that interferes with our enjoyment of many aspects of our lives. In this chapter, we'll get you more familiar with the knees in particular, and I'll explain how to keep them healthy so you can continue to enjoy your training.

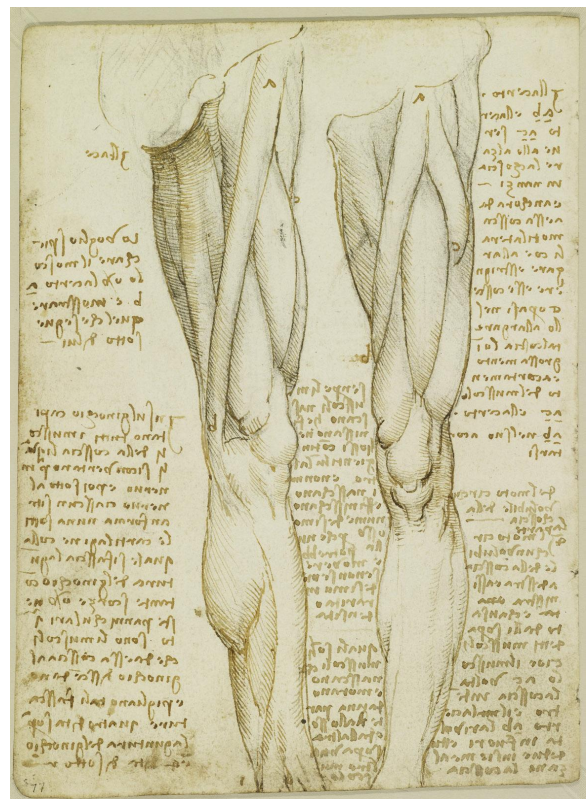
Basic Structure and Function of Your Knees

The knee joint is where the upper leg (femur) connects to the lower leg (tibia and fibula), it is primarily a hinge joint with small rotational capacities necessary for healthy movement. Your shin moves on your thigh when your foot is in the air, and your thigh moves on your shin when your foot is planted. But it is not designed for much side to side and rotational movement. The ligaments of the knee serve to protect the joint from excessive movement in shear (sliding), rotation, and lateral (side to side) movements.

Four major ligaments protect the knee in these planes, one on each side (lateral and medial collateral ligaments), and two in the center (anterior and posterior cruciate ligaments). Without these four, your lower legs would be flopping all over the place.

The menisci (medial and lateral) in between your upper and lower leg help cushion the joint to reduce friction between bony surfaces and absorb forces. Forceful twisting at the knees places strain on these tissues and they are very commonly damaged, either from repetitive strain or from trauma.

Your kneecap (patella) is an intermediary structure between the quadriceps muscles and its tendon, and the tendon (patellar) that attaches to your shin bone (tibia). It improves leverage to better improve the muscular force generated by the quadriceps.



At the inner thigh, the large hip adductors don't cross the knee joint but three smaller muscles do (sartorius, gracilis, and the hamstring muscle mentioned above, semitendinosus) and form a single tendinous connection called the pes anserinus.

What You Really Need to Know About Your Knees

The preceding anatomy primer has probably made you more aware of the knees' role as the middleman between your hips and your feet on the ground.

Your knees can be more prone to problems when the connections from the hip to your lower limbs aren't coordinating as well as they should.

Knee issues can be fairly complicated and have a variety of separate and intermingling causes, but we can break down basic knee issues into three major causes:

- Decreased strength
- Decreased flexibility
- Decreased movement coordination

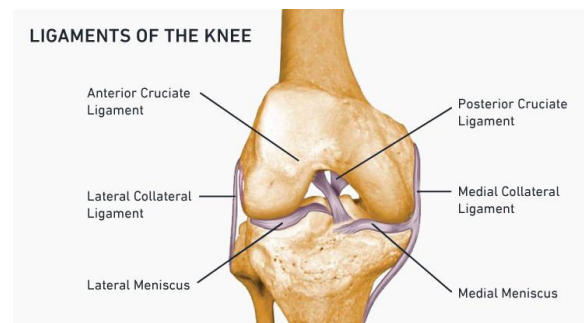
Common Complaints in the Knees

- Tendonitis
- Ligament sprains
- Kneecap issues
- Bursitis/"Friction syndromes"

Tendonitis, as mentioned previously, is inflammation of the tendon. In the knee, this is primarily at the patellar tendon, and is associated with repetitive use wherein the tendon hasn't adapted to the repetitive strain. Say when you start to jog and put too many miles in right away, or other such new movement where you haven't given yourself enough time to build capacity.

Ligament sprains occur when forces lever the bones too far in one direction and overcome the strength of the ligaments. Small to full tears then compromise the integrity of the joint and lead to instability.

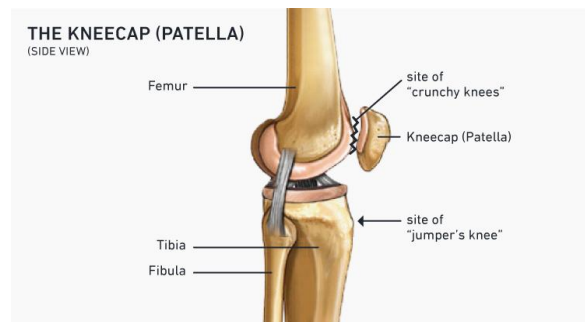
Various kneecap issues arise when forces at the patella overwhelm adaptations at the soft tissue



and underside of the bone and at the patellar tendon. This is the common source of the complaint of “crunchy” knees.

There's also bursae (fluid filled sacs to reduce friction) in various spots at the knee which can be irritated with prolonged pressure, such as kneeling (“housemaids knees”)

Similar to this is the iliotibial band (I.T. Band) at the lateral side of the knee, a tough tissue that runs from the outside of the hip past the knee to the tibia. The infamous “I.T. Band” syndrome is generally from increased repetitive stress from adding too much mileage too quickly as in tendonitis, but in this syndrome appears to be other soft tissue that is irritated (fat pads).



Common Mobility Limitations in the Knees

- Flexion (Bending)
- Extension (Straightening)
- Rotation

Your quadriceps straighten the knee so they are the ones that can be limiting how much you can flex the knee if they are tight. Conversely, your hamstrings are the ones that bend the knee so they can limit straightening if they are tight.

The tightness may also be protective, if you have a history of knee issues your nervous system may increase muscle tension as a reaction. This unfortunately can cause discomfort and movement issues as a result.

Simon Burns ★★★★★  Would recommend this product

Product: Elements

I've been doing Elements for 6 months now , inc 1 month off with a broken wrist due to a unrelated incident and Im loving it. I'm doing good handstands now and feel ready to start doing more strength training.

The biggest improvements have been in my knees, having recovered from a motorbike crash where I hyperextended n dislocated both my knees 90* , 2yrs ago, my knees are now finally pain free and more mobile than actually before the crash.

I highly recommend Gmb and have already to many of my mates.

My kids 5 & 10 are loving this new version of dad that can flip , roll and hang with them.

Cheers crew

Common Strength Limitations in the Knees

- Quadriceps
- Hip Adductors
- Hamstrings

The quadriceps and hamstrings are the familiar and major muscle groups of the knee, with the four quadriceps in the front of the leg converging into a common tendon to the patella and the hamstrings (biceps femoris, semimembranosus, and semitendinosus) to separate tendon attachments.

The quadriceps help absorb the forces the knee is subjected to in running, jumping, and even simply taking the stairs and walking.

In particular, it's the eccentric quad strength that is most helpful for knee joint protection. It's the strength you have in handling forces while the quadriceps are lengthening under load.

The lowering part of the squat is a good example. The same goes for strong and enduring calf muscles, they can take a lot of the load off from landing.

Hamstring strength at the knee is important as well, but more so for the ability of co-contraction with the quadriceps to keep the knee joint stable during activities. With both muscle groups working together correctly, you'll be able to lessen the shear and rotational strain at the knee.

It's more essential to have increased hamstring strength at the hips, where they are a big contributor to hip extension along with the glutes. Good hip action provides the majority of strength in jumping and running and should be developed to its fullest to take away undue stress at the knees.

Improve Your Knees by Focusing on Mobility, Strengthening, and Motion Exploration



One note before we get into the routine: The idea with these exercises is not to work through your pain—please do not do that! Go slowly, and only work within ranges that do not exacerbate your knee pain. Over time, those ranges may increase, but for now, just work at your own level.

As you'll see, the purpose of these movements is not to “get a workout” or to try to get as many reps as you can. The purpose is to introduce your body, and specifically your knees, to movements in different planes.

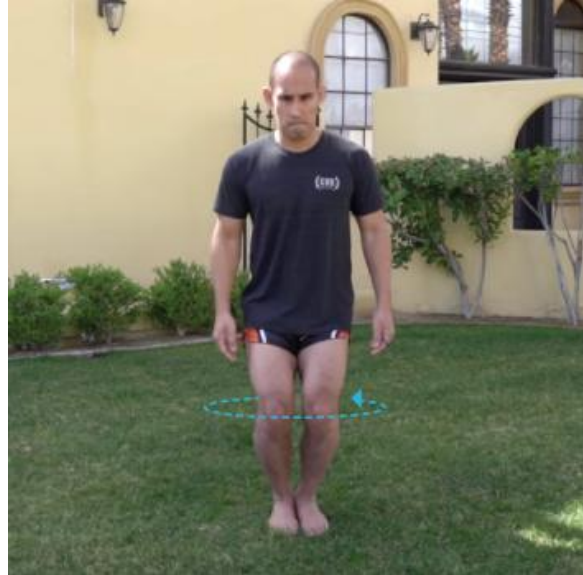
Giving your knees this kind of regular motion will help them start to feel more at ease with movement. Plus, by getting comfortable with these types of movements in a controlled and gentle manner, you'll increase your ability to avoid re-injuring your knee if (and when) you wind up moving in those ways, even if inadvertently.

Knee Pain Exercises - Routine to Fix Your Knees

Knee Circles

This exercise is good for improving joint position awareness, as well as increasing tolerance of rotational movements.

- Start with your feet together, and squat down. Start with a very shallow squat and do a few rotations in each direction, slowly and with control. Then, if you can tolerate it, squat down a little deeper and repeat.
- Next, repeat the rotations with your feet about shoulder-width apart.
- Then, step one leg out to the side and do rotations on the bent leg. Again, only go as deeply as you can without pain. Repeat on the other side.
- Finally, go into a regular lunge position and do rotations in both directions with the front (bent) knee.
- Play around with depth in each position, and with the circumference of your rotations.



Star Pattern Step Knee Bends

Here's a good exercise for working on controlling your knee positioning while in motion.

- Start by standing with your feet shoulder width apart. Stretch one leg out in front of you on the ground, as you bend your other knee to help your foot slide forward.
- Stand back up then repeat in a similar way, but this time bringing your foot out at a 45-degree angle in front of you. Repeat three or four more times, each time moving your foot further to the side/back.
- Repeat on the other side.



Front Scale Quarter Circle

The front scale is an exercise with many benefits, but this variation is especially good for improving balance and coordination with straight leg positioning. Those are important attributes for the health of your knees because they'll help you control your movements in precarious positions.

- Stand with feet together, and raise one leg up in the air. Keep both knees locked out as you do so, and maintain an upright posture.
- Once your front leg is at the top position (wherever that may be for you), keep your torso stable as you rotate your leg out to the side, opening up the hip.
- Don't be concerned about how much you are able to lift your leg, or how far you can rotate it outward. Just work within the ranges that you can.



Jump Landing With Control

The last in this sequence helps to improve knee control in movement, with the added layer of impact.

- Start with a basic broad jump, but focus on landing softly with bent knees, and control your landing.
- Once you're comfortable with that, play around with jumping on a diagonal, or with one leg at a time.
- The key with any of the variations shown is to focus on control. Jumping is perfectly safe for the knees—if done with safe technique.



Chapter Eight

Feet/Ankles

Our feet and ankles are very important, considering we couldn't stand, walk, run, or roundhouse kick someone in the face without them. Unfortunately, our lower limbs tend to be neglected unless something goes wrong.

Strong and flexible feet, ankles, and calves provide our base for stable movement, and are essential for performing our daily activities.

In this chapter, I will give you a brief introduction to the basic anatomy and movements in the ankle and foot (just enough for a good familiarity, but not enough for you to perform surgery...). Then, I'll discuss the primary importance of working on this area, and finally, how to incorporate exercises for these areas into your training routine.

Basic Structure and Function of Feet and Ankles

Your lower leg is made up of the bigger tibia on the inside and the smaller fibula on the outside, then connects lower down to the talus and the calcaneus (heel), then to the five small bones of the instep and the metatarsals and phalanges (your toes).

Lots of different sized ligaments connect the bones together for stability, along with various muscles from the big calf to the small muscles that move your toes.

The ankle and foot are made to move in a great variety of angles to provide stability and dexterity, carrying us over all types of terrain from soft sand to rocky ground. Your ankle is not like a hinge on a door, and your foot isn't just one big lump you slide your socks onto.



All the large and small joints in this area work together to provide this nimbleness, but only if we keep them moving like they are supposed to!

Common Complaints In the Feet and Ankles

- Tendonitis
- Sprains
- Fallen Arches
- Plantar Fasciitis
- Heel pain

Tendonitis rears its ugly head again here, with the achilles tendon being a common victim. Also a familiar refrain, it's prolonged repetitive strain that you aren't quite yet ready for that is the instigator. It's not so much simply running the miles that gets you, it's that you may need to be more conservative than you'd like and run less mileage with less progression over a longer period of time. Our bodies can adapt to nearly anything, we just need to give it enough time to adapt.

Ankle sprains are also very common, it'd be unusual to meet anyone that hasn't twisted their ankle at some point in their lives. Some falls and trips are unavoidable, that's why they are called accidents. But we can also condition our ankles and feet to be more durable, along with different balance and reaction training to make sprains less traumatic when possible.

Another common issue people experience is collapsed arches in the feet. This is caused by poor mobility in the midfoot, along with weak posterior tibialis and intrinsic muscles. With improved mobility and strength in these areas, the arches can correct themselves over time.

Plantar fasciitis and heel pain are also the result of decreased adaptations to stresses. Perhaps you're new to walking barefoot on floors, or the new shoes you're trying are less padded than you're used to. Wearing more cushioned footwear is a good idea to decrease the stress/load, but you'll also benefit from foot strengthening and gradual conditioning to being on your feet on harder surfaces.

You can, and should, both support your feet and ankles as needed as well as strengthen and train them. I've heard people espouse to do just one or the other and that always seemed silly.

Common Mobility Limitations in the Feet and Ankles

- Dorsiflexion (Pulling foot upwards)
- Plantarflexion (Pointing foot downwards)
- Inversion (Tilting foot inwards)
- Eversion (Tilting foot outwards)

A very common complaint we hear from people is their lack of ankle flexibility. Many bodyweight exercise moves, especially as you move into intermediate and advanced work, such as the pistol squat and various locomotive patterns, require good ankle flexibility.

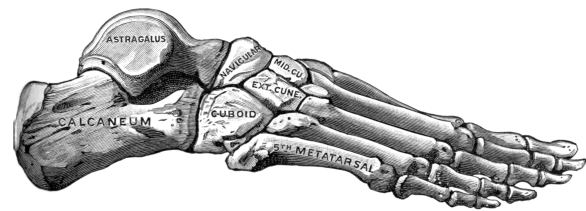
The calf muscles are a very dense muscle group because we use them constantly – even just in standing and walking. And the ankle joints, because of the lack of variety of motion throughout the day, tend to be stiff and immobile. This can require aggressive stretching, in terms of load, duration, and frequency, not intensity, to achieve improvements in range of motion.

Common Strength Limitations in the Feet and Ankles

- Foot Intrinsics (small muscles at the sole of our feet)
- Calves
- Peroneals, Posterior Tibialis

Just as in the hips, our feet often unfortunately fall victim to disuse and understimulation. In addition, for work (and fashion) we're encased in restrictive shoes that don't allow full movement and further affect our strength and range of motion.

But as I've said earlier, I'm not espousing throwing all your shoes away and walking barefoot wherever you go! Sometimes we really do benefit from support and cushioning, especially when we are recovering from injury and even when we are putting long miles on our feet. But we also really need to strengthen and move our feet and ankles in as many different ways as we can.



Improve your Ankles by Focusing on Strengthening, Mobility, and Motion Exploration

Our ankles and feet are too often under-exercised and taken for granted considering how much we rely on them everyday. It's no surprise that this neglect of their full range of motion and total potential for coordinated movement can lead to stiffness and weakness, and perhaps even pain.

This section focuses on simple, yet effective exercises that not only lessen the chances of potential injury, but may also reverse some damage that has already been done (barring any true injuries in need of surgery or more intensive therapy).

Spend 15 minutes on these exercises every day, and you're likely to feel your feet getting stronger, more flexible, and more able to handle variations in movement.

📺 Foot & Ankle Exercises - Calf Stretches (Part 2)

Stretching

A classic and effective exercise is using a step or sturdy block for your foot so you can drop your heel down to stretch. It's simple, not fancy, but works extremely well if you are consistent and approach it the right way. I recommend doing this in shoes, in this way you can place the middle of your foot on the edge of the step comfortably for the stretch. This is protective of your foot arch and allows you to put more weight into the stretch.

The variations are with your knee locked out straight and with your knee bent. The straight leg version emphasizes more of a gastrocnemius stretch, and the bent knee version gives the calf muscles a bit of slack and thus puts more of a stretch in the ankle joint.



The calf responds well to long holds of stretching, so 1 to 2 minutes for 3 sets should be a minimum goal. Stretch before active movement such as the strength and motor control exercises below so that your body learns to adjust and retain the new range of motion from the stretching.

For the following exercises, don't worry too much about sets and repetitions, spend a minute or two in each direction/variation and adjust as needed depending upon the quality of your performance and effort. It's better to do a little bit a lot than a lot a little bit!

Exercises for Ankle Mobility and Foot Strength (Part 1)

Foot Circles with Toes Flexed (Curled)



This movement concentrates on the small muscles in the arch of the foot. These foot intrinsics support the foot, and control over them means improved control and dexterity, which is so important in graceful and athletic movement.

It's a simple movement – it's just making a circle! – but the addition of flexing your toes makes this surprisingly difficult and can lead to muscle cramping in the beginning. Start off by not flexing your toes strongly and do the circles slowly.

- Keep the toes curled gently (not too tight, or your foot may cramp).
- Make a slow and controlled circle in one direction for the allotted reps, then switch directions.
- You may need to take a break between reps to prevent cramping

Toe and Ankle Movement Coordination



Here is another simple movement that works on coordinating the use of the muscles of the lower leg and foot. Simply lift your foot up and down through your full range of motion and add the toe movements with it as well. The coordination is toe extension (lifting toes upward) as you lift your foot upward, and toe flexion (curling in) as you point your foot down. And the other variation is then flexing your toes down as you lift your foot upward, and extending your toes as you point your foot down.

- Here, you'll be working on controlling the movements of your toes and feet with your ankles.
- Curl your toes as you point the foot, then extend the toes as you flex the foot.
- Then, reverse those movements. Extend the toes as you point the foot, then curl the toes as you pull the foot back.

Diagonal Patterns



These are combined motion patterns of either your foot lifting up and rolling inward and then pointing down and outward; or your foot lifting up and rolling outward and then pointing down and inward. You are essentially tracing an X with your foot as you work on the coordination of ankle and foot motions. This can be another surprisingly difficult exercise and is extremely useful for learning how your ankle can move.

- With this exercise, you'll work on diagonal patterns for the feet and ankles.
- Trace an 'X' with your foot, bringing it from the outer/upper corner, down to the inner/lower corner, then from the inner/upper corner, down to the outer/lower corner.
- Start by practicing this on the ground or sitting on a chair. As you get more comfortable you can try working on this while standing.

Rolling up Onto the Toes



This is the first exercise where we are putting weight onto our feet. The goal here is to combine a loaded active stretch to the ankle and foot together. It's a dynamic move, so don't hold too long in any position, instead go slowly through the full range and back again to encourage active movement through all the positions.

- Start in any position that's comfortable for you, whether that's in a full squat like Rachel demonstrates in the video, or in more of a lunge position, or with hands supported on something. Just have one foot in front, and one foot behind.
- Roll forward so you're up on the toes of the front foot. Go as far forward as you can comfortably go.
- Play around with the positioning, and make sure to work on both sides.

Squats with Ankle Rotation



In this exercise, don't worry if you can't drop down into the full deep squat position. The purpose of this exercise is to practice rolling on the inside and outside of your feet while weight bearing in a "compromising" position.

If you were to run and unexpectedly roll onto the side of your foot, you'd likely get a nasty ankle sprain. The exercise shown here is a progressive way to practice these common stresses to your feet and ankles. You can control the pressure and stress of the movement and use it to strengthen these positions to make it less likely to be severely injured when it unexpectedly happens.

- The main action with this exercise is rolling the ankle in and out.
- You can do this from a squat position or you can do this while sitting on a stool or chair—whatever works best for you.

Ankle Rolling Side-to-Side



Here we move to standing and up on the ball of the foot as we practice rolling our ankle from side to side. Again, it's better to do this while we are controlling the forces so we can strengthen them, rather than having it happen randomly and possibly causing injury.

- This exercise emphasizes strengthening the ankle in unusual positions with weightbearing. By doing this while standing, your ankle will be bearing some of your bodyweight (but only put as much weight as is comfortable).
- Lift up onto the toes of one foot, and shift the weight on the toes from side-to-side. Repeat on the opposite foot.

Weight Bearing Ankle Circles on the Heel/Ball of Foot

Continuing in standing, we'll now practice ankle circles while placing as much



weight as we are comfortable with on either our heels or on the ball of the foot. There are different forces and strains involved in the two variations, so it's good to familiarize yourself with both.

- With this variation, you'll lift your toes off the ground so that you're just on the heel of your foot. Again, you'll do this standing so that your ankle is bearing weight, but you can adjust how much weight to your comfort level.
- Rotate the ankle in one direction, then go in the opposite direction. Repeat on the other side.
- You'll then do the same exercise, but this time, go up on the ball of your foot and perform ankle circles with the heel off the ground.

Calf Raises



Another classic exercise, this is the most direct way of strengthening the calf muscles in their full range of motion from a full stretch to a full contraction. You can adjust your intensity by how much you hold on with your hands and by eventually adding weight to your body through a backpack or holding dumbbells.

If this is too much for you, then work both feet at the same time or start on a flat floor versus a step to reduce the range of motion until you get stronger and can handle strengthening from the full stretch.

- For this exercise, you can either elevate the leg on a stool or step, or you can do this on the ground.
- If you are up on a step, you'll lower one or both heels down toward the ground until you feel a nice stretch in the calves. Then, press through the balls of the feet to lift the heel up. Do this slowly, and with control.
- From the ground, just focus on lifting the heels up, then slowly lowering.
- Try this with both straight and bent legs.

Outroduction

This guide was designed to give you a foundational understanding of the most common problem areas in the body, and some things you can do to protect and rehabilitate yourself. There's quite a bit here, with a lot of information to soak up and exercises to try.

We encourage you to engage with it in the spirit of exploration and self awareness. There's a lot to be gained from trial and error and figuring out what's best for you. One thing we can't stress enough is the importance of regular exercise so your body can handle the inevitable stresses life throws at it.

We wish you all the best in your training and your life.

The GMB Fitness Team

One last pitch! We aren't ashamed to say we are very proud of our program Elements and how many people it's helped over the past several years since we launched it.

It comprises all of the knowledge and experience we've accumulated over decades of training, education, and most importantly working with our clients.

Take a look, give it a try and see what it can do for you!

 [Elements](#)

"Purchasing Elements might have been the best investment I've made in the last 20 years."



Purchasing Elements might have been the best investment I've made in the last 20 years. I cant emphasize enough how much I appreciate learning the bear, the monkey and the frog. I literally do them before every activity, from playing basketball with my teen daughter to just a casual stroll through the park. The increased mobility in my hips, the reduced knee pain cant be measured. The most impressive thing of them all, I slipped on something on my stairs and spilled a bucket of water all over the basement. The damage was a bruise to my elbow, and my glasses fell off my face. But I got up and walked away (through the shoes in the garbage lol) without nothing damaged but my ego. I tell my friends about GMB all the time.

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