My Mobility Training Journey

By Garth Crosbie

2nd Dan

Nelson Taekwon-Do

Introduction

Hi, my name is Garth Crosbie and I am the Instructor for the Nelson Taekwon-Do Club. I started my journey in Taekwon-Do at the age of 30, and after 13 years of training I am looking at grading for my 3rd Dan.

During my preparation to get ready for grading I noticed I was getting a lot of pain in my left leg, the pain would seem to move around, with it affecting my calf muscle, hamstring, outside of my knee, and iliotibial band tract (IT band).

I was doing a mixture of weights/ cardio training at the gym and Taekwon-Do throughout the week.

With the pain moving around and not always being there it was hard to find out what activity was causing the issue, after a few months of training and the issue seeming to get worst, I decided to go to a sports physiotherapist.

After 2 sessions at the physio and a mixture of assessments, the physio found I had Iliotibial band syndrome (ITBS) I also had a strength difference between my left and right leg, with my left hamstring and calf muscle being very weak compared to the other side.

With the physio recommending a strength and stretching programme the pain started to subside. During the process I did some of my own research and came across something called Mobility training.

I started adding mobility training into my workouts and Taekwon-Do classes, and discovered not only was my left leg getting better and pain free, but my lower back pain had subsided as well.

I then decided to put my findings in to my 3rd Dan essay and share this information with you.

Thank you for reading my essay and hopefully some small part of this might help you on your journey in grading to another belt or achieving another goal in life.

Taekwon

Garth Crosbie

Flexibility training vs Mobility training

Yes

There is a difference.

"It is common for people to use flexibility and mobility synonymously, However, the two terms mean very different things".

Move RX Performance and Wellness

What is the difference?

Mobility has to do with joints and flexibility has to do with muscles.

Mobility is the ability of a joint to move freely through a full range of motion without pain or discomfort.

Flexibility speaks directly to the ability of a muscle lengthen fully.

Mobility is dynamic or active, whereas flexibility is passive.

Mobility is the ability to move a limb through a range of motions whereas flexibility is the ability of a muscle or muscle groups to lengthen passively through a range of motion.

What are the Similarities?

<u>You can lose both.</u>

If not practiced, you can lose both your mobility and flexibility, potentially putting your body at a higher risk of pain, injury, and limited function.

Old age is a common reason to lose either, but it can also be due to injury or lack of exercise.

Having a regular fitness routine which involves cardio and weights training can benefit overall health, but it is also important for any kind of movement.

<u>They affect range of movement (ROM).</u>

Inflexibility and immobile muscles alike inhibit your body's overall kinematic potential.

Without a healthy combination of both mobility and flexibility you may not be able to squat correctly, catch or throw a ball, or even maintain a proper running technique.

<u>Flexibility can affect mobility.</u>

They may not be the same, but mobility and flexibility can go hand-in-hand. Flexibility is a compound of mobility, but extreme flexibility usually isn't necessary to perform most exercises. That means that mobility can be limited by flexibility, but that super flexibility is not necessary for most strength athletes.

Mobility Training

What is Mobility Training?

Mobility is your ability to actively control and access your full range of motion within a joint.

While all joints need to be mobile, certain joints within your body – including hips, thoracic spine, ankles, wrists and glenohumeral joints (which connect your arm and shoulder), require more mobility than others.

These joints need to be able to move more freely to help you complete everyday movement patterns.

Lack Of Mobility:

This can usually be pinned to two potential causes:

- ✓ Mechanical Tightness:
  Muscles are in a shortened position, so you may not be able to work through a full range of motion around the joint.
  This can be caused through: Surgery, injury, personal anatomy, sedentary lifestyle.

- ✓ Neurological Tightness:
  Typically occurs after an injury, you're usually injured at the end of your range of motion, so your brain is telling the body "Hey I don't want to get injured again" and isn't comfortable using the full range of motion.

Benefit of Mobility Training:

- ✓ Joint Health:
  Joints don't have a blood supply going to them, the way they get nourishment is through movement. Movement flushes your joint getting rid of inflammation and then the new fluid that comes to the joint (synovial fluid) brings nutrients to nourish it. Moving your joints through their full range of motion can ensure you're receiving all these key benefits.

- ✓ Curbs your Risk of Injury and Pain:

  Lacking mobility in any joint could put you at a greater risk of injury – particularly if you're trying to lift heavy weights or try a higher intensity activity.

  If you don't have actual control over the range of motion, you're going to be at a greater risk of injury.

  Poor mobility in specific joints can trigger pain in other areas of the body, for example:

  - Hip tightness can cause compensated movement patterns that can lead to lower back pain.
  - Inadequate ankle mobility can bring pain in your knee and hip.

- ✓ Improves Everyday Functioning:
  Without regularly moving your joints through their full range of motion, you may have a difficult time carrying out simple everyday tasks.
  Poor shoulder mobility could make grabbing something of the top shelf difficult.
  Poor hip mobility could make bending down and tying your shoes a struggle.
  Mobility is important in a sense that you need to be able to control your joints in order to do functional tasks.

Examples of Mobility Exercises:

There are so many things you can do to develop better mobility. Ideas for increasing range of motion are nearly endless. Below are some basic categories and examples for mobility work:

- ✓ Dynamic Stretching:
  In terms of mobility training, dynamic stretching is used to move the body and open up joints:
  - ➢ Hip Swings: Swinging the leg forward and back, side to side, will stretch the hip and improve the joints range of motion.
  - ➢ Lunge Variations: A lunge is a strength training move but can also be used for hip mobility. Do side lunges for lateral movement, lunge, and twist to the side for a trunk stretch, or while stretching place one arm over the head. Lunges also help with ankle mobility.
  - ➢ Shoulder Circles and swings: Improve motion in the shoulders with small and large circles in both directions, you can also swing up/down, side to side to increase the stretch/ range of motion to the joint.
  - ➢ Cat-cow: Great dynamic stretch for the spine. On your hands and knees move between arching and rounding the back upward
- ✓ Strength and Mobility:
  When time is limited combining mobility and strength training can be a great time saver. All it takes is doing a variety of strength movements in all planes of motion and utilizing various joints:
  - ➢ Burpees are great for strength and mobility, add side burpees to change the plane of motion.
  - ➢ Squat and lunge variations make combing strength and mobility efficient.
    Lunges can be done standard, reverse, side to hit all planes of motion.
    Squats can be done standard and sumo plus adding in calf raises as well can improve hip, knee, and ankle motion.
    The important factor here is to change it up. The more we move in multiple directions while strength training the better.
- ✓ Myofascial Release:
  Foam rolling is an easy way to release tightness in the connection tissue beneath the skin. When the fascia is tight, it restricts mobility and hinders recovery. Use a foam roller on all the major muscle groups before a workout to loosen up the fascia and ensure you can move more fully.

Other Ways to Improve Mobility:

- ✓ Yoga or Pilates:
  Both workouts are great for mobility, they use precise movements and include poses that you probably don't engage in regularly. These workouts get you out of your movement comfort zone to increase flexibility and range of motion while also building strength.
- ✓ Cross Train:
  Changing up your exercises mobilizes your body in different ways. Doing the same movements over and over can cause mobility and strength imbalances plus tight muscles. If you love running, take a spin class. If you love to lift weights, do cardio or yoga. Even daily activities can improve your mobility and act like a type of cross training.
- ✓ Pay Attention to Your Planes of Motion:
  When you stick mostly with one workout type, you tend to move in just one plane of motion. An example is running, you move forward only never side to side, or at an angle.
  Think about how you can move in different directions during cross training. Do squats to move up and down, lunges for lateral mobility.

"Don't neglect this important area of fitness, it's easy to overlook, especially with a busy schedule, but if you make a point to include a mobility workout, your body will thank you."

Mobility Training – Why You Need It and How to Do It.

Issaonline.com

Flexibility Training

What is Flexibility Training?

Flexibility is defined as the "*ability of a muscle/ muscle groups to lengthen passively through a range of motion*" (*Move RX Performance & Wellness*). As a result, the body segment is relaxed, and the surrounding connective tissues (tendons, ligaments, fascia) determine the body's natural range of motion.

Flexibility drills commonly include holding positions for anywhere from 30-90 seconds. These drills lengthen and relax the tissues but also loosen the neuromuscular connection to those muscles.

Lack of Flexibility:

Inflexibility can lead to:

- ✓ Muscle fatigue:
  Which can lead to muscular injuries and the inability of the muscles to protect joints from more severe injuries.
- ✓ Muscle stress:
  Abnormal stress on structures and tissues distant from the initial site of inflexibility.
- ✓ Inflammation:
  Of the soft tissues surrounding the joint, or joint swelling.
- ✓ Muscle Stiffness
- ✓ Pain

Benefits of Flexibility Training:

- ✓ Improved Muscle Condition:
  One way to reduce injuries and improve the condition of your muscles is through flexibility enhancing activities like foam rolling and dynamic stretching.
  Foam rolling: Can help loosen tight muscles and is particularly useful if you have contracted or tight muscles that fail to fully release. When using a foam roller along the length of the muscle, you are encouraging it to return to its original and intended length.
  Stretching: Increases the blood flow to your muscles. This improved circulation nourishes your muscles and helps rid them of waste by products. Improved circulation can help shorten your recovery time particularly after a hard work out.

- ✓ Increased range of motion:
  Flexibility allows for a better range in your joints, allowing you to move freely, and significantly beneficial for activities which require twists and turns.

- ✓ Improve muscle balance:
  Flexibility promotes muscle balance as some muscles are overly tight while others are compromised or offset.

- ✓ Reduced Risk of Injury:
  Flexibility improves the range of movement for muscles, ligaments, and tendons. When muscles and the surrounding structures are well-nourished and mobile, there is less likelihood of injury.
  The act of stretching lengthens muscles and improves blood flow (which promotes recovery and healing).

Examples of Flexibility Exercises:

- ✓ Static stretching:
  Means moving the muscle into a position that lengthens specific muscles and then holding that stretch for 30-90 seconds.
  Move into the stretch and stop when you feel some slight discomfort (NOT pain). Hold the position for the desired length of time.

- ✓ Dynamic stretches:
  Moving a muscle or a joint through a range of motion in a controlled manner. Usually used for warming up. It improves power, jump and speed abilities.

- ✓ Myofascial Release:
  Foam rolling is a type of myofascial release that targets the fascia, a connective tissue, to increase flexibility and relive tension.

The stiffest tree is most easily cracked, while bamboo or willow survives by bending with the wind.

Bruce Lee

My Mobility Journey

So far, we have looked at what the differences between mobility and flexibility training is and the benefits of both.

My focus for my training was to fix the issue I was having with my iliotibial band tract (IT band), the other issue was to sort my strength imbalance between my left and right leg.

My training up to this point had included spin and hit classes at city fitness working on my cardio, and weight training once a week, focusing on the main compound exercises (squats, bench press, deadlifts, back rows). I was also teaching and training Taekwon-do 3-4 times a week.

Due to my injury and mobility, I found I struggled with some of these compound exercises, especially with the squats, I would get pain in my lower back and struggle to get low in the squat.

I was also struggling with my balance, especially with the moves in Juche where you must balance on one leg while performing a side kick then rotate and perform a reverse hooking kicking.

With research and ideas from the physio and help from my Personal Trainer, Scot Watson, we came up with a plan.

I put a lot of focus into my hip mobility, as we know with Taekwon-Do we use a lot of hip movement to create power, but we also need good flexibility and mobility in our hips to allow us to do a lot of our kicks.

The next section will look at some information about hip mobility / flexibility and some of the exercises I did to help me in my situation.

Hip Mobility Training

What is Hip Mobility

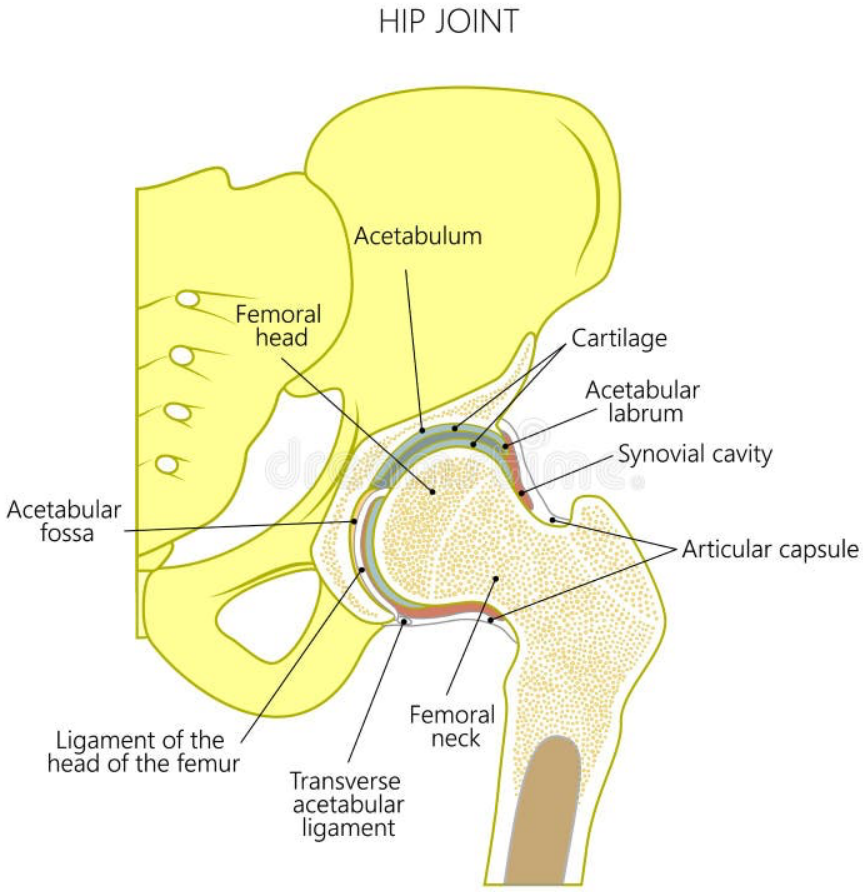
You need hip mobility to execute most lower limb activities such as running to compound exercises. If the hip joint is tight or lacks mobility, this can create additional strain through other areas of the body, including lower back pain, knees, and ankles.

The hip is the most mobile joint in the body with a 360-degree range of motion.

Combination of the following six movements permits overall hip mobility:

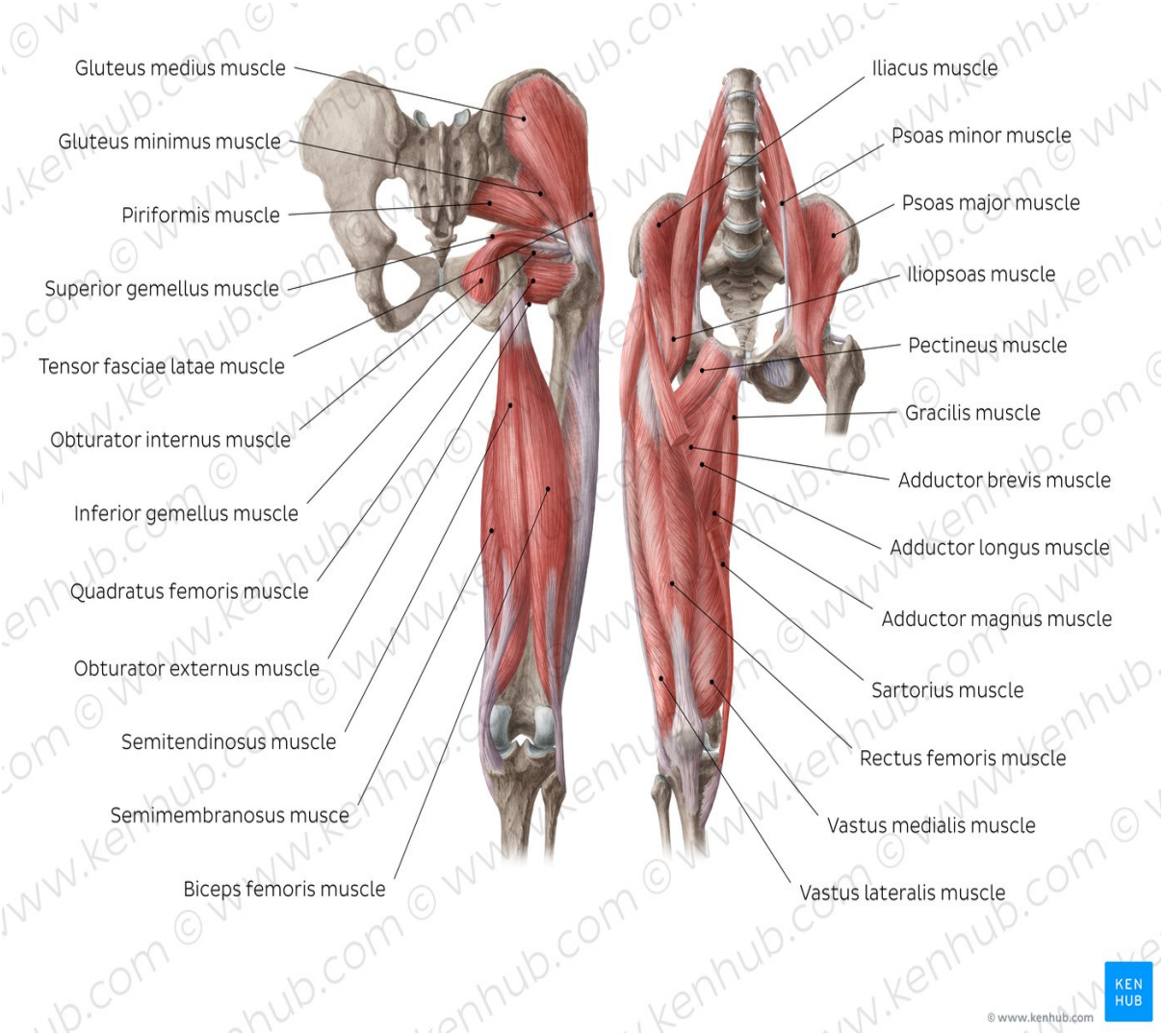
1. Flexion / Extension (forward and back)
2. Abduction / Adduction (Away and towards the midline of the body)
3. Internal / External Rotation (Pivoting of the hip joint inwards and outwards)

The below images are a reference on what the hip joint looks like, and what muscles surround the hip:



Hip Muscles

In human anatomy, the muscles of the hip joint are those muscles that cause movement in the hip. Most modern anatomists define 17 of these muscles, although some additional muscles may sometimes be considered. These are often divided into four groups according to their orientation around the hip joint: Gluteal group, Lateral rotator group, Adductor group, Iliopsoas group.



Why does Hip Mobility Matter

Hip mobility can have several benefits for daily activities and performance.

1. Reducing pain and stiffness in the hip and lower back.
2. Improving posture and stability.
3. Reducing the risk of injury.
4. Enhancing athletic performance by allowing for speed, power and agility.
5. Engaging the posterior chain in training exercises like squats and deadlifting.

"When the femur, pelvis and spine move in a coordinated manner to produce a large (range of movement) than is available to one segment alone."

Levangie and Novkin (2005)

If your hip mobility is compromised your form and technique will also follow. Instead, other parts of the body will begin to compensate and experience additional strain. An accumulation of stress on the body can lead to increased risk of developing devastating injuries, such as low back pain, hip condition and knee injuries.

"Poor hip joint mobility can lead to greater forward lean and thus increase spinal shear."

Dr Brad Schoenfeld (body builder)

Inadequate hip movement and strength can also lead to:

- Hip impingement.
- Poor ankle posture.
- Hip and knee osteoarthritis.
- ACL injuries.
- Patellofemoral joint injuries

Not only is hip mobility essential for sports and exercise performance, but also injury prevention.

How to Increase Hip Mobility

To increase hip mobility, you must consider 3 important characteristics:

- ✓ **Hip flexibility:**
  Flexibility is a term commonly associated with the joint's full capacity to move. This can be measured in static or non-moving positions. Example, when doing the splits, you're limited by the tightness of your adductor or groin muscles.

- ✓ **Hip Stability:**
  The hip has specific stabilizer muscles that help accompany and fine tune hip movements. Examples of these muscles include the deep external rotators (piriformis, obturator externus, pectineus, etc), gluteus minimus and hamstrings.
  Depending on the location and size of these muscles, most will guide rather than drive movement.

- ✓ **Hip Strength:**
  In contrast to hip stability, strength describes the ability of the hip muscles to contract, generate power, and act as prime movers. Typically, large, and more robust muscles are associated with strength such as the gluteus maximus and adductors.

Hip flexibility Exercises:

Self-Myofascial Release (Foam Rolling)

Purpose: Foam rolling is a form of Self-Myofascial Release which is an effective way to relive tension and tightness in the muscles, improve blood and lymphatic circulation and to stretch the skeletal muscles. Foam rolling can increase range of motion by reducing delayed onset muscle soreness (DOMS) and can be used to reduce scar tissue that has grown around the area of an injury.

Rules of Foam Rolling:

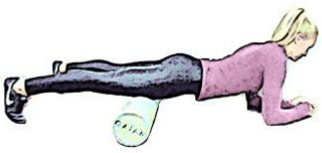
1. Begin by using a medium softness foam roller.
2. Roll slowly around the areas of direct pain.
3. When rolling out trigger points (knots) in the muscles, you can expect to experience some intensity or pain.
4. Once you find a trigger point, hold for 20 seconds then move on to the next one.
5. Always listen to your body and stop immediately if something doesn't feel right.
6. Foam roll consistently and daily if possible.

Hip Foam Rolling Routine:

1. Hip Flexor Rollout
2. Figure 4
3. IT Band Release
4. Prone Quad Release
5. Adductor Rollout
6. QL Release
7. Suping Hip Flexor Stretch


HIP FLEXOR ROLLOUT


IT BAND RELEASE


PRONE QUAD RELEASE


QL RELEASE


FIGURE 4


ADDUCTOR ROLLOUT


SUPINE HIP FLEXOR STRETCH

90/90 Stretch

Purpose: One of the best mobility exercises around. The 90/90 stretch increases mobility both in the external rotation (foot twists towards the centre of your body) and internal rotation (foot is twisted out to the side).

90/90 position means when in the full stretch, your knees will both form 90-degree angles.

Hip flexion, the act of lifting your thigh up towards your torse or shifting it back towards your glute, uses 11 different muscles in the hip. They are collectively called the hip flexors and include the iliacus, psoas major and piriformis. This move targets these muscles. It also stretches the glutes, hip abductor (external hip) and hip adductor (inner thigh).

Tips for doing the 90/90 stretch:

- ✓ Keep your torso straight and centred.
- ✓ Bend your knees at 90 degrees.
- ✓ Don't lean forward.
- ✓ Breath and sink into your hip.

Video on how to perform the 90/90:

https://www.youtube.com/watch?v=2uW-9KD5XOM

Hip Flexor Stretch

Hip flexors are a group of muscles that help you move your lower body. They include the rectus femoris, iliacus, psoas, iliocapsularis and sartorius muscles, which allow you to bend at the hips, lift your knees and swivel your hips from side to side.

Tight hip flexors can be caused by prolonged sitting or even exercising.

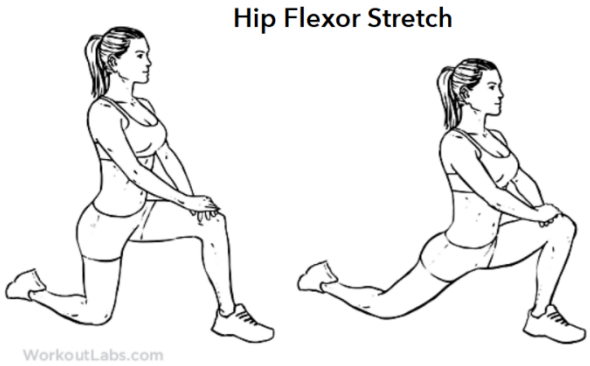
Tight hip flexors can cause lower back tightness, neck and back stiffness and pain in the glutes.

Opening up and relaxing the muscles in the hips and upper thighs helps encourage proper movement and use of this area.

Below is some of the hip flexors stretchers that I was doing to improve mobility and flexibility in my hips:

Kneeling Hip Flexor Stretch:

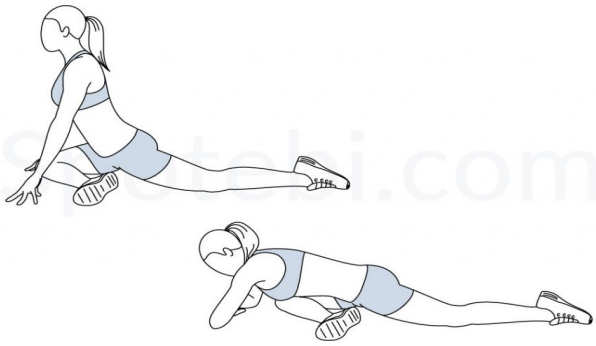
The kneeling hip flexor stretch is a beginner-friendly stretch that is best incorporated as part of a regular stretching routine before exercising. If you hinge at the waist a lot, such as during a set of heavy squats, or sit for prolonged periods, this is a great stretch to add to your routine.



This stretch targets the hip flexor and psoas muscles.

Pigeon Stretch:

Pigeon stretch is an effective way to open the hips while stretching multiple muscles. It is a great static stretch to perform as a cool down after intense sports or activities such as running.



The pigeon stretch targets many muscles in the hip including piriformis, psoas major, psoas minor and also engages the back, thighs and glutes.

Hip Stabiliser Exercises

Monster Walk (Resistance Band Sidestep)

Purpose: The Monster Walk exercise is a routine that uses a resistance band to strengthen the glute muscles, especially the gluteus medius and the gluteus minimus, which helps with abduction. The exercise can increase the stability of the leg.

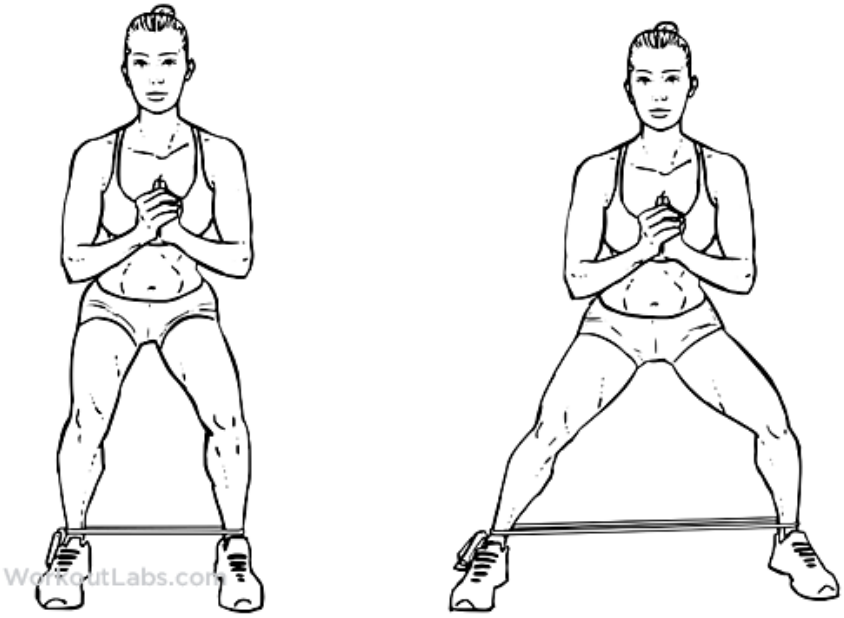
Monster Walk Benefits:

- ✓ Strengthens the glutes, hips, and thighs.
- ✓ Improves hip stability and balance.
- ✓ Helps prevent knee injuries by strengthening the muscles around the knee.
- ✓ Can be done with or without resistance bands to added difficulty.
- ✓ Can be modified for different fitness levels and abilities.

Primary muscles:

Glutes, Quadriceps, Hamstrings, Hip Abductors, Hip Adductors.

Variations: Side to Side, forward – backward.



Clamshell with Resistance Band

Purpose: The hip external rotators are important for dynamic hip stability during high-velocity movement. Particularly with single leg activities, such as compound exercises or running sports, these muscles play a major role in fine tuning hip movements. The Clam helps isolate these muscles, as well as the gluteus maximus.

Benefits:

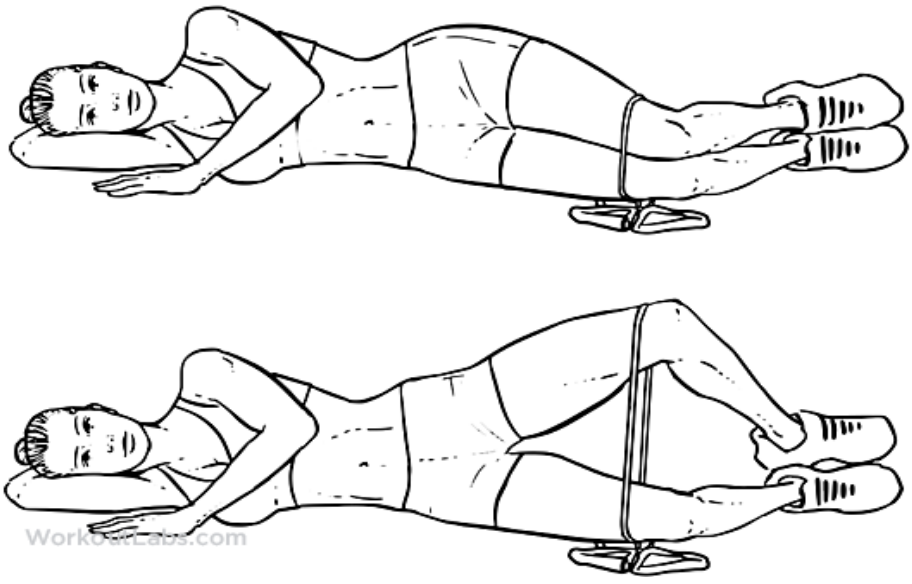
- ✓ Reduce your injury risk.
- ✓ Improve hip mobility.
- ✓ Joint friendly.
- ✓ Great warm up before doing squats, lunges, deadlifts.
- ✓ Build a better butt.

Primary muscles:

Gluteus (Maximus, Medius, Minimus), Tensor fascia latae, Core.

Variations:

Banded, weighted, sitting, standing.



Lateral Leg Raisers

Purpose: Lateral leg raisers involve abducting or pushing the leg away from the midline. It's a simple way to build strength in the outer thigh and hip abductors which include the gluteus medius and minimus.

The gluteus maximus is one of the strongest muscles in the body and well-known, this means the glutes medius can sometimes get overlooked, it plays a very important role as the muscle responsible for stabilization of the hip.

Benefits:

Side leg raises target this muscle primarily which leads to several benefits:

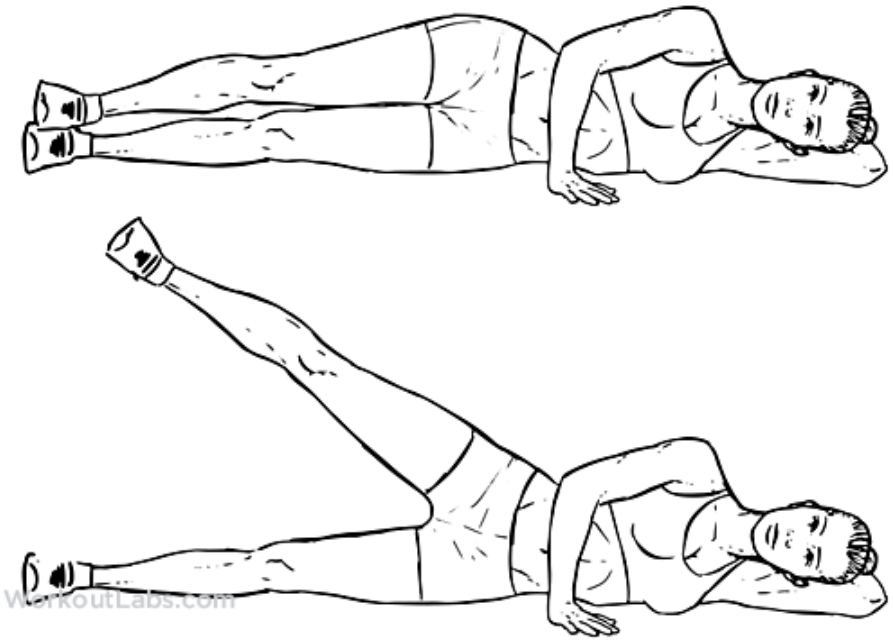
- ✓ Better range of motion in the hips
- ✓ Better body Stabilization
- ✓ Improved muscle endurance

Primary muscles:

Gluteus Medius, Gluteus Minimus.

Variations:

These can be done lying, standing or with a side plank.



Barbell Single Leg Deadlift

Purpose: This is a hip hinge movement that is performed on one leg. Reduction in stability means more of the lower body stabilizing muscles are working overtime to keep you balanced including the core.

Benefits:

- ✓ Improved balance and coordination.
- ✓ Increased stability in the lower body.
- ✓ Strengthen core muscles.
- ✓ Increased glute activation.
- ✓ Improved hamstring and glute health.
- ✓ Improved hip mobility.

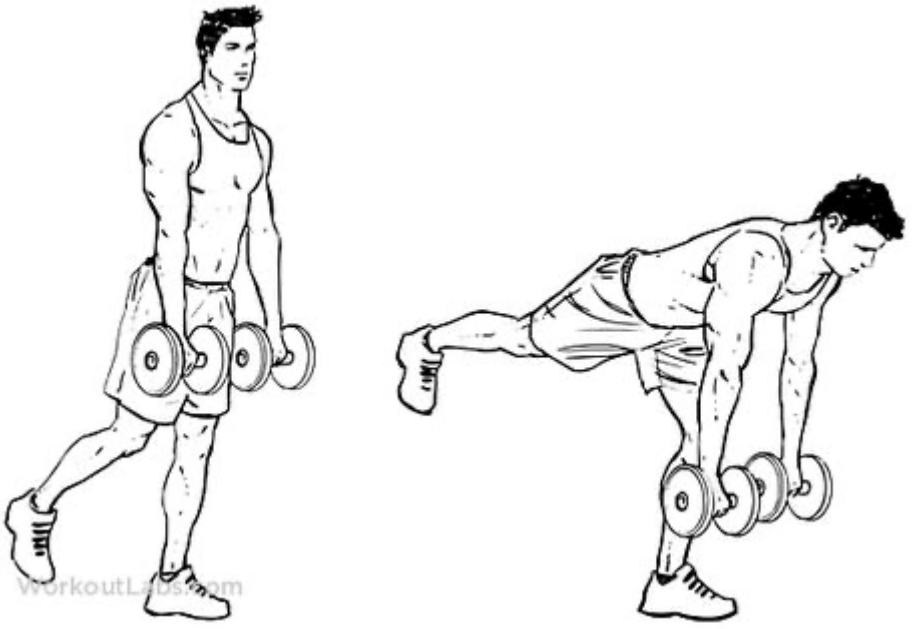
Primary muscles:

1. Glutes: Have double duty as hip stabilizers and hip extenders to keep you upright.
2. Hamstrings: Assist glutes with hip extension and work as knee flexors. Main job is to stop you from face planting.
3. Calf Complex: Anterior and posterior calf muscles co-contract isometrically to help keep the working foot on the ground.

Variations:

Barbell version is likely the most challenging variation with the weight being anterior and being on one leg, this tests your balance and stability.

They can also be done with kettlebells, dumbbells, trap bar etc.



Hip Strength Exercises:

Barbell Squat

Purpose: The squat lift exercise is a compound exercise that engages multiple muscles and joints. Squats build lower body muscle strength, endurance, and power. Additionally, they engage the core and improve strength and stability in the trunk and upper body.

Benefits:

- ✓ Strength lower body and core muscles.
- ✓ Burn calories and may aid weight loss.
- ✓ Increase bone mineral density.
- ✓ Improve posture.
- ✓ Help you jump higher and run faster.
- ✓ Aid in flexibility and mobility.
- ✓ Offer endless variations.

Primary Muscles:

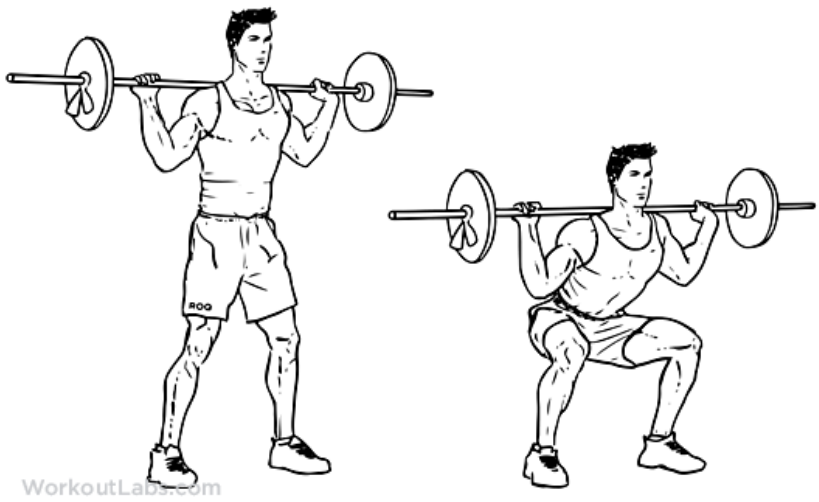
Quadriceps (front of thigh), Gluteus Maximus (Buttocks)

Secondary Muscles:

Erector spinae of the back, transverse abdominis, gluteus medius, gluteus minimus, adductor magnus, soleus, gastrocnemius, hamstrings.

Variations:

The squat can be easily scaled up and down for different abilities, they can be done weighted or unweighted, sumo squats, front squats, jumping squats, etc.



Dumbbell Lunges

Purpose: The dumbbell lunge is basically taking a giant step forward. The quadriceps muscle is the main target of the lunge. One of the 4 quad muscles the rectus femoris also acts as a hip flexor drawing your torso towards your thigh.

You use your quad to straighten the knee from a bent position and keep your kneecap in the proper position. As your balanced is challenged during the lunge, your stabilizer muscles of your back and legs come into play.

Benefits:

- ✓ Improve balance, coordination, and core stability.
- ✓ Increase bone health.
- ✓ Strengthen lower back, calf muscles and abs.
- ✓ Improve posture.
- ✓ Aid in weight loss.
- ✓ Greater glute activation.
- ✓ Better muscle symmetry.

Primary Muscles:

Quadriceps.

Secondary Muscles:

Abdominal muscles, back muscles, glutes maximus, hamstrings, calves, adductor magnus.

Variations:

There are many lunge variations: barbell, walking, side, jumping, reverse, etc.

Plyometrics

Purpose: Plyometrics also known as jump training are explosive exercises designed to build speed and power in different movements. Plyometric training doesn't use weights rather it relies on repetitive, high impact movement such as hopping, kicking, and jumping that move your muscles through a rapid cycle of contraction and eccentric contraction (stretch reflex), also known as stretch – shortening cycle. It occurs when you lengthen a muscle (stretch) followed by an immediate contraction (shortening) of the same muscle.

The purpose of plyometrics is to teach the muscles to produce maximum performance for athletes and exercisers alike.

Benefits:

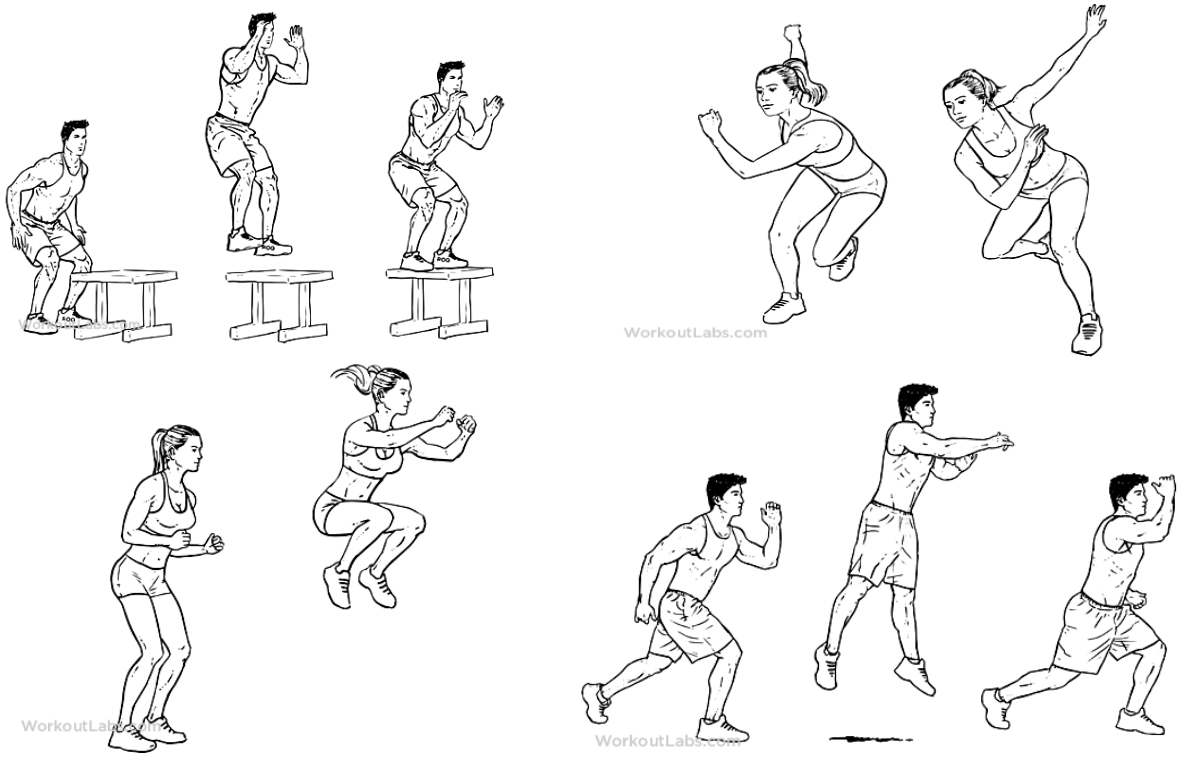
- ✓ Improves cardio fitness.
- ✓ Burns calories.
- ✓ Strengthen bones and joints.
- ✓ Increases muscular strength.
- ✓ Improves coordination.

Primary Muscles:

Would depend on the plyometric routine you were performing. Ideal you would choose a mixture of exercises to cover the major muscle groups.

Variations:

Box jumps, Lateral jump, Burpees, Clapping Push ups, Tuck Jumps, Jumping Lunges, etc.



Plyometrics help to increase tendon elasticity which means that you'll be less at risk of injury, plus your mobility and flexibility will also improve as a result.

Exercise Summary

It was great having all this new information and training ideas, but trying to fit it all into an already very busy schedule was going to be interesting.

So below is what I did to incorporate mobility training into my training schedule:

I found adding mobility training into my warmup was a great time saver, below are some of the exercises I was doing:

Monster walk, Clams, Lateral leg lifts, Body weighted squats with medicine ball throws, hip bridges,

90/90 hip rotation and foam rolling.

I found doing this before the weight's session allowed the body to fully warm up, especially the hips, and gave me more movement and less pain when doing some of the weighted exercises.

I was also doing these at home throughout the week, especially if the body was feeling sore, foam rolling, and stretchers were great to alleviate this.

During the PT session, we would superset exercises together:

- ✓ Squats – Box Jumps.
- ✓ Single leg side jumps – Single leg calf raises.
- ✓ Single leg deadlift – single leg bosu ball with a one arm kettlebell shoulder press
- ✓ Squat – Lunges
- ✓ Bench press – medicine ball chest throws at a wall.
- ✓ Single leg forward jump – Single leg lateral jumps with a band

Generally, these were done in 4 sets and 5 -12 reps depending if we were working on endurance or strength.

The HITT class was also a mixture of weighted movements and plyometrics.

During My Taekwon-do session I would bring in some of the mobility stretches and exercises:

Lateral leg lifts, 90/90s, pigeon stretch, hip flexor, front/side splits, burpees, tuck jumps, squats, lateral jumps etc.

Conclusion

After months of training and adding mobility training into my sessions and lifestyle, I found that my leg pain has gone, the lower back is feeling much better, and my hips are a lot freer. I can squat lower, with a heaver weight compared to what I was doing at the start.

I feel my Taekwon-Do has improved, as my ability to move easier has made my patterns flow better, my kicks higher, and I feel stronger on the floor.

This essay only scratches the surface of mobility training, there is so much more information out there, and the exercises are endless; there will be something there for everyone.

In the reference section below are all the links to where I got my information from.

Thank you for taking the time to read my essay, hopefully there is something in here that will help you add mobility training into your next session.

Mobility

Leads to

Better Positioning

Leads to

Movement Efficiency

Leads to

Strength

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  The Single-Leg Deadlift will Increase your Strength and Performance, By Shane McLean
- ✓ Side Leg Raises Two Ways with Variations and Tips (healthline.com)
  How to Do Side Leg Raises Two Ways, By Sarah Kester
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  How to Do the 90/90 Stretch for Healthy, Mobile Hips, By Greg Presto
- ✓ Monster Walk - Guide, Benefits, and Form (liftmanual.com)
  Monster Walk, Liftmanual.com
- ✓ Clamshell Exercise Guide: Muscles Worked, How-To, Benefits, and Alternatives – Fitness Volt
  Clamshell Exercise Guide, Muscles Worked, How-to, Benefits and Alternatives,
  By Patrick Dale, PT, ex-Marine
- ✓ 7 Essential Hip Flexor Stretches (verywellfit.com)
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- ✓ How to Do the Squat: Techniques, Benefits, Variations (verywellfit.com)
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  By Elizabeth Quinn, MS
- ✓ How to Do a Dumbbell Lunge: Techniques, Benefits, Variations (verywellfit.com)
  How to Do Dumbbell Lunges: Proper Form, Variations, and Common Mistakes,
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- ✓ Define and Perform Plyometrics (verywellfit.com)
  Burn Calories and Build Power with Plyometrics, By Paige Waehner, CPT
- ✓ Plyometrics and Their Importance in Training - Define Fitness
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Image Reference

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- ✓ Hip Muscle Image: Hip and thigh muscles: Anatomy and functions | Kenhub