



FUNCTIONAL INJURY PREVENTION EXERCISES

Part 2

“The Hip Complex”

[Jerry Shreck](#)

In my first article *FIP – The Shoulder Complex* on the Diesel site, I focused strictly on the “shoulder complex”. In this second installment of the Functional Injury Prevention (FIP) Exercise Series I will put the focus on the “Hip Complex”. Of all the areas of the body, I typically find the hip musculature of athletes to be not only the weakest, but typically the most unbalanced. I am a firm believer that if you teach the athlete neuromuscular control of the hips that the percent of injuries, especially injuries of the knee, could be decreased. In fact our athletic training staff has reported an overall decrease of major injuries over the last 4 years. Much of the credit has been attributed to the focus of our FIP exercises that are done weekly during our weight training sessions. Let’s face it, injuries are going to happen in sport but even a 1% decrease is worth it.

There are 24 muscles that are responsible for the following hip movements: flexion, adduction, medial rotation, abduction, lateral rotation, extension, and various

combinations. Just like the rotator cuff of the shoulder, there are small intrinsic muscles that act like stabilizers in the hip joint.

Sure we like squats, dead lifts, lunges, step-ups, and various triple extension movements which all, if done correctly, will hit various portions of the hips. But for the purposes of this article, we are looking for specific function patterns. Always keep in mind that you are only as strong as your weakest link.

The exercises in this article are strength exercises, but we want neuromuscular control of these movements. Ok, some of you are saying right now that it is the same thing. True it is, but I relate neuromuscular control to the amount of isolation and firing of an individual muscle to produce a certain movement and lessen the amount of stimulation of the surrounding musculature which would normally be stimulated. This takes strict amounts of focus and practice at first. When mastered the benefits payoff BIG TIME!

I employ the use of bands (9"x 2" loop) to do the following circuits of exercise. The first circuit is the "Standing Hip Circuit". Basically, I have the athletes stand with the band around the ankles at shoulder width and the knees slightly bent with their weight back on the heels. The toes will be pointed directly forward throughout every exercise. We do not want the hip to externally or internally rotate. This is important because the athlete will automatically want to rotate at the hip.

There are 5 patterns of movements which consist of 10 reps each equaling 50 total reps per hip. The first movement involves the athlete to step one leg forward while maintaining a slight bend in the knee and isolating all of the stimulation to the front of the hip, pause for a two second count, and return to the starting or "athletic position". The second movement is stepping out towards a 45 degree angle. Remember, to maintain toes pointing directly forward with a slight bend in the knees. I do not want the legs to straighten at any moment. The third is to the side. The fourth is back and to a 135 degree angle. Remind the athlete to keep strict form and have them identify exactly which

portion of the hip (musculature) that is doing the work. The focus should correlate to the direction of the movement. The last or fifth movement is straight back.

Theraband Hip Forward



Theraband Hip 45 Degree



Theraband Hip Side



Theraband Hip 135 Degree



Theraband Hip Backward



These can be performed in consecutive sets or circuit training style (Around the World). I will start athletes out with the standing hip circuit in consecutive sets per hip twice a week. After two weeks, I will progress them to an “Around the World” circuit. Which involves them doing 1 rep and progressing to the next movement until the athlete has gone all the way through all ten patterns and repeat until 50 reps are achieved. Then have him/her run the order counter clockwise for 50 reps. This style or circuit will usually be done for two weeks.

The first week or two, most athletes will report having DOMS (Delayed Onset Muscle Soreness) in the hips. This is a good sign that they are isolating and getting the neuromuscular firing that we are looking for.

After an athlete has learned these controlled movement patterns, I will progress him/her to the “Walking Hip Circuit”. This is four different series of movements related to the standing hip circuit. The first movement is a forward 45 degree step. Instead of returning the lead foot back to the athletic position, have the athlete step forward with the trail leg (maintain good form) until the foot reaches the athletic position. Then repeat starting with the opposite foot out to a forward 45 degree angle (toes forward!). Continue this for 15-20 yards. Then have the athlete come backwards stepping out at 135 degree

angles. The third movement is side stepping for the 15-20 yards and then finish side stepping back for the distance.

Forward 45 Degree Walk



Backward 135 Degree Walk



Hip Side Walk



An athlete will usually get careless with their form during the walking circuits so it is important to remind him/her to keep the proper form throughout the series of movements.

Additional exercises for the hips are always emphasized. These would include manual resistance adduction/abduction, manual resistance hip flexion, glute/ham raises, reverse hypers, and various other exercises.

Also, try jogging, cutting, jumping, carioca, and bounding speed exercises while wearing the theraband loop around the ankles. I will have the athletes do continuous sport movements for 30 second bouts. Or have them play five minutes of basketball while wearing the bands. These are some fun drills that help athletes focus on using their hips while performing sport skills.

I also have my power lifting team do these exercises and it has really helped some of them break through plateaus in their training. The main goal is the reduction of injuries by strengthening a weak area and gaining neuromuscular awareness of the hip complex.

Take a one month challenge and try these exercises. I will guarantee you will notice improvements in all your lower body and triple extension exercises. For questions and/or comments related to this article contact me at varietytrainer@yahoo.com.

Jerry Shreck

Head Strength & Conditioning Coach

Bucknell University

Stay tuned for 2 new innovative products coming from Jerry, they will be listed on the Diesel site. Trust me – you’ll want to add them to your strength training arsenal!!!