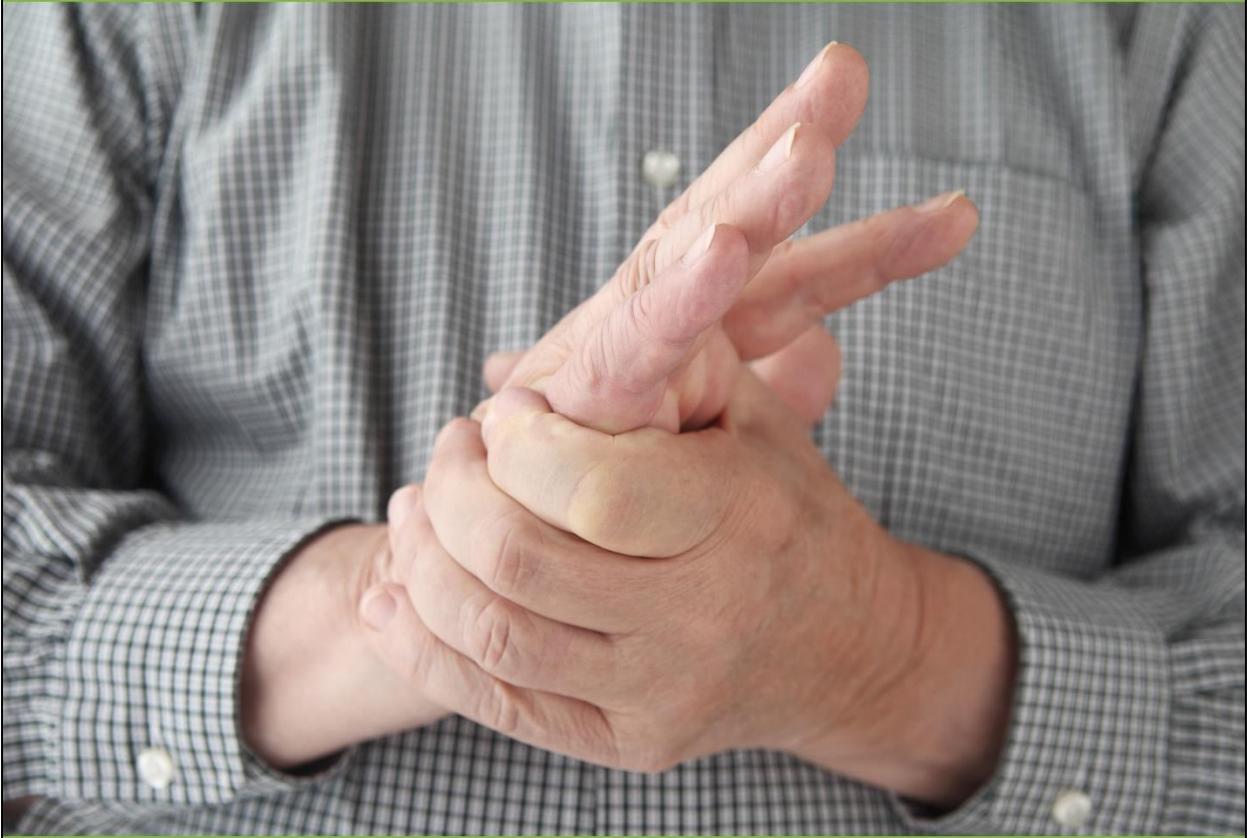




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WHAT IS *THORACIC OUTLET* SYNDROME?

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Disclaimer

What is Thoracic Outlet Syndrome? is primarily an educational resource and is not intended to take the place of the advice and recommendations of a physician. If you suspect you might have a health problem, please seek the services of a physician or healthcare professional.

The author has checked with sources believed to be reliable in his effort to provide information that is complete and generally in accord with the standards accepted at the time of publication. The information was accurate to the best of his knowledge. It is presented AS IS.

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Preface

Thank you for supporting one of my dreams!

I have always dreamed of being a writer. The book you are reading is one of those writing dreams coming true. I hope you take from it as much as I have gotten out of its research and production.

Pass this Book On

Feel free to take your personal printed copy and share it with your family, friends and colleagues. Everyone's health will improve if we all learn and educate each other on how to maintain a healthy and active lifestyle. If you received this as an e-book, please do not forward it on. Writing is how I make a living. Unauthorized distribution constitutes theft of my intellectual property.

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Contact Me

Please let me know what you think of this book. Visit www.ExercisesForInjuries.com or e-mail me at support@ExercisesForInjuries.com. Your feedback and ideas will help with the content of future editions and books.

Rick Kasey

What is Thoracic Outlet Syndrome?

Thoracic outlet syndrome might be caused by injury, overuse of your arm or poor posture. Some typical symptoms are arm or hand pain, numbness and weakness. The diagnosis of thoracic outlet syndrome is often missed, even by experienced doctors. One of the reasons is that the symptoms can look a lot like other problems, such as muscle strain.

The correct diagnosis of thoracic outlet syndrome is critical as it can lead to chronic pain and limb dysfunction.

The Thoracic Outlet



A bit of anatomy helps explain what causes thoracic outlet syndrome (TOS). At the base of your neck, there is a space between your collarbone (clavicle) and first rib. This space is called the thoracic outlet. A bundle of nerves, arteries, veins and muscles pass through this passage. Because the space is tight, any change in the anatomy can cause a compression of structures in the thoracic outlet.

Heated Debate

Before we get into the specifics about TOS, it's important to realize that within the medical community there is significant debate about the syndrome. For example, surgeons make the diagnosis of TOS 100 times more frequently than neurologists. One of the reasons for the confusion is that the name "thoracic outlet syndrome" is very nonspecific. It only describes an anatomic region of the body and the problems that affect the area are diverse.

For example, if you were in an accident and had an arm injury, damage to a bone is treated differently than a damaged blood vessel. The same applies to TOS, as symptoms and treatment vary depending on which structure is affected.

What Are the Symptoms of Thoracic Outlet Syndrome?

If you think about the anatomy of the thoracic outlet, you can imagine what TOS symptoms might look like. Most of the symptoms are based on a nerve or blood vessel being pinched. For this reason, doctors divide the symptoms into two categories: neurological and vascular.

Symptoms of neurological TOS may include:

- Wasting away of the muscle at the base of your thumb (Gilliat-Sumner hand)
- Numbness or tingling in arm or fingers
- Sharp, stabbing, burning pain or ache in armpit, neck, shoulder, hand or back
- Decreased grip strength



Symptoms of vascular TOS may include:

- Bluish discoloration of hand and/or arm
- Arm pain and swelling, which may be from blood clots
- Blood clots in the blood vessels
- Fingers or hand looks pale due to poor circulation
- Weakened or absent pulse in one arm
- Cold fingers, hands or arms
- Arm tires easily with use
- Numbness or tingling in your fingers
- Weakness of arm or neck
- Throbbing lump near your collarbone
- Eye problems and transient vision loss associated with head position

More than 90 percent of TOS cases are neurological in nature while the remainder are vascular. As you can tell by the symptom description, TOS can be very serious. We can also see why making the diagnosis is difficult since the symptoms are highly varied.

What Causes Thoracic Outlet Syndrome?

The most common causes of thoracic outlet syndrome are:

- **Inherited anatomical defects:** You could be born with an extra rib located above the first rib or might have a very tight band of fibers connected to your rib
- **Poor posture:** Shoulder droop or extending your head in a forward position like when using a computer can cause thoracic outlet compression
- **Injury:** Car accidents or falls might alter your thoracic outlet anatomy; symptoms often appear sometime after the accident
- **Repetitive activity:** These include using a computer, assembly line work, lifting things above your head, stocking shelves or carrying a heavy backpack

- **Sports injury or repetitive movements:** Activities like baseball pitching and swimming can be a cause of TOS
- **Obesity:** Can place excess stress on your thoracic outlet
- **Pregnancy:** Your joints change during pregnancy; thoracic outlet syndrome may occur with pregnancy
- **Tumors:** In rare cases, a cancerous growth can compress the structures in the thoracic outlet

How Is Thoracic Outlet Syndrome Diagnosed?

Detecting TOS is not easy, but prompt diagnosis is essential. Diagnostic delay can lead to worsening symptoms or even permanent disability. The correct diagnosis of TOS might include the following tests:



1. **History and physical exam:** Your doctor will ask you about your symptoms and then examine you. A complete exam of your neck, arm, pulses, skin coloration, range of motion and strength can help decide about further tests.
2. **Provocation tests:** Your doctor might ask you to try certain movements or head positions to see if this provokes symptoms.
3. **Imaging tests:** These could include X-rays, MRI, CT scan or ultrasound tests. Angiography or venography is a test where a special dye is injected into your blood vessels to make them show up on X-ray. All these tests could help detect if there is a compression of structures in the thoracic outlet.
4. **Electromyography and nerve conduction:** These test the electrical activity in certain muscles or nerves. This could help diagnose a pinched nerve due to TOS.

One of the keys to diagnosing TOS is for your physician to have a high level of suspicion for the syndrome. A stroke may cause similar symptoms, but the steps to diagnose a stroke are completely different. It's important for doctors to consider TOS if any of the symptoms are present.

How Is Thoracic Outlet Syndrome Treated?

If at all possible, a conservative treatment approach is preferred. This could include:

- **Physical therapy:** The goal is to regain function in the affected areas, reduce symptoms and to minimize thoracic outlet pressure; some methods used are posture improvement and exercises to increase strength and range of motion; some therapists also use heat, ice and infrared treatments

- **Medications:** Anti-inflammatory drugs and muscle relaxants might give you some relief while you undergo therapy
- **Anticoagulants:** If it's detected that you have a blood clot, you may need medication that dissolves the clot; also, your doctor will likely recommend that you continue to take medication that "thins" your blood to prevent future clots from forming
- **Injection of botulinum toxin:** Also known as Botox, this has been shown to help some temporarily while physical therapy takes effect

What Exercises Can I Do at Home?

Some common stretching exercises used to treat TOS are as follows — make sure you consult with a doctor or physical therapist before doing these exercises:

- **Shoulder stretch:** Move your shoulders forward as far as possible (hunch) then back to a neutral position. Next, move your shoulders back as far as possible (arch) then back to neutral. Finally, raise your shoulders as high as possible (shrug) then back to neutral. Repeat this cycle several times.
- **Scalene stretch:** Tilt your head to one side while lowering the opposite arm. Hold the position for a few seconds and return to a neutral position. Do the same on the other side. Repeat several times.
- **Chest expansion:** Open up your chest and shoulders by lying on a cylindrical mat or rolled up towel in line with your spine. Your shoulders will naturally fall back toward the ground to open up your thoracic outlet.

While you do the exercises, envision that your thoracic outlet is opening up. Visualization may help improve your form while doing the exercises. It may also help you become more aware of your posture in general.

How Successful Is Conservative Therapy?

A review of 13 studies published between 1983 and 2001 found that approximately 90 percent of patients had "good" or "very good" results with conservative treatment for neurological TOS. Still, some people who suffer from TOS may experience symptoms long term.

When Does Thoracic Outlet Syndrome Require Surgery?

In severe cases of TOS that don't respond to conservative measures, surgery might be the only option. Surgical intervention is used only as a last resort. The thoracic outlet is difficult to reach surgically and complications in the area might lead to other problems.

How Can Thoracic Outlet Syndrome Be Prevented?

Even before symptoms begin, take precautions to prevent TOS. Some of the best strategies are:

- Practice good posture

- If you use a computer, make sure your elbows are at a 90-degree angle while typing; when looking straight ahead, your eyes should focus on the upper third of the computer screen
- Take frequent microbreaks, especially for computer and assembly line work; stop and stretch your neck, arms and back
- Avoid using heavy backpacks or bags that hang from your shoulder
- Try not to work in cramped areas that allow limited body movement

*If you are looking for precise and simple exercises that completely release those compressed nerves and reverse Thoracic Outlet Syndrome quickly, effectively and safely, then **check out the Thoracic Outlet Syndrome Solved program.***



Thoracic Outlet Syndrome Solved

Discover How to Overcome Your Thoracic Outlet Syndrome in Just Minutes without Expensive Appointments, Drugs, or Surgery

Click Here to
Discover the Simple Step-by-Step Guide
That Will Finally Help You Overcome
Your Thoracic Outlet Syndrome!

About Exercises For Injuries

Exercises For Injuries – Your Trusted Resource for Pain-Free Living

Recognized as a global leader in injury prevention and recovery since 2008!

At Exercises For Injuries (EFI) we recognize that traditional exercise and treatment programs often do NOT produce the results that people are looking for. We believe that understanding the cause of injuries and painful conditions can help heal and prevent them. Therefore, our programs are based on years of research, study, creativity, and hands-on testing. Our methods successfully determine what really works to heal injuries and eliminate pain, without expensive appointments, addictive prescriptions, or risk-laden surgery.

Often recognized as the ‘Trainer to the Trainers’ and the ‘Expert to the Experts’, company founder, Rick Kaselj, has been featured in major publications such as Livestrong.com, Men’s Health Magazine, San Francisco Chronicle, Canada.com, Iron Man Magazine, Men’s Journal Magazine, and has delivered presentations and seminars to *more than 6,000 health and fitness professionals across North America*. As an internationally renowned injury and pain expert, Kinesiologist, author and public speaker, Rick has made it his personal mission to make his ground-breaking programs available to as many people as possible, so they can return to pain-free lives.

Today, the EFI team is comprised of health and wellness experts from around the world. We help hundreds of thousands of people each year live fuller, healthier, pain-free lives by addressing all areas of health, fitness, and personal wellbeing.

Access our vast FREE library of health-promoting recipes, pain-relief resources and injury recovery information, online at: www.ExercisesForInjuries.com

About Rick Kaselj

Hi, I'm Rick Kaselj. I create exercise programs that help people heal injuries, eliminate pain, lose weight, increase energy and more... so they can go back to living a full, active, healthy life.

Here are a few relevant facts about me:

- I've been a Kinesiologist and pain and injury specialist since 1994.
- I spent 6 years at university studying Kinesiology, Corrective Exercise and Therapeutic Exercise, and got my Master's Degree in Exercise Science.
- I have over 20+ years of hands-on experience, working directly with clients and teaching my techniques and programs to fitness professionals, Kinesiologists, and healthcare providers.
- I have personally conducted thousands of personal training sessions.
- I have reviewed and carefully scrutinized hundreds of scientific and medical research papers and studies.
- I'm also an author and speaker, and I've given over 260 presentations to more than 6,000 fitness professionals across Canada and the USA.



I USE RESEARCH, STUDY, AND HANDS-ON TESTING TO FIND WHAT REALLY WORKS TO HEAL INJURIES AND ELIMINATE PAIN

I'm all about finding what works... and unfortunately, a lot of the advice out there, even from trained professionals and reputable sources... does not work!

Some of the most effective methods I've discovered for eliminating pain and healing injuries are *counterintuitive* - they required extensive research, testing, and *creativity* to discover.

People get the best results when they follow a program that's been *properly designed*. The best programs include only the exercises that are necessary, instructions for how to perform them properly, the proper order in which to perform them, and instructions for what the right amount of rest is, and when to take it.

What My Clients and Customers Say:

"Your exercises have changed my life. I have been in constant pain for 15 years."

-- **Shelley Watson, Carmel, CA**

"I just wanted to say thank you for providing what I needed to resolve my hip problem! After following your exercises, I went through work all day with no pain and no pain medication. Yeah!! Thanks so much for a simple answer to a problem I have been dealing with for months."

-- **Tracy Walker, North Carolina**

"Before I used the information, I couldn't walk normally for at least the first 15 minutes each morning. After using the program, I only have a little pain, but it eventually all got better with continued attention."

-- **Cher Anderson, Athens, TN**

"Thank you Rick, you saved my career!"

-- **Marco Mura, Professional Forester, Sardegna, Italy**

"I thought I would just have to retire due to foot pain, but now my pain is gone with your program. It has helped me a lot. Thank you, Rick!"

-- **Audal Acosta**

"I noticed a difference by the second morning. I was able to get up out of bed without the immediate pain and stiffness I am used to experiencing in the morning. I am now able to walk 1.5 miles without pain during or after my walk. That is exciting! I was in constant pain before I started the program and now I am able to take walks with my husband, pain-free."

-- **Jennifer Dixon, Payroll Supervisor, CPP, Wenatchee, WA**

"I have suffered with Plantar Fasciitis for over a year, with no relief, no matter what I tried. One week into your program and I'm able to do exercises that I have been unable to perform for some time now."

-- **Dave Elder, CFT, Infinite Fitness, Ft. Wayne, IN**

"The best thing about the program is that it starts to work quickly. I have already started to notice improvement. My heel says, 'Thank You, Rick!'"

-- **Sue, Former Fitness Instructor**

Free DVD Offer

I HAVE A FREE GIFT FOR YOU... THAT WILL START DECREASING YOUR PAIN NOW!

I want to send you some of my very best *pain-hacking techniques* FOR FREE!

It's a DVD called "The Pain Hacker" and I want you to have it for free.

On the DVD, you'll find an extensive collection of 90-second pain fixes, which are exactly what they sound like - techniques you can do in just 90 seconds that can start reducing your pain almost immediately! In the video, I go through each technique slowly and carefully to show you exactly how to do them. Here's what you can look forward to...

- "The Pain Hacker" DVD contains 90-second fixes for shoulder pain, back pain, knee pain, elbow pain, foot pain, neck pain, wrist pain, hip pain, hand pain, and more.
- The pain techniques in this DVD will work for you regardless of your current health condition, gender or age.
- **TWO SURPRISE BONUSES!** With your free DVD, I'm also going to throw in two bonus programs that will teach you simple exercises that could radically change the way you feel, day-to-day.



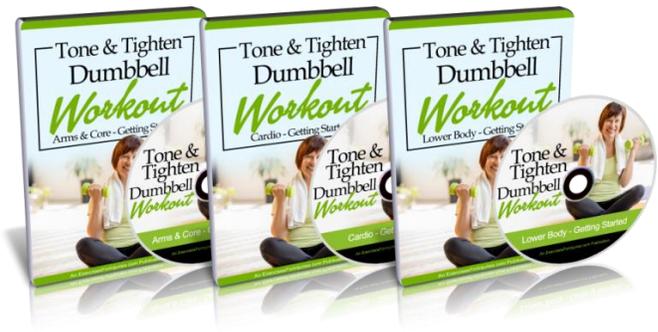
We have limited supplies right now... so get your FREE copy of "The Pain Hacker" DVD before we run out. Go here to get yours now:

www.ThePainHacker.com/Free-DVD-2

Our TOP 5 Best Selling Exercise Programs

#1: TONE & TIGHTEN DUMBBELL WORKOUT

FINALLY... an easy-to-do, low-impact, exercise routine designed for women and men between 45 and 75 that can help you lose weight, increase your energy, feel better throughout the day, be more attractive, reduce your risk of disease, and lots more...

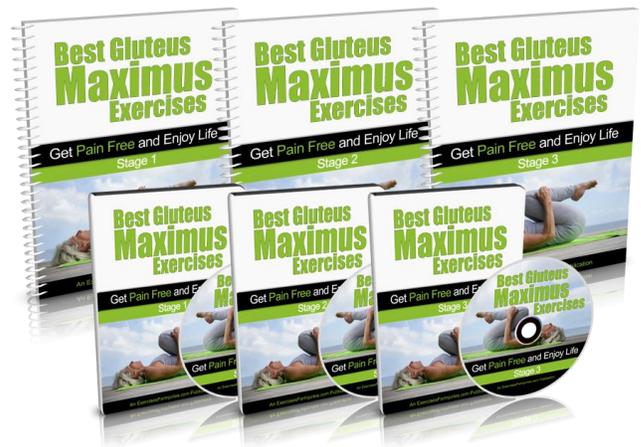


- You can do this whole program in 12 minutes or less each day
- This program is designed specifically for women and men between 45 and 75
- This workout is based on conclusions from scientific research and medical studies
- You don't need a gym membership or any expensive equipment to do this program

Learn more at: www.Invincible-Body.com/Tone-Tighten

#2: BEST GLUTEUS MAXIMUS EXERCISES

Most doctors have NO IDEA what really causes low back, hip and knee pain. Your "butt" muscle - the Gluteus Maximus, is the key. If you stretch it and strengthen it the right way, you can rapidly reduce and eliminate lower back, hip and knee pain, and finally get back to your normal, pain-free life!



- This amazing pain-relieving program only takes 15 minutes a day
- You're finally going to be addressing the real cause of your pain
- This program isn't just *made up* - it's based on scientific research and medical studies
- You don't need a gym membership or any expensive equipment to do this program

Learn more at: www.BestGluteusMaximusExercises.com

#3: BEST GLUTEUS MEDIUS EXERCISES

THE SURPRISING TRUTH ABOUT BACK AND HIP PAIN: Most people (and doctors!) don't know it, but the Gluteus Medius muscle single-handedly keeps millions of people stuck and struggling with chronic back and hip pain. This simple video exercise program shows you how to heal your Gluteus Medius muscle, so you can reduce and eliminate your back and hip pain, FAST!

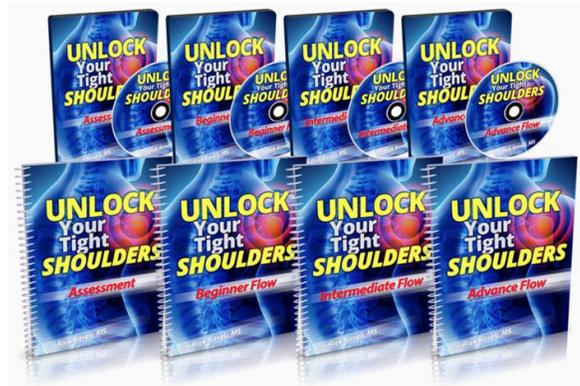


- Within just 7 days you should feel a significant decrease in your back and hip pain
- Imagine your life without low back and hip pain - many of my clients have achieved this!
- This program is based on conclusions from scientific research and medical studies
- These exercises are gentle, easy-to-learn, and easy-to-do... but highly-effective!

Learn more at: www.GluteusMediusExercises.com

#4: UNLOCK YOUR TIGHT SHOULDERS

This REVOLUTIONARY 8-Point Reshape Method HEALS shoulder pain! In less than 9 minutes a day you can release decades of trapped muscle and irritating joint pain, and PAIN-PROOF your body's most vulnerable joint - the shoulder.



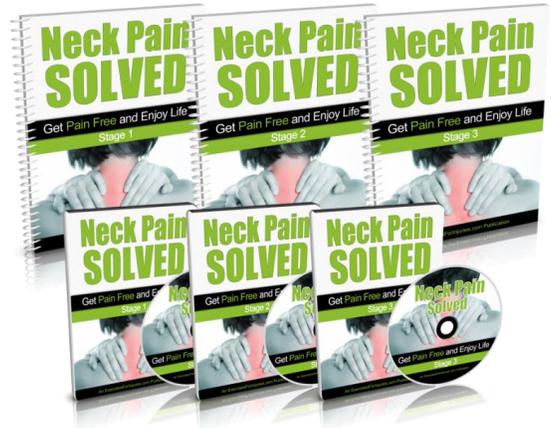
- Based on real scientific research
- Do it all yourself, in the comfort of your own home, with this simple video program
- Most "experts" give you one or two ways to loosen your shoulders, this program gives you 8 layers of shoulder relief and protection!

Learn more at: www.Invincible-Body.com/Tight-Shoulders

#5: NECK PAIN SOLVED

Do you have persistent NECK PAIN? Migraines? Headaches?
Give me JUST 9 MINUTES a day, for JUST 28 DAYS, and I
GUARANTEE your neck pain, headaches and migraines will
be gone for good...

- Reduce and eliminate your neck pain, headaches, and migraines NATURALLY... without expensive surgery, without time-consuming physical therapy appointments, without pain pills, without invasive treatments
- This program gives you 7 DIFFERENT approaches to fixing your neck pain - most others don't even give you 3!
- This program is based on scientific research, data and studies related to neck pain
- This is the most comprehensive neck pain exercise program you'll find, but ALSO the easiest to do - it only takes 9 minutes each day!



Learn more at: www.NeckPainSolved.com

GOT PAIN? We Have a Program for You

If you've got a specific pain or injury you need help with... *you're in the right place*. For more than 23 years, Rick Kaselj has been developing easy-to-learn, easy-to-do, highly-effective, research-based, low-impact exercise programs that are designed to reduce, heal and eliminate specific pains and injuries. **These are just some of Rick's programs, categorized by pain and injury:**

BACK PAIN

- Best Gluteus Medius Exercises (back and hip pain)
- Best Gluteus Maximus Exercises (low back, hip and knee pain)
- Sacroiliac Pain Solution (low back pain)
- Lumbar Fusion Exercises (recover faster from lumbar fusion surgery)
- Effective Exercises For Scoliosis (back pain)
- Low Back Pain Solved (low back pain)

KNEE PAIN

- Patellofemoral Syndrome Solution (knee pain)
- Best Gluteus Maximus Exercises (low back, hip and knee pain)
- Knee Replacement Handbook (recover faster from knee replacement surgery)
- Iliotibial Band Syndrome (knee pain)
- Meniscus Tear Solution (knee pain)
- Jumper's Knee Solution (knee pain)

FOOT, HEEL, ANKLE PAIN

- Plantar Fasciitis Relief In 7 Days (foot and heel pain)
- Ankle Sprain Solved (ankle pain)

SHOULDER PAIN

- Thoracic Outlet Syndrome Solved (shoulder, neck and arm pain)
- Frozen Shoulder Solution (shoulder pain)
- Effective Rotator Cuff Exercises (shoulder pain)
- Scapular Stabilization Exercises (shoulder pain)
- Shoulder Pain Solved (shoulder pain)

NECK PAIN

- Neck Pain Solved (neck pain)
- Thoracic Outlet Syndrome Solved (shoulder, neck and arm pain)

LEG PAIN

- Hamstring Injury Solution (hamstring pain)
- Shin Splints Solved (shin pain)
- Achilles Tendonitis Exercise Solution (calf pain)

MISCELLANEOUS

- Piriformis Syndrome Solved (buttock pain)
- Recovery Workouts (speed up recovery between workouts)
- Tennis Elbow Pain Solution (elbow pain)

**To find out more about any of these
or our other pain, injury or exercise programs, go to:**

www.ExercisesForInjuries.com/Shop