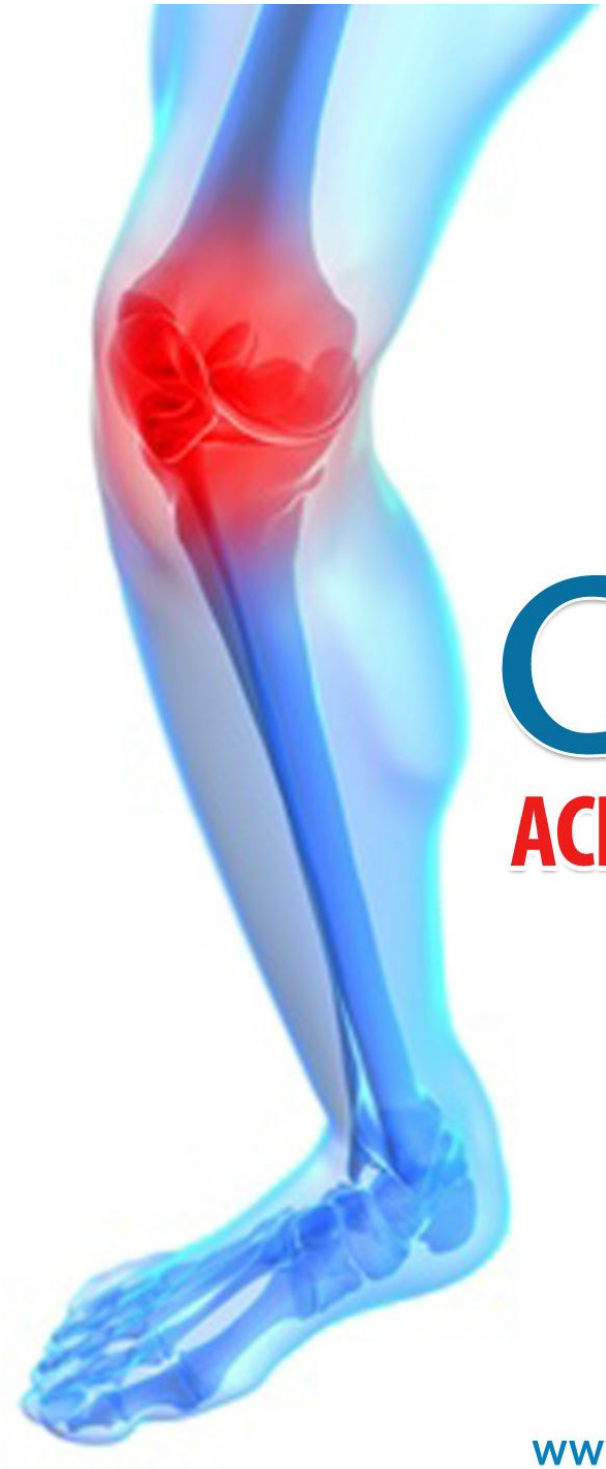

KNEE PAIN GUIDE

ACL INJURY EDITION

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www.KneeInjurySolution.com

Table of Contents

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Exercise Considerations

Please consult with a physician before beginning the exercises in this book. A physician can effectively determine which exercises are appropriate for you or your clients, and if any exercises should be avoided or modified.

Disclaimer

Knee Pain Guide: ACL Injury is primarily an educational resource and is not intended to take the place of the advice and recommendations of a physician. If you suspect your client has a health problem, please have him or her seek the services of a physician or healthcare professional.

Exercise is an ever-changing science. As new research and clinical experience broaden our knowledge, changes in exercise and exercise prescriptions are inevitable. 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. However, in view of the possibility of human error or changes in exercise science, neither the author nor any other party who has been involved in the preparation or publication of this work warrants that the information contained herein is in every respect accurate or complete, and they are not responsible for any errors or omissions or for the results obtained from the use of such information. Readers are encouraged to confirm the information contained herein with other sources.

Overview of Knee Pain

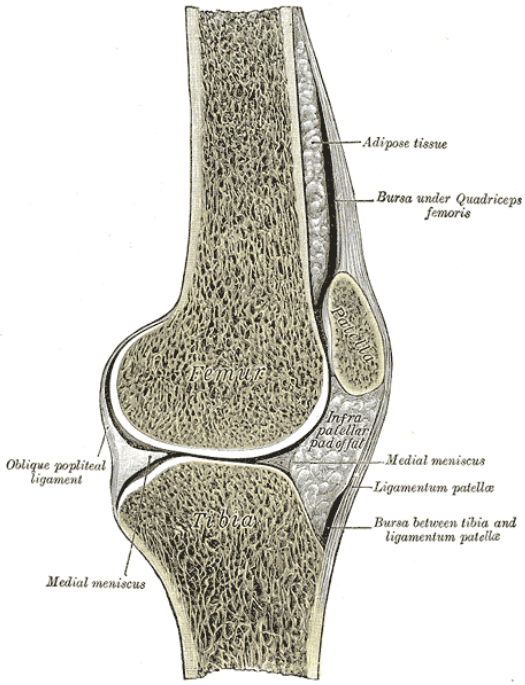
The knee is the largest joint in the human body. In the most recent report of the U.S. Department of Health and Human Services, the knee is also one of the most commonly injured joints. Each year, more than 5.5 million orthopaedic visits are made due to knee injuries. The joint's high susceptibility to injuries is mainly attributed to its intrinsic anatomical structure and its function during weight-bearing. Moreover, because of the increasing problem of obesity and a sedentary lifestyle, knee injuries are one of the leading causes of disability in modern society.

Knee injuries are complex because they typically involve more than damaged structure. The anterior cruciate ligament, the major stabilizing ligament of the knee, is frequently the cause of knee pain and injury in young, healthy adults. ACL injuries can be devastating. A significant number of patients with ACL injuries require reconstruction, prolonged rehabilitation and as a result, high health care costs. For these reasons, ACL injury prevention has been the focus of many researchers over the last few decades.

Neuromusclar training programs consisting of specialized stretching and strengthening exercises of the knee's dynamic stabilizers, agility training and plyometrics have been found to be the most effective strategies to prevent anterior cruciate ligament injuries. These exercise programs are designed to help clients regain and maintain the functions of the knee without putting much force on the ACL. Some of these exercises are introduced in the last section of this guide.

Anatomy of the Knee

The knee joint is the largest joint in the body; however, it is highly susceptible to injuries. This has been attributed to its complex anatomical structure. A significant number of knee injuries involve the anterior cruciate ligament, most especially in non-contact sporting activities. Understanding the anatomy of the knee joint, specifically the ACL, is fundamental to understanding the mechanisms of ACL injuries, development of signs and symptoms, treatment and exercise.



Bones

The knee joint is composed of 4 essential bones: the femur (thigh bone), tibia (shin bone), fibula (calf bone) and patella (kneecap). The femur is attached to the tibia by the tough ligaments and a knee capsule. The tips of these bones are covered by articular

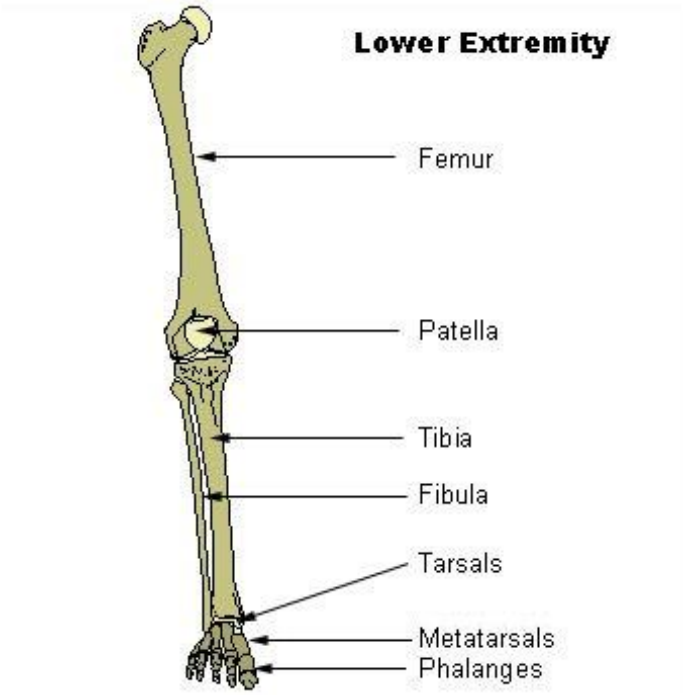
cartilages that keep them from grinding each other during movements. Most knee movements occur between the femur, patella and tibia.

Femur

The femur is the major weight bearing bone of the upper leg. This important and highly demanding function is evidenced by its size and structure. The femur is the largest and strongest bone in the human body. It provides attachment sites to muscles that move the knee. At the lower end of the femur are two condyles - the round projections at the end of the bone; these are called the medial or inner condyle and the lateral or outer condyle. The medial condyle, the larger of the two, is more involved during weight bearing activities.

Tibia and fibula

The bones of the lower leg are the tibia and the fibula. They run parallel to each other, starting from the knee to the ankle. The fibula articulates with both ends of the tibia, allowing a slight degree of movement.



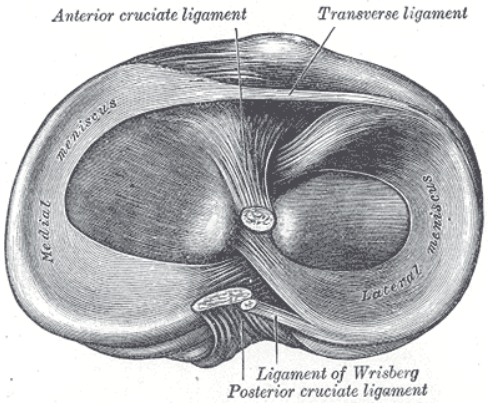
Next to the femur, the tibia is the largest bone in the body. It is the weight bearing bone of the lower leg. The upper end of the tibia joins with the femur and its lower end joins with the talus, the bone that forms the lower part of the ankle. The fibula is located on the outer side of the leg. Unlike the tibia, this bone is non-weight bearing. Instead, it functions as an ankle joint stabilizer and as an attachment site for one of the four major knee ligaments and the biceps femoris tendon. The lower end of the fibula protrudes on the lateral side of the ankle.

Patella

The patella, also known as the kneecap, protects the knee joint. It holds the quadriceps tendon on the lower end of the femur, acting as a fulcrum for the quadriceps muscles. The quadriceps is a group of four individual muscles on the anterior part of the thigh. The lower patella connects to the tibia through the patellar tendon.

Menisci

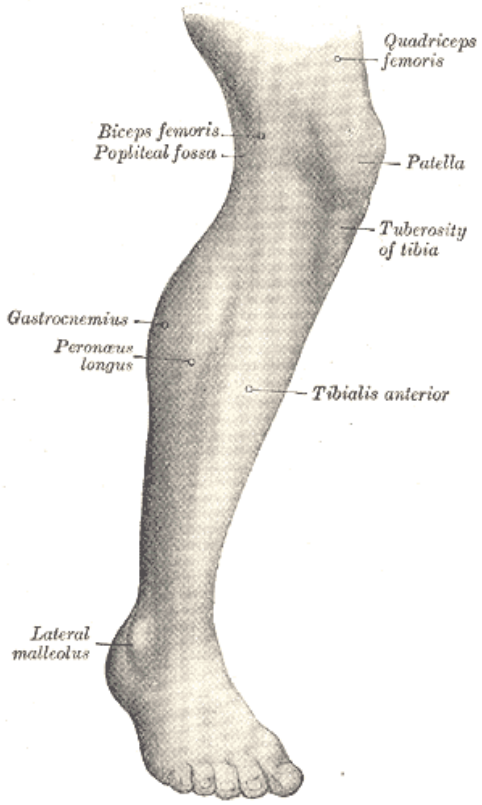
Incompletely covering the surface of the tibia that joins with the femur are the C-shaped fibrocartilages known as the medial and lateral menisci. The menisci function as shock absorbers that equally spread the weight of the body, reducing friction between the tibia and the femur during knee movements. They assist in knee rotation and play a function in stabilizing the ligaments.



Most areas of the menisci are not supplied by blood, which contains oxygen and nutrients needed for healing. When these structures are damaged, repair is nearly impossible. The menisci deteriorate with age. Menisci damage is a common cause of knee pain and injuries.

Knee Joint Capsule

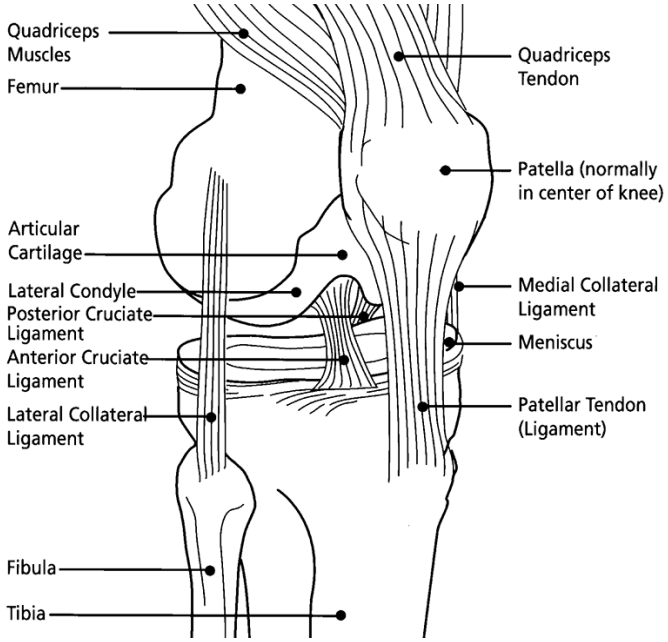
The knee capsule is a thick, water-tight sac that surrounds the knee joint. The outer part of the capsule is lined with a fibrous and thick membrane. Within the capsule is the synovial membrane, which produces the fluid that lubricates the joints. This fluid also provides nutrients to the articular cartilage.



Muscles

The movements and the stabilization of the knee joint are supported by the quadriceps and the hamstrings. The quadriceps is actually composed of four individual muscles located on the anterior upper leg. These muscles are the vastus lateralis, vastus medialis, vastus intermedius and rectus femoris. These muscles fuse, forming the quadriceps tendon. The quadriceps straightens the knee by pulling the patella up on contraction.

The hamstrings are the muscles that attach to the tibia, specifically at the back of the knee. It consists of three individual muscles: biceps femoris, semitendinosus and semimembranosus. The hamstrings functions by flexing or bending the knee joint. This muscle group also provides stability on both sides of the knee.

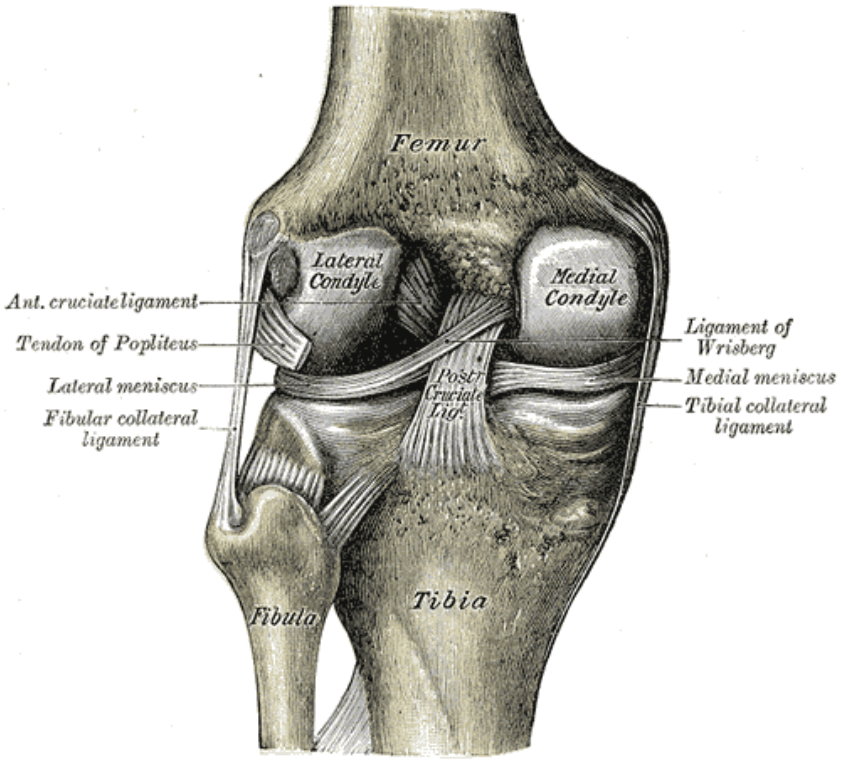


Ligaments

The stability of the knee largely depends on the four major knee ligaments: the medial collateral ligament, lateral collateral ligament, anterior cruciate ligament and posterior cruciate ligament. Ligaments are the tough but slightly elastic bands of connective tissues that hold two or more bones together. Excessive movements, such as hyperextension or hyperflexion, at the knee joint are restrained by these ligaments, stabilizing the knee joint and keeping the bones in their correct alignment during movements.

Medial and lateral collateral ligament

The medial collateral ligament, or MCL, resists excessive forces coming from the knee's outer surface, or valgus forces. The lateral collateral ligament, or LCL, resists the forces coming from the inner surface of the knee, or varus forces. These ligaments are located on the outside of the knee joint and are able to heal on their own.



Anterior cruciate ligament and posterior cruciate ligament

The cruciate ligaments are located within the center of the knee, where they are constantly bathed by the synovial fluid. These ligaments form a cross right in the center of the knee joint. The anterior cruciate ligament and the posterior cruciate ligament, are closely interconnected and are commonly termed the central pivot (Johnson, 2004). If one of these ligaments is injured, the damage can completely disrupt the function of the entire knee joint. Without timely and appropriate treatment, a cruciate ligament injury may result in degenerative arthritis.

The anterior cruciate ligament is considered one of the most important structures of the knee. Functioning as the knee's major stabilizer, the ACL runs from the thigh bone to the shin bone through the center of the knee, and provides stability and reduces stress across the knee. It prevents hyperextension of the knee by restraining the excessive forward movement of the tibia in relation to the femur. Working with PCL, the ACL limits the rotational movements of the knee. If one of these ligaments is damaged, instability

of the knee occurs whenever the foot of the affected leg is planted on the ground or during pivoting. A major injury involving the ACL usually requires extensive surgery and prolonged therapy.

The three bands of ACL supporting the knee through full range of motion are mostly composed of type-1 collagen fibers. Collagen is a naturally occurring protein that is produced by the fibroblasts. These fibers provide the tensile strength and elasticity of the ACL.

In contrast to ACL, the posterior cruciate ligament is not frequently injured. The PCL is almost two times stronger than the ACL and is more resistant to damages of excessive forces. Not much is known about this ligament; however, it is believed that the PCL functions as a central axis during knee rotation.

Anterior Cruciate Ligament Injuries: Mechanism of Injury and Causes

The ACL measures between 31 to 35 mm in length and is believed to withstand about 2160 N or almost 500 pounds of pressure before failure or tearing (Weinstein & Buckwalter, 2005). The ACL can also withstand up to 25% of lengthening without failure in younger and healthy adults (Golofski, 2004). Normal activities apply about 454 N or 100 lbs of force on the ACL.

Hyperextension of the knee and the medial rotation of the tibia apply the greatest amount of force on the ACL. These same positions also place the ACL at highest risk for tearing or rupture. Hyperextension of the knee is the excessive straightening of the knee that forces the tibia excessively forward in relation to the femur. Medial rotation of the tibia is the excessive inward turning of the tibia.

Non-contact Injuries vs. Contact Injuries

When the ACL sustains forces beyond its capacity, tearing or rupture of the ACL occurs. The injury is commonly incurred from one episode, although repetitive strain to the ACL

may also cause the injury. The ACL is injured mainly through two mechanisms of injury: non-contact and contact.

Non-contact injuries

The most common mechanisms of ACL non-contact injuries include:

1. Planting and cutting – abrupt or sudden alteration in direction or speed with the foot fixed on the ground
2. Straight-knee landing – the foot strikes the ground with the knee straight
3. One-step-stop landing with the knee in hyperextension – the leg abruptly stops as the individual with the knee in excessively straightened position
4. Pivot-shift – rapid slowing down followed by a quick turn in one direction with the feet securely fixed on the ground; the most common mechanism of injury

In these situations, the ACL injury results from the application of indirect forces to the knee. And so, these injuries are classified as non-contact injuries. Non-contact mechanisms occur in 70 to 80% of ACL tears (Allen & Horn, 2010). The pivot-shift mechanism is the most common non-contact injury. The incidence of non-contact ACL injuries in female athletes is between 4- and 6-fold higher than in male athletes.

Contact injuries

The ACL is also injured through direct force or blow to the front of the knee and through collisions that force the knee to hyperextend. Contact or traumatic mechanisms usually cause injuries of the surrounding structures. In addition to ACL, the medial collateral ligament and the medial meniscus are also damaged. Next to pivot-shift mechanism, contact injuries are the most common mechanism of ACL injuries.

Signs and Symptoms

About 50% of individuals who sustained tearing of the ACL commonly report feeling a "popping" sensation or hearing a snapping sound at the time of the injury. In most cases of ACL tears, large bruising of the injured knee is observed within a few hours after the injury. If the ACL tear is minor, the pain may not be severe enough to discontinue the activity. Knee pain and stiffness are felt after the activity with rest.

In more severe cases, excruciating pain in the involved knee is usually felt almost immediately after the injury. The pain is severe enough to stop the activity and inhibit weight bearing of the affected leg. In some cases, the pain may subside, only to recur a

few hours later. A feeling that the knee is buckling or giving out is a common complaint. Within the first few hours of the injury, swelling and bruising may be extensive.

Risk Factors and Incidence

It is estimated that the overall ACL injury rate in the United States is about 200,000 annually. This figure suggests that 1 in 300,000 individuals in the U.S. will sustain an ACL injury for the first time each year. ACL injuries commonly occur between the ages of 14 and 29 years, occurring in non-athletes and athletes. Those engaged in football, soccer, basketball, soccer and skiing activities are the most susceptible to ACL injury in the athlete group.

Female athletes are more susceptible to ACL injuries than male athletes performing similar sporting activities and training. It is estimated that female athletes are 2 to 8 times more likely to sustain ACL injuries when compared with their male counterparts (Souryal & Adams, 2009).

Many factors have been attributed to the increased susceptibility of women to ACL injuries. Females have a narrower femoral notch, or the space at the bottom of the thigh bone where the ACL runs. This tight fit may cause increased friction between the ACL

and femur during knee movements. Another possible cause is the greater Q angle, or the angle between the quadriceps and the patella tendon, in women. A larger angle is partly caused by a woman's wider pelvis. This increases the risk for greater stress and ACL injuries. Other factors include increased joint laxity, inadequate strength and impaired neuromuscular coordination.

Diagnosis

A complete physical assessment and a review of the mechanism of injury are conducted in the diagnosis of an ACL injury. Imaging tests may be ordered to verify the diagnosis and determine the extent of the damage. Some techniques, such as the Lachman test, pivot shift test and the anterior drawer test, may be performed to determine the occurrence of any knee problem.

Treatment and Management

Minor ACL injuries are highly responsive to conservative treatment methods, most especially if they are appropriately utilized and given in a timely manner. With compliance, full mobility should be achieved within 2 to 8 weeks. For complete ACL tears, a surgical reconstruction is recommended, followed by a rehabilitation that may last between 6 to 12 months.

If you have sustained an ACL injury, it is best to immediately discontinue your activity. Although weight bearing is possible and knee function is not significantly diminished, it is best to completely rest the involved knee until the pain and swelling subside. Immobility during acute pain promotes the healing process, improving recovery time. During recovery, be sure to avoid exercises that hyperextend and rotate the knee.

Apply cold or ice packs to the knee for 15 to 20 minutes every 1 to 2 hours for the first 24 to 48 hours to reduce the pain and swelling. Only apply heating pads or hot towels to the injured knee 48 to 72 hours after the injury. Heat relaxes the muscles and relieves stiffness. Alternating ice and heat applications 48 hours after the injury may also relieve the pain.

Elevate the knee above the heart and wrap the knee with an ACE or elastic bandage to reduce and limit the swelling. Non-steroidal anti-inflammatory medications, such as ibuprofen and aspirin, may be taken to reduce pain and inflammation. For severe or uncontrolled pain, cortisone injections may be administered for immediate relief of pain.

Exercise

An injury involving the anterior cruciate ligament is a serious matter. The ACL is not adequately supplied by blood, which contains oxygen and the nutrients needed for tissue repair and healing. For this, an injury involving the ACL may take some time to heal, if at all. This can severely limit your physical activities, mobility and independence over time. For severe tears, it may take 6 to 12 months or longer to restore knee function. Re-injuries are also frequent once your ACL is torn, consequently resulting in degeneration of the knee joint over time.

In complete ACL tears, a surgical procedure is most likely recommended to avoid further injury and re-injuries and to restore stability. Although the results of an ACL reconstruction are promising, the cost is financially damaging. In the United States, a reconstruction costs between $20,000 and $50,000. An additional $3,000 is required for rehabilitation and follow up visits.

A neuromuscular training program is the best and inexpensive way to prevent the occurrence and recurrence of ACL injuries. This training program consists of specialized balancing, stretching and strengthening exercises of the knee's dynamic stabilizers, agility drills and plyometrics. These activities aim to improve knee stability on jumping,

landing and pivoting. This program retrains you to use and move your body correctly, specifically the muscles and tendons surrounding the knee.

Neuromusclar training exercises are usually completed within 15 minutes. It is recommended that these exercises be included in your regular exercise regimen 2 to 3 times a week.

Warm Up Exercises

It is recommended that any exercise regimen begin with warm up exercises for 5 to 10 minutes. These exercises are vital to reduce your risk of injuries.

Jog line to line and backward running

Set up two cones 10 to 20 feet apart. Ensure that your head is kept in alignment with your trunk. Maintain your trunk upright with a slight forward lean throughout the exercise. Forward bending from the hips should be avoided. Your hips, knees and

ankles should be in straight alignment. The knees should not cave in. Jog from cone to cone. As you reach the end cone, jog backwards until you reach the first cone. Be careful to land on your toes without snapping your knee back.

Stretching Exercises

These exercises improve and maintain the knee's range of motion and reduce joint stiffness.

Calf stretch

Stand tall facing a wall, about 3 feet way. Position your left leg one step forward. Place both hands on the wall with slightly bent elbows. Your shoulders, hips and feet should be facing the wall. Slowly bend your left leg, and keep both of your heels in contact with the ground throughout the movement. Keep your back or right leg straight. Hold for 30 seconds. Switch sides and repeat the exercise. Complete 2 repetitions on each side.

Quadriceps stretch

Stand tall in front of a counter or chair, keeping your feet shoulder-width apart. Hold the counter or chair with your left hand. Lift your right leg off the ground. Using your right hand, grasp your ankle and lift it toward your buttocks. Your right knee should be pointing the floor. Keep your back straight throughout the exercise. Do not allow the right knee to drift forward ahead of the left leg. Hold for 30 seconds and switch sides. Complete 2 repetitions on each side.

Figure four hamstring stretch

Sit tall on the floor. Position your right leg straight in front of you. Bend the other knee, allowing the sole of your left foot to rest on your right inner thigh. Maintaining a straight back, slowly move your chest towards the right knee. Over time, try reaching down

towards your toes and pull them towards your head. Avoid rounding your shoulders. Hold the stretch for 30 seconds. Switch sides and repeat the exercise. Complete 2 repetitions on each side.

Strengthening Exercises

Strengthening exercises aim to strengthen the muscles surrounding your knee to stabilize the joint.

Lunge step

Stand tall with your feet together. Bring your right leg forward and bend your knee to 90-degrees as your foot comes in contact with the ground. Lunge the other leg forward by pushing off with your right leg. Position the left leg together with the step leg. Alternate your legs with each step. Complete 10 to 15 repetitions in 2 to 3 sets.

Single toe raises

Stand tall with your arms at your sides. Bend your left knee as you stand on your right leg. Your hip, knee and foot should be aligned with one another. Slowly rise up on your right toes and then down. Repeat 30 times on each leg. Switch sides. Complete 2 repetitions on each side.

Plyometrics

These exercises increase the strength, power and speed of your leg muscles. The main objective in these exercises is to land gently on the ball of foot and then roll backwards towards the heel. The landing should maintain the alignment of the hip, knee and ankles with your body in an upright position.

Broad jump

Stand tall with your feet shoulder-width apart. It is recommended that you perform the exercise in front of the mirror to check your landings. Take a small jump forward and land on the ball of your feet with your knees slightly bent. Make sure that you land with your weight equally distributed on each leg. Aim to achieve soft and quiet landings as the alignment between the hips, knees and feet is maintained. Complete 20 repetitions.

Agility Training

Agility training improves coordination of movements, increases leg muscle strength and stabilizes the knee joint.

Bounding run

Place 2 cones about 45 yards apart. Run from the first cone to the other end cone. Lift your knees up toward the chest when running. Land on the ball of the foot with the knee slightly bent. Keep the hip straight in alignment with the knee and the ankle.

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About Rick Kaselj

Rick Kaselj, M.S. (Exercise Science), B.Sc. (Kinesiology), PK, CPT, CEP, CES

Rick Kaselj specializes in active rehabilitation and fitness. He works in one-on-one and group rehabilitation settings, educating and training people who have been injured at work, in car accidents, and during sport activities.

Rick has combined his rehabilitation experience and passion for research to develop a variety of courses and presentations for fitness professionals, Kinesiologists, and healthcare providers. Rick has given over 260 presentations to more than 5000 fitness professionals across Canada and USA. These courses include:

- Core stability of the shoulder
- Exercise rehabilitation for the shoulder, lower back, hip, or knee
- Foam roller essentials
- Intro and advanced core stability
- Intro and advanced stability ball exercises
- Postural assessment and exercise prescription
- Injury-free running
- Save your shoulders
- Training for better golf

Rick strives to balance his work life with his personal fitness endeavours and travel. He has trained for and competed in the Manitoba Marathon, the 225 km Ironman Canada Triathlon, and the 160 km Sea2Summit Adventure Race in Whistler, BC.

He recently hiked 4,300 km along the *Pacific Crest Trail* from Mexico to Canada and

mountain biked the 5,000 km *Great Divide Mountain Bike Route* over the Rocky Mountains from Mexico to Canada. An avid traveler, Rick has toured three continents and visited 17 countries.

In 1997 he graduated with his Bachelor of Science degree in Kinesiology from Simon Fraser University. Rick recently completed his Masters of Science degree focusing on corrective exercise and therapeutic exercise for the rotator cuff. Rick currently works as a lecturer, Kinesiologist, personal trainer, and exercise rehabilitation specialist in and around Vancouver, British Columbia, Canada.

To learn more about Rick Kaselj, please visit www.**Exercises***For***Injuries**.com

About Healing Through Movement

Healing Through Movement
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Healing Through Movement has been helping people reach their health, fitness, rehabilitation and sport goals since 1999.

How Healing Through Movement can help you:

Active Rehabilitation – This individualized program is designed to help you overcome injury by using flexibility, endurance, strength and cardiovascular exercises.

Adaptive Fitness – A personalized exercise program designed for youth and adults with special needs. The types of special needs may include cerebral palsy, multiple sclerosis, brain injury and/or developmental disability.

Adventure Travel Presentations – A full sensory experience including music, images, and storytelling on the experience and adventure of hiking the 4,300 km Pacific Crest Trail, cycling Cuba, and cycling the Rockies from Mexico to Canada.

Corrective Exercise – An exercise program designed to address your muscle imbalances and areas of tightness and pain.

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Exercise Rehabilitation – An exercise program designed to help you recover from your injury or medical condition in a safe and effective manner.

Exercise Rehabilitation Courses – Education and training for registered Kinesiologists, exercise therapists, and personal trainers on the use of exercise as a safe and effective tool to recover from back, shoulder, knee, hip, ankle, elbow and wrist injuries.

Expedition Training – Forming a complete plan including gear selection, route preparation, nutrition guidelines and a training program to help accomplish your hiking, biking or kayaking dream.

Personal Training – An exercise program to help you reach your weight loss, strength gain, and body shape improvement goals.

Post Rehabilitation – After you have completed physical therapy, chiropractic or massage therapy treatment, this is an exercise program designed to help you recover from your injury and return your body back to where it was before your injury.

Pool Therapy – Use the pool environment to decrease stress on joints and to help your body recover from injury by improving range of motion, strength, endurance and balance.

Where can Healing Through Movement meet me:

In Person – Healing Through Movement can meet you at your home, local community centre or fitness centre to help you achieve your health, fitness, training, sport, travel or rehabilitation goals.

Phone/Online Training – More clients are meeting with Healing Through Movement over the phone or through email to reach their health, fitness, training, sport, travel or rehabilitation goals.

Founder of Healing Through Movement - Rick Kaselj

Rick Kaselj is a Registered Kinesiologist and Personal Trainer with a passion for exercise rehabilitation. Rick designs effective exercise programs that safely and rapidly help his clients recover from an injury, medical condition, and/or musculoskeletal pain, and reach their health, rehabilitation, and sport goals. Rick presents courses on exercise rehabilitation and adventure travel across Canada and USA. To reach Rick, call (888) 291-2430 or visit www.HealingThroughMovement.com .

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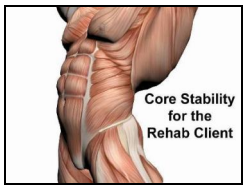

Core Stability for the Rehab Client DVDs

Core stability muscles assist in stabilizing the lower back and pelvis; when ignored they weaken, and the risk of lower back and pelvis related injuries increase. This course will cover anatomy of the core and introduce functional core exercises which focus on strengthening core muscles and stabilizing the lower back and pelvis. - $89.00 for 3 DVD set

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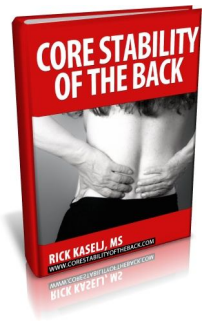
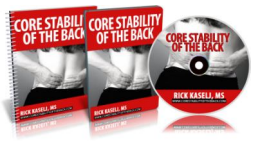


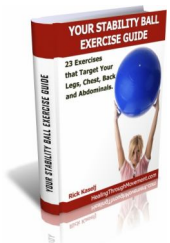
Core Stability of the Back

The Core Stability of the Back program is for the back pain sufferer who wants to get their back onto the road of being pain-free. Core stability muscles play an important role in all activities of daily living. They enable us to perform the simplest of activities and help us maintain good posture. When ignored, core stability muscles become weak and the risk of lower back pain and instability increases. In the Core Stability of the Back program you will get an easy to follow program that you can do anywhere and will help you on your way to a pain-free back. In the Core Stability of the Back book you will learn about the key muscles of the core, how to locate these muscles in the body, how to activate them and an effective program to create a strong and stable back.
- $19.95 for physical book

Core Stability of the Back - *Home Program* -

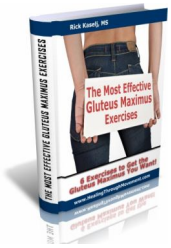


The complete Core Stability of the Back program is for the back pain sufferer who wants to get their back onto the road to being pain-free. Core stability muscles play an important role in all activities of daily living. They enable us to perform the simplest of activities and help us maintain good posture. When ignored, core stability muscles become weak and the risk of lower back pain and instability increases. In this home program you will get the Core Stability of the Back book plus a home DVD, audio workout and audio book. The Core Stability of the Back program provides you with an easy to follow program that you can do. In the Core Stability of the Back book you will learn about the key muscles of the core, how to locate these muscles in the body, how to activate them and an effective program to create a strong and stable back.
- $54.95 for physical book, DVD and CD



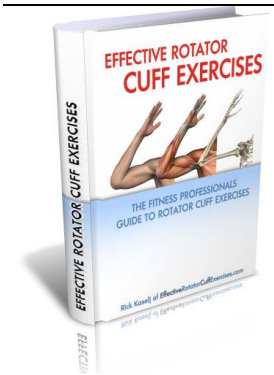
Your Stability Ball Exercise Guide

You bought a stability ball, now what? This guide will take you through 23 exercises that target your legs, chest, back and abdominals. The guide includes two stability ball workouts you can follow based on your fitness level and a stretch routine you can do with the stability ball.
- $9.95 for eBook or $19.95 for physical book



Most Effective Gluteus Maximus Exercises

A common area that people want to exercise is their gluteus. There are a number of common exercises people do but recent research has determined which gluteus exercises are the most effective. This guide will help you learn about the most common gluteus exercises and which ones are the most effective in working your gluteus maximus, hamstrings and gluteus medius.
- $9.95 for eBook or $19.95 for physical book

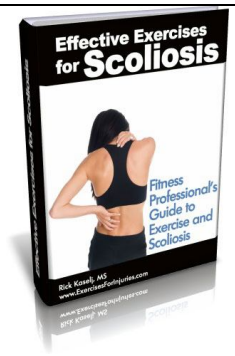


Effective Rotator Cuff Exercises
- Fitness Professional's Guide to Rotator Cuff Exercises -

Rotator cuff injuries are the most common shoulder injuries fitness professionals will face. Exercise is recommended by physicians for people with rotator cuff injuries and therefore it is vital for the fitness professional to be educated and prepared to work with these clients. Exercise can help safely alleviate pain, decrease stiffness, increase range of motion, and improve rotator cuff strength. Gain a comprehensive understanding of rotator cuff injuries, how to design an appropriate exercise program for your clients with a rotator cuff injury and discover the most effective exercises for the rotator cuff. If you are ready to increase your confidence working with clients with rotator cuff injuries, would like to understand how to safely train clients with rotator cuff injuries and empower yourself with the best exercises to help your clients with rotator cuff injuries, then Effective Exercises Rotator Cuff Exercises is a must for you.

For more details visit - http://effectiverotatorcuffexercises.com/

$77 for digital manual / $97 for physical manual



The Most Effective Exercises For Scoliosis
- Fitness Professional's Guide to Exercise and Scoliosis -

Exercise is recommended by physicians for people with scoliosis. With more people with scoliosis leaning towards exercise to help improve their condition, it is vital for the fitness professional to be educated and prepared to work with these clients. Exercise can help safely alleviate pain, stiffness, de-conditioning, and muscular weakness associated with scoliosis. Gain a comprehensive understanding of scoliosis, how to design an appropriate exercise program for your clients with scoliosis and discover the most effective exercises for scoliosis. If you are ready to increase your confidence working with clients with scoliosis, would like to understand how to safely train clients with scoliosis and empower yourself with the exercises to help your clients with scoliosis, then Effective Exercises for Scoliosis is a must for you.

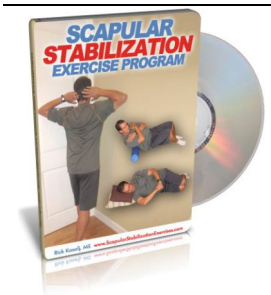
For more details visit - http://effectiveexercisesforscoliosis.com/

$77 for digital manual / $97 for physical manual

Interested in receiving over $299 worth of fitness education information?

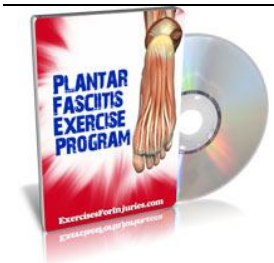
Visit www.ExercisesForInjuries.com

Ready-to-Download Presentations from Rick Kaselj



Scapular Stabilization Exercise Program

Shoulder injuries lead to pain, prevent people from doing the things they love and make life's simple tasks challenging. Many will learn strength exercises to help them recover from their shoulder injury, but too often these exercises will lead to slower recovery from a shoulder injury. What needs to be done before strengthening the shoulder is activating, building endurance and strengthening the scapular stabilization muscles. Adding this one step will speed up the recovery from a shoulder injury and prevent re-injury of the shoulder.
For more details visit - http://**Scapular**Stabilization**Exercises**.com/



Exercise and Plantar Fasciitis

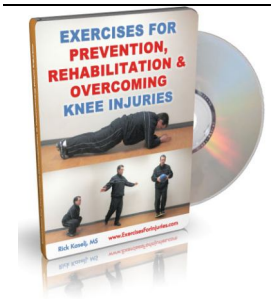
The role of exercise to treat plantar fasciitis is vital in helping shorten recovery time, decrease pain, and decrease the risk of reoccurrence. Creating an action plan on what to do if symptoms return is also important for the plantar fasciitis sufferer. The focus of the plantar fasciitis and exercise webinar will be exercise program design for clients who have plantar fasciitis.
For more details visit - http://exercisesforinjuries.com/plantar-fasciitis-exercises/

The Most Effective Rotator Cuff Exercise Program

After the back, the second most common injury a fitness professional will encounter is the shoulder. Most times shoulder injuries directly and indirectly involve the rotator cuff. When fitness professionals hear that their client has a rotator cuff issue, they end up focusing on strengthening. Strengthening is important for your rotator cuff clients but it is only one part of an effective rotator cuff conditioning program. The fitness professional must address all five areas of a rotator cuff conditioning program in order to fully rehabilitate the rotator cuff. If not, they will only band-aid the injury and not fully help their client overcome it. In this webinar, fitness professional will learn how to avoid common rotator cuff exercise mistakes, the 5 components of a rotator cuff conditioning program and exercises to help their client's rotator cuff injury.
For more details visit - http://exercisesforinjuries.com/rotator-cuff-conditioning-exercises/

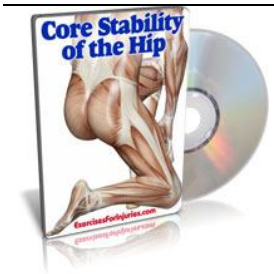
Corrective Exercises for Running Injury-Free

Running is one of the most popular recreational activities among adults but most will have to stop due to an injury. Along with a solid running program that prevents over-training, there are a number of key exercises that must be included in a recreational runner's program in order to be injury-free. In the corrective exercises for running injury-free webinar, the fitness professional will learn a comprehensive list of assessment techniques and exercises to keep their clients running injury-free.
For more details visit - http://exercisesforinjuries.com/running-corrective-exercises/



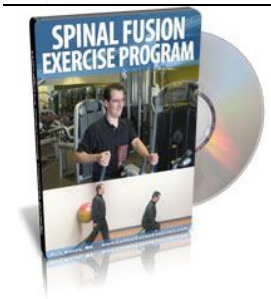
Exercises for Prevention, Rehabilitation & Overcoming Knee Injuries

The knee is the focus of an exercise program when it is injured but often ignored any other time. More and more research has shown that the goal of the client should determine the knee exercise program compared to the presence or absence of injury. If your client's exercise goal is prevention of knee injuries, their exercise program should differ from that of a client recovering from a knee injury. If the client has had a knee injury and would like prevent a future knee injury, here is an exercise program that focuses on overcoming knee injuries. It is important that the fitness professional know which exercises and exercise programs are best for their client depending on the goal of the client. In this exercise and knee injury webinar, fitness professionals will learn three different knee exercise programs to help their clients who want to prevent a knee injury from occurring, to rehabilitate a knee injury and overcome knee injuries by preventing them in future.
For more details visit - http://exercisesforinjuries.com/acl-injury-exercises/



Core Stability of the Hip

In this video presentation, fitness professionals will learn a progressive exercise program that they can use with their personal trainer and group fitness clients to improve core stability in the hip, and prevent and recover from back, hip and knee injuries.
For more details visit - http://exercisesforinjuries.com/hip-injury-exercises/



Lower Back Spinal Fusion & Exercise

In many situations, a lower back condition can lead to lower back spinal fusion surgery. It is estimated that 126,000 spinal fusion surgeries occur each year in the US and since 1996 the number of surgeries has increased 116%. The group that has had the greatest increase in lower back spinal fusion are adults over 60. Lumbar compression fractures, spinal deformities, spondylolisthesis, lumbar instability, disc herniation and degenerative disc disease are common conditions that can lead to lower back spinal fusion. A key component in the recovery from lower back spinal fusion surgery is exercise. The role of exercise after spinal fusion is important in speeding up recovery, strengthening the muscles supporting the vertebrae and improving the endurance of core stability muscles. The focus of the spinal fusion and exercise webinar will be exercise program design and exercises for a client who has had a lower back spinal fusion.

For more details visit - http://exercisesforinjuries.com/lumbar_fusion_exercises/

Upcoming Webinars

- Exercises for Shoulder Impingement
- Exercises for Shoulder Dislocation

Interested in receiving a Shoulder Injury Guide?

Visit www.ExercisesForInjuries.com