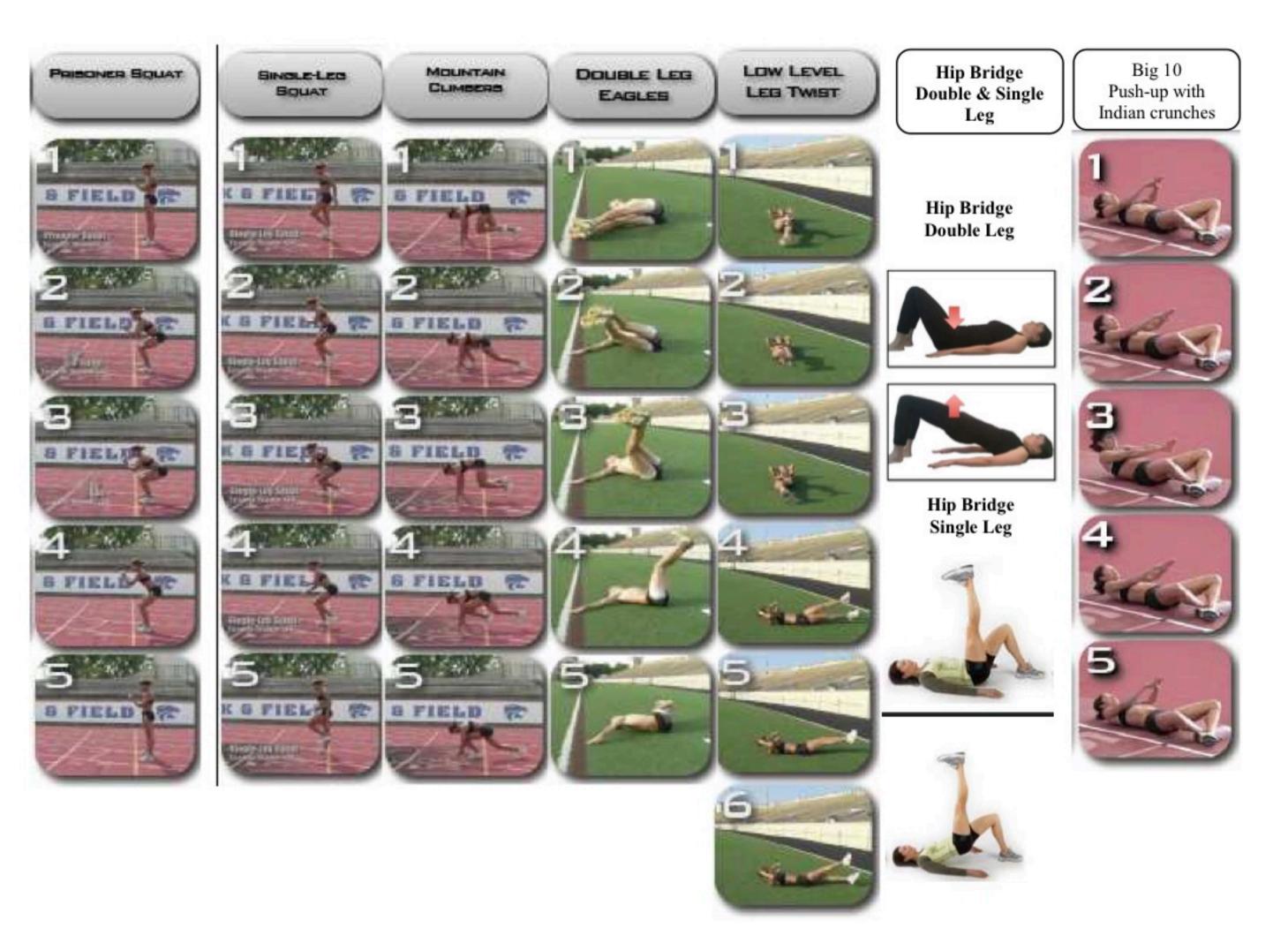
1. Routine 2

- 1.1. Prisoner squats (Up to a calf raise, last 5 up to a jump)
- 1.2. Single leg squats (Up to a calf raise)
- 1.3. Mountain climbers (single or double leg)
- 1.4. Double leg eagles
- 1.5. Low level twists
- 1.6. Hip Bridges (2 knees bent & 1 knee bent, 1 knee straight)
- 1.7. Big 10 (Indian crunch)

1. Routine 2



- 1. Routine 3
 - 1.1. Leg (donkey) whip
 - 1.2. Single leg lift
 - 1.3. Lateral leg lift x3
 - 1.4. Clam Shells (Forward & Reverse)
 - 1.5. Tuck jump
 - 1.6. Calf raise
 - 1.7. Big 10 (Cross body crunch)

1. Routine 3



Single leg lift

Lateral leg lift x3 (toe down, forward and up)

Clams & **Reverse Clams**

Clam Shells

Tuck jump











Reverse Clam Shells

CE

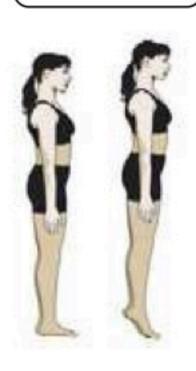




Big 10 Push-ups with cross body crunch



Calf raises x3 (Toes in, forward and out









Start on your side. Use your hand to push your pelvis forward to prevent it from rotation back during exercise. Keep feet together and bend your knees to 90 degrees, knees in front of your body. Lift top knee away from bottom knee, using glutes to drive motion. For Reverse clams, lift the top foot way from bottom.

- 4. Routine 4 (Back)
 - 4.1. Straight leg lifts on knee
 - 4.2. Leg swing up and out on knee (Donkey kick)
 - 4.3. Straight leg circles on knee
 - 4.4. Push ups
 - 4.5. Prone opposite arm opposite leg raises (Superman 1)
 - 4.6. Prone double-arm and double leg raise (Superman 2)
 - 4.7. Prone straight leg in and outs
 - 4.8. Low back extensions
 - 4.9. In and out arms with legs raised
 - 4.10. Back rounders (Roman chair sit-up & hold)

4. Routine 4



Routine 5 (Pedestal)

- 4.1. Prone elbow stand (Table tops low)
- 4.2. Prone elbow stand single leg raise
- 4.3. Prone hand stand (Table tops high)
- 4.4. Prone hand stand single leg raise
- 4.5. Push ups
- 4.6. Supine elbow stand (Plank)
- 4.7. Supine elbow stand single leg raise
- 4.8. Crunch low reach
- 4.9. Lateral elbow stand (Side plank)
- 4.10. Side ups

Routine 5

Prone Elbow Stand Table Tops-Low





K-STATE

Prone Hand Stand Table Tops-High





Mand Stand, Single Log Baiss

K-STATE

nd Stand, Single Log Ruise

K-STATE



Supine Elbow Stand Plank



















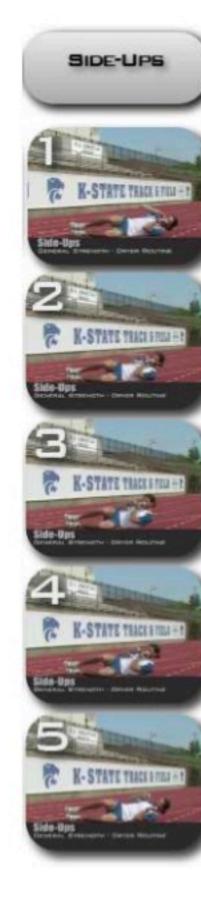




Lateral Hand Stand Side Plank







- 1. Balance/Lower Leg
 - 1.1. Standing alphabet
 - 1.2. One foot, cross arms
 - 1.3. Close one eye, one foot, cross arms
 - 1.4. Close both eye, one foot, cross arms
 - 1.5. Front scale
 - 1.6. Side scale
 - 1.7. Back scale
 - 1.8. Runner's Touch
 - 1.9. Close one eye, cycling with running arms

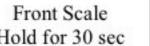
1. Balance Drill



One foot Cross arms Hold for 30 sec



Hold for 30 sec







Repeat the above position on other leg

Side Scale Hold for 30 sec





Repeat the above position on other leg

Back Scale Hold for 30 sec





Repeat the above position on other leg

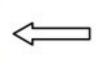


Repeat the above position with:

- · One eye closed
- · Both eyes closed
- · Switch legs & repeat

Runner's **Touch**





Start in a perfect running position, balancing on one leg. Hinge at the hip to touch the toe with the opposite hand. Make sure the standing leg stays stable and prevent the knee from diving in to midline. Come back up to running position quickly, but without losing balance.

- 1. Lunge Matrix
 - 1.1. Front lunge
 - 1.2. Front lunge with a twist
 - 1.3. Side lunge
 - 1.4. Back and to the side (diagonal)
 - 1.5. Backwards
 - 1.6. Backwards with a twist

1. Lunge Matrix

Front Lunge (both legs)

Front Lunge with a twist (both legs)

Side Lunge (both sides) Back and to the Side Lunge (both sides)

Backwards Lunge (both legs)











- 1. Plank Matrix
 - 1.1. Prone on elbows
 - 1.2. Right side on elbows
 - 1.3. Supine on elbows
 - 1.4. Left side on elbows
 - 1.5. Prone on hands
 - 1.6. Right side on hands
 - 1.7. Supine on hands
 - 1.8. Left side on hands

1. Plank Matrix

Prone on elbows

Side on elbows (right side)

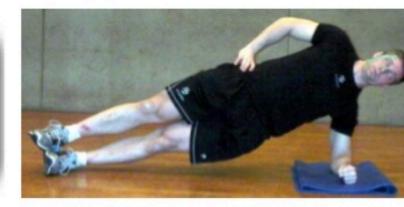
Supine on elbows

Side on elbows (left side)









Prone on hands

Side on hands (right side)

Supine on hands

Side on hands (left side)









- 1. Ankle Matrix
 - 1.1. Ski jumpers lean
 - 1.2. Ski jumpers lean with alternating butt kickers
 - 1.3. Foot rockers
 - 1.4. Ankle jumps (bounces)both feet
 - 1.5. Ankle jumps alternating feet
 - 1.6. Star touch
 - 1.7. Dorsiflex

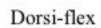
1. Ankle Matrix

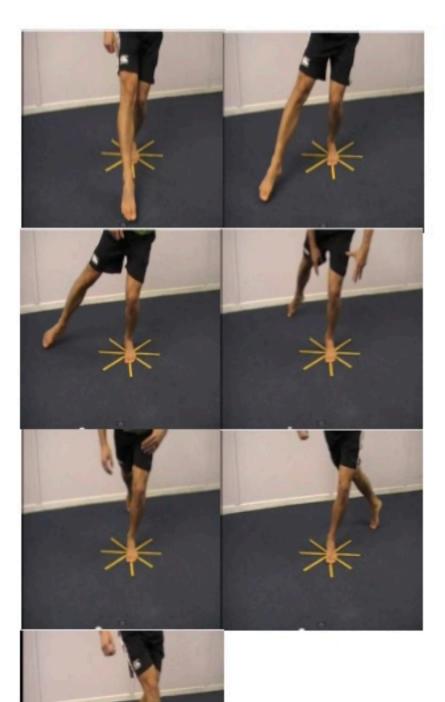
Skiers Lean (no support)





Star touch







Ankle jumps both feet and alternating single foot



Medicine Ball Routines

1. Routine 1

- 1.1. Seated big turns (around the world)
- 1.2. Seated figure 8 (Passing ball over-under legs)
- 1.3. Lying 180° to 90° toe touch
- 1.4. V-sit side to side twist (Russian twist)
- 1.5. V-up holding med ball with hands
- 1.6. Two leg lift over cone with med ball
- 1.7. Med ball oblique
- 1.8. Reverse curls
- 1.9. Knee to elbow (hold for 30 sec)
- 1.10. Med ball plank (table top with feet on med ball)

2. Routine 2

- 2.1. Standing big turns (around the world)
- 2.2. Standing figure 8
- 2.3. Side to side twist (Russian twist) also done with partner
- 2.4. One leg ball touch to ground 9:00 to 3:00
- 2.5. Hay bales with bounce. (challenge one leg)
- 2.6. Power chair raise
- 2.7. Over under with partner
- 2.8. Squats (hold med ball out from chest or over head)
- 2.9. Lunges with med ball crossover
- 2.10. High toss

Medicine Ball Routines

1. Routine 1



Med Ball Reverse Curls (Bring ball to chest) Med Ball Oblique (Twist ball side to side)







Medicine Ball Routines

2. Routine 2

BIG TURNS

Standing Figure – 8 (Move ball in circular motion) Standing Russian Twist (Done with a partner)

MED BALL TO GROUND 9:00 TO 3:00

30 SEC

Medicine Ball
Haybales
(Both legs or one leg)

Power Chair Raise (Hold for a 3 sec on toes)





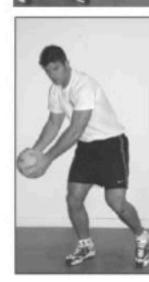


























Over - Under (Done with a partner)



Squats with medicine ball (Hold ball in front or hold overhead)









Variation – Hold ball over your head



Lunges with med ball crossover











High Toss



TAI Foam Roller Program

Why use a Foam Roller?

You can use the foam roller to provide self soft tissue mobilization (SSTM). Benefits of SSTM includes: improving muscle flexibility and tightness, decreasing lactic acid, decreasing muscle fibrosis (adhesions/scar tissue), and decreasing your risk for injury. By using your body weight you will put pressure through your muscles in order to regulate areas of increased muscle tone or tightness.

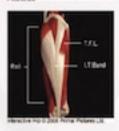
How to use your Foam Roller:

It is important NOT to roll over bony areas (like your knee) or areas where you have an open wound or injury (unless instructed by a medical professional). Always roll in line with the muscles and at a SLOW PACE. When you roll over a tight painful area (muscle knot) slow down the speed and stay on top of this area for about 20-30 seconds or until you feel the area release. If it is too painful to stay on top of this area, then decrease the force by unweighting the area. When you are finished rolling, make sure that you drink plenty of water, just like you would after a massage. Use the foam roller as described at your own risk.









Start with the foam roller on the inside of your leg just above the knee and slowly roll up toward the groin area. Make sure that you protect your low back (by lightly contracting your abdominal muscles) while rolling the adductor muscles. When rolling, make sure the foam roller is perpendicular to your thigh (as seen in picture).



Start with the foam roller under your Achilles and slowly roll up to the back of your knee. Make sure that you move your leg so that you roll up the outside and inside of your calf so that you get both heads of the Gastroc muscle. Use position #2 if you do not get enough pressure from position #1.



Start with the foam roller on the outside of your lower log on the Peroneal muscles. Slowly roll up towards the knee (STAY ON MUSCLE). Make sure that you move your leg so that you roll up the front of your lower leg so that you get the tibialis anterior muscle. Use position #2 if you do not get enough pressure from position #1.

IT Band and TFL:

Start with the foam roller on the outside muscle above the knee. Slowly roll up the outside of your leg towards the hip. Make sure that you move the leg so that you roll up the hamstring and quad portions of the ITBand. Wehn you roll up toward your hip, make sure you spend some time along the TFL. Be sure to bring the leg that is not being rolled on out to the side and use it to control the pressure of the foam roller (as seen in pictures).



Adductor Muscles:



Position #1



Position #2

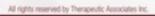










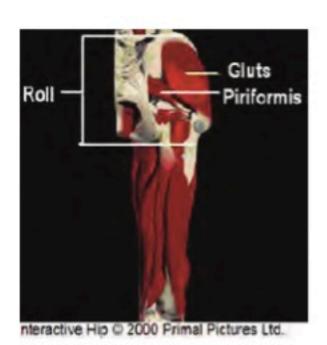


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Gluts and Piriformis Muscles:

Start with the foam roller in the center of the glut/piriformis that you are going to roll. Bring the same leg that is being rolled up and put it across the other leg as seen in the picture. Lean back and forth as you roll so that you get all the little rotator muscles.



Biceps Femoris Semitendinosis Semimembranosus

Hamstrings:

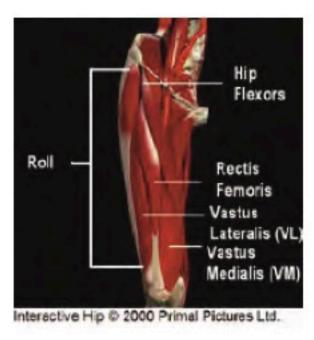
Start with the foam roller under your leg and above your knee. Slowly roll up the leg towards your gluts. Make sure that you roll up the inside and outside of the hamstrings so that you get all three muscles. Use position #2 if you do not get enough pressure from position #1.





Position #2





Interactive Hip @ 2000 Primal Pictures Ltd.

Roll

Quads and Hip-Flexors:

Start with the foam roller on the muscle above the knee. Slowly roll up towards the hip. Make sure that you move the leg so that you roll up the front of your leg then the inside and outside so that you get the V.M. and V.L. When you roll up toward your hip, make sure you spend some time along the hip flexors. Be sure to bring the leg that is not being rolled on out to the side and use it to control the pressure as of the foam roller (as seen in pictures).







How NOT to use Foam Roller (as seen in picture):

Always keep your back straight and your abdominal muscles lightly contracted while performing any of the foam roller exercises.

Created By: David McHenry, PT, DPT and Shawn Dailey, DPT

Services We Provide:

ASTYM™ System

Biomechanical Analysis

Cycle Fit

Injury Prevention

Manual Therapy

Men's Health

Myofasical release

Pilates

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Sports Rehabilitation

Sport-Specific Injury Prevention

TMJ and Headache Treatment

Triathlon Training

Women's Health







PrincetonUniversity Athletic Medicine

Illiotibial Band Syndrome Protocol

Treatment includes activity modification, stretching, and strengthening the affected limb. Immediately begin using:

Protection

Consider using a knee immobilizer for the first 1–2 days if painful when walking.

R

You should rest from all activities that cause pain or limping. Consider using crutches until you can walk without pain or limping.

1

Place an ice bag on the distal knee, or proximal hip (wherever painful) for 15–20 minutes, or use an ice bath if available 3–5 times a day for the first 24–72 hours.

Compression

Wrap an elastic bandage from mid-calf to mid-thigh, using even pressure. Wear this if swelling is noticed until it decreases.

Elevation

Make sure to elevate the knee above heart level until swelling subsides. Always be sure to ice your knee down after you complete your exercises using either immersion in ice bath, or wrapping a bag of ice. Apply for 20 minutes.

Iliotibial band syndrome (ITBS) is the result of inflammation and irritation of the distal portion of the iliotibial tendon (see illustration) as it rubs against the bursa that lies underneath the tendon and lateral femoral condyle (outer part of the thigh bone at the knee), or less commonly, the greater tuberosity (outer part of the thigh bone at the hip). This overuse injury occurs with repetitive flexion (bending) and extension (straightening) of the knee. This could also occur because of a lack of flexibility of the ITB, which can result in an increase in tension on the ITB during activity.

When experiencing these problems with your knee, it's important to find ways not to keep it irritated. Occasionally, the injuries start with a clear-cut onset, like stepping in a hole or falling on your knee. Usually though it feels like it comes out of nowhere. This means that you've been gradually creating the injury over a longer period of time like a few days or weeks. Something that you do during the day sets it off, but it's commonly very hard to figure out was exactly is the aggravating activity. Nonetheless, you've overdone it. Try not to worry if you can't figure out exactly why your knee got sore. That may not be necessary to determine in order to get better.

The more often you make your knee sore, the longer it will take to get better. The inflammation seldom builds up to a level where it keeps you in bed, so it's tempting to keep up and about on it. This may keep it stirred up. Try to avoid all the activities that make it sore, i.e., sitting with your knee bent for a long time, walking a lot, going up and down stairs, or exercising. While it doesn't cause more damage, it does



From Netter's Sports Medicine

keep the inflammation from going away. You may find it helpful to sit with your knee straight or get up and move around occasionally. Also, try stairs one step at a time using your uninjured leg. These knee injuries can be very stubborn before they get better. The sooner you stop aggravating it, the sooner you can get back to the activities you like.

The first phase of exercising begins with these stretches:

Quadriceps stretch

Using a towel, or band, lie on your stomach, attach the band to affected foot, and pull your heel to your butt. Hold this stretch for 1 minute. Repeat 3 times.



Hip flexor stretch

Kneel with affected knee on the ground, same side arm goes back causing pelvis (hips) to shift forward, and back to extend. Hold for 20–30 seconds. Repeat 3 times.



Abductor stretch

Prop the inside of your ankle up on a table, lean into the side you're stretching. Hold for 20–30 seconds. Repeat 3 times.



Hamstring stretch

Prop the back of your heel up on a table, keep your back straight, and lean forward at the hips. Hold for 20–30 seconds. Repeat 3 times.



Dynamic hamstring stretch

Lie on your back, reach hands behind your knee, keep knee at 90-degree angle, and kick up until you feel stretch. Repeat 15–20 times each side.





Sidelying ITBand stretch

On your side, using a towel or band, pull foot back as if stretching quadriceps, and use the opposite foot to push down on distal part of leg. Hold this stretch for 1 minute. Repeat as needed





C stretch for ITBand

Standing, place affected leg behind the good leg, and lean away. Hold for 20–30 seconds. Repeat 3 times.





Glute stretch

Prop the outside of your ankle up on a table, make sure leg is at 90 degrees, keep your back straight, and lean forward at the hips. Hold for 20–30 seconds. Repeat 3 times.



Begin these strengthening exercises once you have completed and feel comfortable with the stretching protocol:

Straight leg raises in all 4 directions

Lie on your back, bring your foot toward you so quadriceps muscle is contracted and knee is straight, raise leg up toward ceiling into hip flexion. Repeat this on your side for hip abduction, opposite side for hip adduction, and on your stomach for hip extension. Do 3 sets of 15 in each direction. As this gets easier, you can add weight, or add repetitions.



Hip abduction with foot externally rotated

On your side, with knee straight (quadriceps contracted), raise your leg into hip abduction with leg slightly back, and point your foot towards the ceiling. Do 2 sets of 15.





Fire hydrant position

On your side, flex hip, and bend knee to 90 degrees, then lift leg upward towards ceiling. Do 2 sets of 20.





Hip circles

On your side, with knee straight (quadriceps contracted), complete 20 circles to the right, and 20 circles to the left.





Standing squat with hip abduction

Begin with a standing squat and add leg lift out to the side. Do 3 sets of 10.





Begin these functional exercises when you have successfully completed and feel comfortable with the strengthening exercises:

Sidelying bicycle

On your side, flex hip with knee bent, extend knee, and bring hip into extension. Repeat 5 times. On your side, extend hip with knee straight, bend knee, and bring hip into flexion. Repeat 5 times.







Standing hip abduction/adduction on box

Standing on a box, with affected leg off the end, bring leg out while pointing toe, and bring leg in while flexing foot. Do 3 sets of 15.







Alternating lunges

Standing, lunge forward alternating right and left leg.





Plyometric Stations

- 1. Station 1 Pull up bars on fit course
 - 1.1. Chin ups
 - 1.2. Frog kicks
 - 1.3. Alternating frog kicks
 - 1.4. Double leg pike
- 2. Station 2 Upper Leg
 - 2.1. Prisoner squat
 - 2.2. Single leg prisoner squat
 - 2.3. Front lunges (Stationary lunges)
 - 2.4. Lunge exchange (Stationary)
- 3. Station 3 Upper Torso
 - 3.1. Push ups
 - 3.2. Push ups with toe walk
 - 3.3. Push up on finger tips or with clap
 - 3.4. Dips
- 4. Station 4 Lower Torso & Hip
 - 4.1. Mountain climbers (4 way: singles in/out, doubles in/out)
 - 4.2. Donkey whips
 - 4.3. Plyo box step ups knee lift and twist
 - 4.4. Plyo box side jumps
- 5. Stations 5 Agility
 - 5.1. Backward run
 - 5.2. Straight leg shuffle to bound
 - 5.3. Quick legs
 - 5.4. Dribbling small steps ankle high to high knees
 - 5.5. Frog jumps

^{*}Each station should be at least 50 meters apart. They rotate/jog to each station.

Plyometric Stations

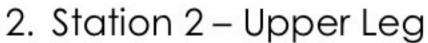
1. Station 1 – Pull up bars on fit course





















3. Station 3 – Upper Torso

Push-Ups

Push-Ups With toe walk Finger Tip Push-Ups



Same as push-up except after the push up walk to the left 2 spaces by crossing your arms and legs









4. Station 4 – Lower Torso & Hip







Plyo box side jumps







5. Stations 5 – Agility









Frog Jumps (can also be done side to side)

