

## **WELLNESS UPDATE 2000, #7**

### **SIMPLE FUNCTIONAL TESTS TO DETERMINE AN INJURED ATHLETE'S READINESS TO RETURN TO PARTICIPATION**

Objectively evaluating an athlete's ability to return to participation following an injury often proves difficult. Knowing how the injury occurred and performing an initial evaluation are critical in determining an athlete's safe return to participation. **If, after evaluation, the injury does not seem to be serious, functional tests can be administered to assess the athletes' physical ability to return.** These tests allow the athlete and coach to determine if the athlete's body is ready to adapt to the demands of returning to participation. **The objective is to have the athlete perform skills that progressively simulate participation requirements.** In addition to providing an objective evaluation as to the athletes' readiness to return to participation, **functional testing also increases the athlete's confidence which decreases the chance of re-injury.**

When using functional testing, the extent of the injury and the demands placed on the athlete during participation must be considered in determining which specific tests to use. **The athlete should pass one test before progressing to the next and should be able to complete all tests before returning to participation. If an athlete exhibits an inability to perform a specific test, has great anxiety while performing a specific test, limps, is favoring the injured area, or exhibits indications of pain or instability they should not return to participation without evaluation by a medical professional.**

#### **FUNCTIONAL TESTS**

**The tests for each body area are numbered in the progression in which they should be performed.** Always begin with number one and progressively continue through the tests until the athlete has completed all of them or exhibits signs of not being able to continue the tests.

#### **FOOT, ANKLE AND LOWER LEG INJURIES**

**1. Break test** - Seat the athlete on the ground, floor, or a bench with their injured leg extended and their toes pointed. Have the athlete pull their foot and toes toward their body while you manually resist that motion. Check to see if the athlete can resist your force or if the ankle is too weak and painful. Compare their strength to the uninjured foot.

**2. Weight bearing test** - Have the athlete gently step down on their foot, progressing to a slow walk, if possible. Watch for limping or signs of pain.

**3. Toe raise test** - Have the athlete stand with their feet shoulder-width apart, and their weight evenly distributed on both legs. Ask the athlete to raise up on the toes of both feet ten times. Progress to raising up on the toes of only the injured leg.

**4. Hop test** - Have the athlete hop on both feet and progress to hopping only on the injured leg. Finally, hop in a figure 8 with both feet, then using only the injured leg.

**5. Jogging figure 8 test** - Have the athlete slowly jog in a large figure 8 pattern, and progress to smaller patterns and a quicker pace.

**6. Cut and pivot test** - Have the athlete jog toward you and on your command pivot to either the right or left. Increase the speed at which the athlete jogs and watch for limping or hesitation. Progress to cutting and pivoting at full speed.

**7. Zig-zag test** - Have the athlete run a zig-zag pattern, increasing the speed and intensity of the cuts.

**8. Forward/backward test** - Have the athlete jog forward ten yards, then stop and back pedal five yards. Gradually increase speed and the intensity of the starts and stops.

## **KNEE INJURIES**

**1. Range of motion test** - While seated on a chair or bench, have the athlete attempt to straighten their knee as far as possible, without pain. Now, have them bend the knee as far as possible. Compare the range-of-motion to the uninjured knee.

**2. Squat test** - Standing with their feet shoulder-width apart, and their weight distributed evenly on both legs. Have the athlete do a 2-legged squat, going no lower than 90 degrees and holding it for five seconds. Progress to squatting with only the injured leg, going no lower than 90 degrees and holding it for five seconds.

**3. Modified duck walk test** - In a semi-squat position, with their knees bent no more than 90 degrees, have the athlete walk forward and backwards ten steps.

**4. Jogging figure 8 test** - Have the athlete slowly jog in a large figure 8 pattern, and progress to smaller patterns and a quicker pace.

**5. Cut and pivot test** - Have the athlete jog toward you several steps and on your command pivot to either the right or left. Increase the speed at which the athlete jogs and watch for limping or hesitation. Progress to pivoting at full speed.

**6. Zig-zag test** - Have the athlete run a zig-zag pattern, increasing the speed and intensity of the cuts.

**7. Run and jump test** - Have the athlete jog several steps, then jump off both feet. Progress to jumping off only the injured leg.

## **SHOULDER INJURIES**

**1. Apley scratch test** - **a.** Have the athlete reach behind their back and place the back of their hand on the small of their back. Now ask them to reach as high as possible between their shoulder blades. **b.** Have the athlete place the palm of their hand on top of their head. Now, ask them to reach down between their shoulder blades as far as possible with that hand. Compare to the uninjured shoulder.

**2. Shoulder shrug test** - Have the athlete stand and shrug their shoulders as high as possible; relax, then push the shoulders as far forward as possible; relax, then squeeze the shoulder blades together as far as possible.

**3. Throwing test** - Have the athlete throw a ball easily and at short distances. Progress to throwing harder and at longer distances.

**4. Racket swing test** - Have the athlete simulate swinging a racket using forehand, backhand, and over the head motions. Progress from easy swings to full swings.

## **ELBOW INJURIES**

**1. Range of motion test** - Have the athlete bend and straighten their elbows as far as possible without pain. Compare to the range-of-motion of the uninjured arm.

**2. Grip strength test** - Have the athlete grasp the first two fingers on each your hands and squeeze tightly. Compare to the strength of uninjured arm.

**3. Resistive motion test** - While grasping the athlete's wrist, ask them to bend and straighten their elbows against your resistance. Compare to the strength in uninjured arm.