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## Common Injuries in Basketball

Common injuries in the sport of girls' basketball include many overuse injuries as well as some injuries to ligaments that can be strengthened with a correct strength and conditioning program.

- **Jammed Fingers:** These are some of the most common basketball injuries. Many jammed fingers can be minor and heal relatively quickly. Others may lead to broken fingers or dislocated fingers. Not all of these injuries may be preventable, but the minor jammed fingers from lack of wrist strength can be improved.
- **Ankle Sprains:** Ankle sprains most commonly are caused by a player jumping and coming down on another player's foot causing the ankle to roll. There are different levels of severity of ankle sprains. An athlete that is lacking in balance and body control is more likely to suffer ankle sprains because they are not able to change their body movement to prevent injury. Also weakness in the lower part of the leg: calf and tendons in the ankle leads to more possibility for ankle sprains.
- **Achilles Tendonitis:** This is an overuse injury that can be caused from continued use or excessive jumping. This may eventually lead to an Achilles tendon tear if not taken care of right away. Achilles tendonitis can also be caused from having tight calf muscles or just biomechanical issues that may be causing extra stress to be put on the tendon. Muscle weakness and imbalance also may lead to Achilles tendonitis.
- **Patellar Tendonitis:** This is pain in the tendon below the knee. This is also an overuse injury that is usually caused from continued jumping.
- **Knee Injuries – knee sprains, meniscus tears, ACL tears:** All of these injuries can be related to weakness of the muscles around the knee. These injuries can occur from changing directions, imbalance, or lack of body control to keep the knee in align with the rest of the leg.

# Strength and Conditioning Exercises

## 3 Cone Balance Touches

Purpose: to develop dynamic balance, body control, and build strength in both the knee and hips.

### Exercise Description:

1. Place 3 cones on the ground about 2 feet apart from each other. They should form a very shallow “v” formation.
2. To begin your right foot should be about 1 ½ feet away from the center cone.
3. Stand only on your right foot and perform a squat to touch the first cone with the right hand.
4. Return to standing.
5. Repeat this same movement touching the second cone (center cone) and then the third cone.
6. Goal is to maintain balance throughout the movement. Keep the knee straight do not let it cave towards the midline of the body as you reach across to touch the cones.
7. Repeat this 3-5 times on the right leg touching with the right arm.
8. Then repeat with these other combinations:
  - Left leg squat: left hand touch cones
  - Right leg squat: left hand touch cones
  - Left leg squat: right hand touch cones

### Equipment Needed:

- 3 small cones

## **Monster Walks**

Purpose: To improve overall leg strength along with lateral movement.

### Exercise Description:

1. Place a connected exercise band around both ankles.
2. Begin on one side of the room and start in an “athletic position”. Legs should be slightly bent, back straight, head should be looking forward.
3. Keep the knees bent and in that slightly squat position. Step laterally (to your right) with your right foot about 5 inches out. (about shoulder width apart)
4. While keeping the band under control lift your left foot and bring it in to meet the right foot.
5. Repeat this series by “walking” to the other side of the room. (about 10 steps)
6. Then walk back beginning with the left foot stepping laterally.
7. Repeat this exercise twice in each direction.

### Equipment Needed:

- Exercise band

## **Bounding/Hoping**

Purpose: Develop the ability to land on one leg. Increase eccentric strength which helps an athlete to land properly.

### Exercise Description:

1. Begin at the baseline of the basketball court.
2. Jump off of your right foot and land on your right foot. Continue this hoping until you reach the half court line.
3. Turn around and repeat this exercise to the baseline this time on your left leg.
4. Focus should be on height and landing with balance evenly on your leg so that the ankle and knee are in alignment and stable.
5. This exercise should be repeated twice on each leg.
6. Then complete this exercise in the same way but with bounding. Jump off of your right leg and this time land on your left leg. Then proceed to jump off the left leg and land back on the right leg. You should be pushing off your leg and jumping forward to get to half court.
7. This exercise should also be completed twice (back and forth from the baseline to half court twice).

### Equipment Needed:

- Court or a any flat surface that you can mark a distance off on.

## **One Leg Mini Squats:**

Purpose: To develop strength in each single leg at time. Develop increase proprioception in the ankle while improving balance and core stability.

### Exercise Description:

1. Begin by standing on your right leg. Raise your left leg out in front of you. The left leg may not be raised very high until the athlete begins getting used to the exercise.
2. Complete a half squat with your right leg. Keep your back straight and your knee behind your ankle, with your whole right leg in alignment.
3. Do 10-12 repetitions on your right leg then switch and repeat the exercise on your left leg.
4. Again complete a mini squat with your right leg, this time holding your left leg out to the side and then again out behind you. In each position you should complete 1-12 repetitions.
5. Repeat this circuit 3 times for each position and for each leg.

### Equipment Needed:

- Nothing

## **Ankle Rolls**

Purpose: Increase strength and motion within the ankle while also allowing the athlete to gain better control over the movement of their ankle.

### Exercise Description: (this exercise is to be done barefoot)

1. Begin in an athletic stance: feet shoulder width apart, knees slightly bent, back straight, and head looking forwards.
2. Lift your right leg into the air.
3. Rotate your ankle clockwise in 5 small circles, then counterclockwise in 5 small circles.
4. Repeat this same step, but this time rotating in 5 medium circles and then in 5 large circles.
5. Repeat this entire exercise for your left ankle as well.

### Equipment Needed:

- Nothing

## **Ankle Balancing Standard/Advanced**

Purpose: To strengthen the ankle in the inverted position. Increase balance of the ankle to prevent inverted positions.

### Exercise Description:

#### *Standard:*

1. Start in an athletic stance: feet shoulder width apart, back straight and head looking up and forward. Weight should be evenly distributed on both feet.
2. Rise up onto toes, stopping about halfway up so you are not fully on your toes.
3. Balance in this position and then close your eyes. Goal is to hold this position for 2 minutes.
4. If the balance is lost repeat the exercise again.
5. This exercise should be done a total of 3 times, each time holding for 2 minutes.

#### *Advanced:*

1. Start in an athletic stance: feet shoulder width apart, back straight and head looking up and forward. Weight should be evenly distributed on both feet. You must be near a wall, chair, or table.
2. Lift one leg into the air and rise onto toes of the other leg until you are about halfway to full extension.
3. Balance in this position and then close your eyes. Try and hold for 2 minutes on each leg.
4. Use wall, table, or chair for support if necessary as you get used to the exercise.

### Equipment Needed:

#### *Standard:*

- Nothing

#### *Advanced:*

- Wall, table, or chair if necessary

## Adapted Calf Raises

Purpose: lengthen the muscle tendon as a load is applied to it. Strengthen the tendon by eccentric exercises.

### Exercise Description:

1. Stand on the edge of a step or box. Toes and ball of your foot should be on the step and your heels should be hanging off the step.
2. Raise up both feet until your weight is on your toes. Legs should remain straight.
3. Lift your right leg up at the knee so all your weight is on your left foot.
4. Lower the heel of your left foot below the step.
5. Place your right foot back onto the step.
6. Repeat this on the left foot for 15 repetitions then switch to the right foot.
7. Complete this exercise 3 times 15 repetitions each time with both legs.
8. The same exercise can then be repeated with a slight bend in both knees.

### Equipment Needs:

- Stair, step or box of some kind.

## Calf Stretch

Purpose: To loosen the Achilles tendon to relieve some of the tension that may be building.

### Exercise Description: *Upper Calf*

1. Take a stride forward with your right leg and lean against a wall.
2. Your right leg should be partially bent and you are keeping your left leg straight.
3. The heel of your left leg must remain flat on the ground to stretch the calf.
4. Lean forward slowly as you feel the stretch in your upper calf.
5. Hold this stretch for about 15 seconds. Then switch your right and left leg.

### *Lower Calf*

1. Just like with the upper calf lean forward against a wall.
2. The heel of your left leg should remain flat on the ground.
3. Bend both of your knees, sink your hips back to put all of your weight onto your left foot. Right foot is still out in front of you like during the upper calf stretch.
4. Hold this stretch for about 15 seconds. Then switch your right and left leg.

### Equipment Needs:

- Wall, or something to lean against.



## **Thera-Band Ankle Exercises**

Purpose: to strength the ankle using both inversion and eversion.

### Exercise Description:

1. Sit on the ground or for more strength training on a table or surface where your foot is able to hang off the end.
2. Place the Thera-Band around the top of the foot. Hold your leg out straight so that the toes are point up.
3. Rotate/ pull your foot in towards the midline of your body. Make sure to curl you toes at the very end of the movement to work all the internal muscles of the foot.
4. Repeat this motion 20 times.
5. Then rotate/push your foot outwards, doing the same thing, and repeat this 20 times.
6. Then switch to your other foot.
7. You should complete 3 sets of 20 repetitions for each leg and each direction.

### Equipment needs:

- One thera-band

## **Scissors Jump**

Purpose: build power, strength, and speed in the lower body, land properly and softly. Increase both power and strength of vertical jump.

### Exercise Description:

1. Lunge forward with your right leg first.
2. Drop down into the lunge keeping your knee over your ankle and your back straight.
3. Push off with your right foot, jump up and move you left leg forward to land in a lunge position this time with the left leg first.
4. Drop down into the lunge position keeping you knee over your ankle and not allowing your knee to cave in our out.
5. Keep your body stable and balance over your ankle.
6. Should be landing on the ball of your foot, softly, with a slightly bent knee.
7. Repeat this 20 times.

### Equipment Needs:

- nothing