

## PLYOMETRICS AND QUICK FEET

The following is just a sampling of the unlimited number of exercises one can develop in this area to improve quick and powerful leg movement. Players should ultimately get into box jumps and depth jumps which go far beyond this sampling of exercises for developing powerful legs.

1. **JUMPING JACKS** - do this with a very strong kneebend and move the legs and arms as rapidly as possible.
2. **LUNGES** - with a scissor-movement of the legs, one leg is thrust in front and the other behind. Then the player jumps and switches the position of the legs. Focus again on kneebend, and then I concentrate on three things:
  - a) go for distance by stretching the legs as far forward as you can (after a good warm-up);
  - b) go for height; and
  - c) go for quickness.

Then go for a combination of all three - distance, height, and speed.

3. **JUMPING ON THE SPOT** - in a stationary position, simply jump as quickly as possible kicking your butt on each occasion. The key here is not so much a low kneebend at all. The focus is on how fast you can move your legs together jumping. As soon as your legs touch down, they should be off the ground again. As soon as your legs start to slow down, stop. In other words, don't just do this at medium speed or it defeats the purpose.
4. **JUMPING 90'S** - do the same thing, but as you jump turn 90°, land, spring up again turning another 90° until you've made a full circle, and go back in the opposite direction again.
5. **JUMPING 180'S** - do the same thing making sure you kick your butt on each occasion and making sure that there is not a long delay at all on landing. As soon as you touch down, spring up, and turn.

6. **JUMPING 360'S** - again the same thing, here balance comes into play a lot. The key is trying to come down with the shoulders over your feet. Concentrate on trying to keep your shoulders back on landing.

7. **ONE-LEGGED JUMPS** - try doing the Jumping on the Spot, the 90's, the 180's, and the 360's with one leg. The most important one would be jumping in a stationary position. Try to get the leg up kicking your butt as close as possible and alternate legs.

8. **PUSH-UP LEG KICK** - get down in a push-up position. Bend one knee forward and tuck it under the chest so that one leg is under the chest and the other is extended behind. Then rapidly alternate the leg positions, moving the legs as quickly as possible. Then try the same exercise only this time moving both feet together under the chest and out extended behind. Again, you do this as rapidly as possible.

9. **SIDE JUMPING** - with both feet together, simply jump side-to-side as quickly as possible and as far to the side as possible. Trying to immediately spring up once you've touched down is the key. Try also to kick butt.

10. **JUMPING FORWARD AND BACK** - with both feet close together, jump forward and back as far and as fast as possible.

11. **JUMPING STICKS** - each player gets two sticks and puts them in a cross. Starting with two feet in one corner, jump diagonally ahead and on the opposite side. Then jump straight backwards with both feet. Then jump diagonally ahead to the opposite side, which is diagonally ahead. Then jump back to the original position and do this repeatedly moving the feet as quickly as possible.

You can use the sticks in any way you would like. You can jump sideways, forward, sideways, and back so that you are basically going around in a circle with two feet in the squares and then reverse the direction. You can jump two feet forward and two feet back straddling the vertical stick as you jump over and back of the horizontal stick. You can jump side-to-side, etc.

You can do all these exercises again with one-foot hops.

12. **BODY THROW** - here with both feet close together you simply bend your knees and throw yourself forward. Continue to throw yourself forward and try to move yourself forward as quickly as possible. Keep a fairly good

kneebend. I have players use their arms to help throw themselves forward. The real challenge is then doing it with the arms on your waist or behind your back so that the only power you are using is coming from the legs. Whenever you do this exercise, try to ensure that when you land you are keeping your shoulders back for proper balance.

This exercise can be done backwards.

13. **LATERAL RUNS** - with the legs stretched apart and with a very low kneebend, have the players run sideways in one direction.

- a) as you run sideways, pull the inside leg ahead so that at the finish of each jump both legs are close together;
- b) then try the same exercise with the legs wide apart with a good low kneebend. In other words, you are springing off both feet and keeping them wide apart as you move sideways.

For this exercise, I also have ankle straps with surgical tubing which causes greater resistance on the leg muscles.

14. **LATERAL MOVEMENT** - three pylons about 5 yards apart. Player moves laterally with good kneebend and legs apart sideways to the far marker, then past the middle marker sideways in the opposite direction to the opposite mark and then return to the centre or continue going back and forth. This can be done with the legs always spaced apart or by bringing the legs closer together each step. It can also be done with crossovers sideways.

15. **AGILITY DRILL** - take the same three markers, one in the middle and one to either side about 5 yards apart, and then add another two markers one directly in front of the middle marker 5 yards apart, and one directly behind the middle marker 5 yards apart. Standing in the middle, you would have 4 markers; 1 in front, 1 behind, 1 to the left, and 1 to the right. The drill is simply running with a low kneebend straight forward to the front marker and running backwards to the rear marker, running forward to the middle, and then either running face forward to the left and to the right, or using a sideways crossover or step in the lateral directions. Again, these movements should be done with the shoulders back and a good bend, and moving as quickly as possible.

16. **SIDE STEP** - facing forward, run sideways crossing one foot in front of the other and then the second step with the same foot goes behind the other foot, and alternate this leg movement as you run sideways in one direction.

17. **REVERSE QUICK FEET** - the player takes short, quick steps sideways facing one direction and every alternating step he turns quickly and faces the exact opposite direction. Again, I don't have the players cross the feet over. They are actually just taking one quick step sideways and then turning. They take another quick step and turn in the opposite direction. The player continues to do this sideways down the line.

18. **SIDEHOPS** - instead of hopping sideways with two feet together, the player hops with one outside leg to the left with a good kneebend and a wide hop. As he lands on the left leg, he brings his right leg across the centre of gravity so that his right foot almost touches or does touch his left heel. He immediately then jumps back in the opposite direction sideways landing on his right foot and similarly swinging his left leg across the centre of gravity to touch the other foot. This should be done back and forth as quickly as possible.

19. **FOOT STOMP** - while the player stands on the spot, he simply takes rapid stomping foot movement with very little kneebend, moving his feet as quickly as possible, alternating feet up and down. I have the players do this first on the balls of their feet which is what they would normally do, then I have them do the same flat-footed so that they feel the impact more on their quads than their calves. Doing this on the flat should be done on some form of carpet or semi-soft surface, or at least make sure the players have good cushioned running shoes.

20. **ONE-LEGGED KNEEBEND** - just as we have the players walk around with good kneebend and shoulders back, do the same with a one-legged kneebend which is, of course, much harder.

21. **RAPID LEG CROSS** - the player starts with a good kneebend and his legs wide apart. He then jumps forward with the right leg crossing in front of the left, so he has now landed with his legs crossed and a good kneebend. He then continues to jump ahead with the next step uncrossing the legs and landing with both legs wide apart again and with lots of

kneebend. As he continues to jump forward, he then crosses his legs once more but this time the right leg is crossed behind the left leg. This alternating leg movement is continued.

22. **SIDEWAYS TWO-FOOT LEG HOP** - this is a variation of the Two Foot Hop Sideways Back and Forth. In this case, with two feet close together and a good kneebend, the player jumps sideways, landing on two feet, and then immediately continues jumping in the same direction sideways down the line, always landing with two feet.

23. **BACKWARD BOUNDING** - this is simply bounding in the modified manner that I described above, i.e. bringing the leg across the centre of gravity. In this case, you simply do the bounding in a similar manner backwards.

24. **HURDLE JUMPS** - this is simply using a bench and other pylons. You can face the bench and jump over facing forward. Turn, and jump back again, always facing the bench. You can jump sideways using two feet. You can add to this as I did pylons where you're doing two-foot jumps with a rotation in the air down a string of four or five pylons. Try to get the legs up as high as you can and move the legs as fast as possible.

25. **DEPTH JUMPS** - if you can get boxes with a steel platform and cushioned surface for the top of the steel platform and get into depth jumps, this would be very valuable. Before players get into depth jumps, they should be able to leg press or squat at least as a minimum one and a half times their weight. Thus, if a player is 200 pounds, he should be able to leg press 300. If a player has had any history of knee problems or instability with his knees or back, he should consult with a physician about the advisability of doing depth jumps. The key is not jumping high off the box. You simply step off the box, but as soon as your legs touch down you should explode upward again. It is this part of the jump that should be quick and explosive.

## SIMULATED SKATING DRILLS

The following are just a few of what I call Simulated Skating Drills. The purpose of the exercises are to reinforce the body position and the skating movement that I try to teach players on the ice.

1. **BOUNDING** - but as you bound ahead, the legs are brought across the centre of gravity to touch the heel of the supporting foot. It is important to do the bounding with as low a kneebend as possible.
2. **STATIONARY KNEEBEND** - squatting with the lower part of the thigh parallel to the floor and the shoulders back. The chest should be sticking out and the back should be arched. Hold it in this position with the arms out in front or to the side. When the quads start to burn, gradually lower the kneebend further, bringing your seat close to the floor. Then gradually raise the kneebend and hold it at the original position.
3. **DYNAMIC KNEEBEND** - starting in the same position as the stationary kneebend, start walking around forward and backwards, turning etc., while maintaining this knee and shoulder position.
4. **STATIONARY ARMSWING** - in a stationary position with the knees bent and the shoulders back, start to swing the arms forward and back, not raising the forward arm higher than the chin. Gradually move the arms faster and faster. Then do the same exercise but moving the arms forward and back fast but holding the position. Get the sense of thrusting the shoulders straight ahead.
5. **SITTING ARMSWING** - you can do the same type of armswing, but only sitting on the floor. This tends to feel funny, but it isolates the arm movement even more.
6. **DYNAMIC ARMSWING** - as you are bounding, you can try to concentrate on bounding and the armswing at the same time. As you throw one leg forward, the arm on the same side would extend backwards. Try to ensure that the armswing is straight forward and not crossing the body at all.

7. **ARMSWING CONTRAST** - to get the sense of throwing the body forward, have players run ahead swinging arms side-to-side, and then at a certain point immediately switch to a forward armswing and feel the difference in the body being thrust forward.

8. **STRAIGHT RUNNING KNEEBEND** - just run or sprint with the knees bent.

9. **TURNS** - run straight ahead with knees bent and turn backwards. Run backwards again with a strong kneebend. Then turn forward, running forward again with a strong kneebend. Make sure all throughout the turn, the knees remain bent and that the player does not straighten up.

10. **360°** - running in the same manner, turn 360° and keep running straight, again with a significant kneebend.

11. **REVERSE TURNS** - run with the kneebend forward. At a certain point, immediately turn backwards, and immediately turn forwards, turning to the same side. Again, keep a kneebend throughout the turn without straightening up at all.

12. **MOHAWK TURNS** - run in the same manner backwards and practice mohawk turns without opening up the kneebend during the turn. Practice as well in a stationary position the thrusting of the first two strokes. It is extremely important to work on driving your leg while your body is over top of your leg. In other words, as we make the turn, we have a tendency to start moving forward without really driving the leg while it is underneath us.

Make sure that when you do the Mohawk Turn you turn the heel in on the outside foot toward the heel of the inside foot and pull it in closer to your body.

13. **QUICK STARTS** - all three types of open-face, crossover, and T-starts can be practiced off ice. The most important thing is working on the proper position of the feet and a very low kneebend as well as driving the legs forward, again, while the body is directly over the driving leg.

14. **CROSSOVER** - both forward and backward crossovers can be worked on off-ice. Practice turns and tight turns in alternate directions.



Concentrate on keeping a low kneebend, driving the legs, and most importantly, bending from the waist so that the inside shoulder is up.

15. **BACKWARD STROKING** - you can practice the C-cuts in a stationary position, working again on a low kneebend, pushing the leg out and ahead, and twisting the ankle so that the heel comes in first.

16. **PENGUIN WALK** - you can just turn the heels in and with a strong kneebend walk forward and back with the toes pointed as directly out as possible. This helps train your foot movement to easily turn the heel in for the backward stroking as well as Mohawk Turns.

17. **WALKING AND RUNNING SIDE CROSSOVERS** - walk and run sideways making sure that you raise the knee high and cross the outside foot over the inside foot. Always try doing this exercise with a low kneebend and make sure that the heel of the crossing foot is always turned in toward the direction you are headed.

20. **RUNNING BACKWARDS** - make sure you do this with a low kneebend. Again, the value is just training your body to move in any direction with a low kneebend. You will also find that this strengthens the hamstring muscles.

21. **TIGHT TURNS** - do the same as with crossovers, only you make tight turns around a pylon focussing on even a lower kneebend and bringing the inside shoulder up and at the same time keeping your shoulders back so that you're not leaning too far forward. The tight turns and the crossovers can be worked on both running forward and backwards.

22. **STOPS** - you can even practice running forward with a low kneebend, turning and stopping sideways, trying to keep the knees bent at all times throughout the turn and stopping with your feet spread so that your inside foot is slightly in front and your outside foot is slightly behind.

23. **BOUNDING BACKWARDS** - you can try this again with a low kneebend, and as you bound make sure you pull the legs back in across to touch the ankle of the other leg.