

## Superman

### Purpose

To prevent overuse injuries or chronic lower-back pain by targeting the erector spinae muscles along the spinal column

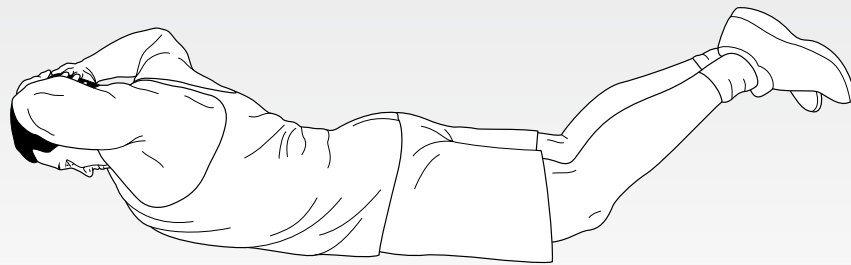
### Procedure

The athlete should do the following:

1. Lie prone on the floor with the arms fully extended overhead.
2. Lift both arms and both legs simultaneously.
3. Hold this position for one to five seconds and return to the start position.

### Variation

Lift the right arm and the left leg and then lift the left arm and right leg in an alternating pattern.



## Hyperextension

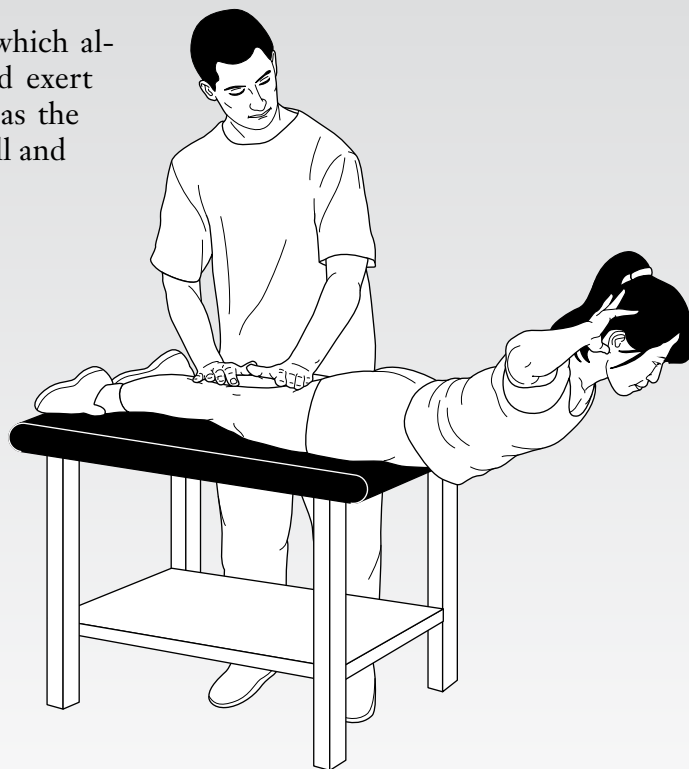
### Purpose

To strengthen the erector spinae, which allows the lower back to absorb and exert greater forces during such actions as the service motion in tennis or volleyball and the overhead throw

### Procedure

The athlete should do the following:

1. Lie prone on a table with the trunk and upper body hanging off the end.
2. Hold the hands behind the head while a partner holds down the lower body.
3. From a lowered starting position, raise the upper body until it is in line with the rest of the body or until the back is tight.
4. Then lower the upper body to a 30-degree angle or to the point just before the lower back curves.



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## Reverse Hyperextension

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**Purpose**

To strengthen the erector spinae to prevent injury and chronic back pain

**Procedure**

The athlete should do the following:

1. Lie on the abdomen on a table, letting the legs hang off the end.
2. While keeping the feet together, slowly raise and lower the legs.

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## Russian Twist

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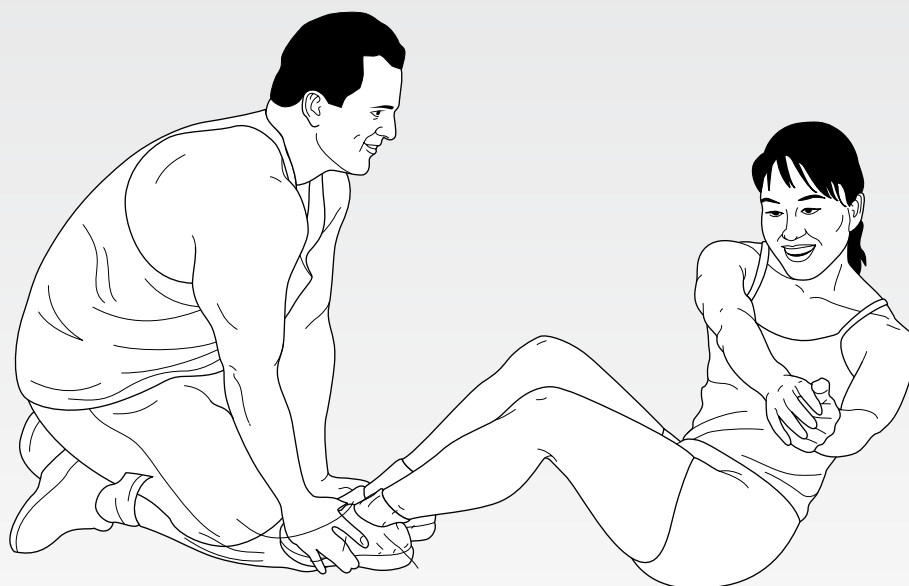
**Purpose**

To enhance trunk rotation by working the obliques

**Procedure**

The athlete should do the following:

1. Secure the feet on the floor, with the knees bent and the body leaning back at a 45-degree angle.
2. Hold the arms straight out from the shoulders so that they are parallel with the thighs. Holding a weight increases the resistance of the exercise.
3. Rotate to the side by turning the shoulders until the arms are at a 90-degree angle with the body.
4. Then make a full twist to the opposite side. Over and back constitutes one repetition.



## Crossover Crunch

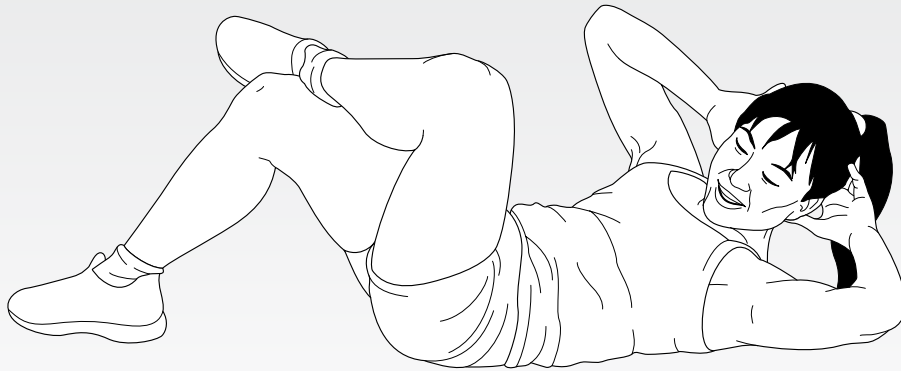
### **Purpose**

To strengthen the internal and external oblique muscles of the trunk, which are responsible for trunk rotation

### **Procedure**

The athlete should do the following:

1. Lie on the back with one knee bent and the same foot flat on the floor. Bend the opposite knee so that the heel rests on the other knee.
2. Hold the hands behind the head with the elbows out to the sides.
3. Curl the upper body so that the elbow opposite the elevated knee moves toward the elevated knee diagonally. Refrain from pulling the head forward with the hands.
4. Repeat this movement on the opposite side.



## Seated Trunk Circle

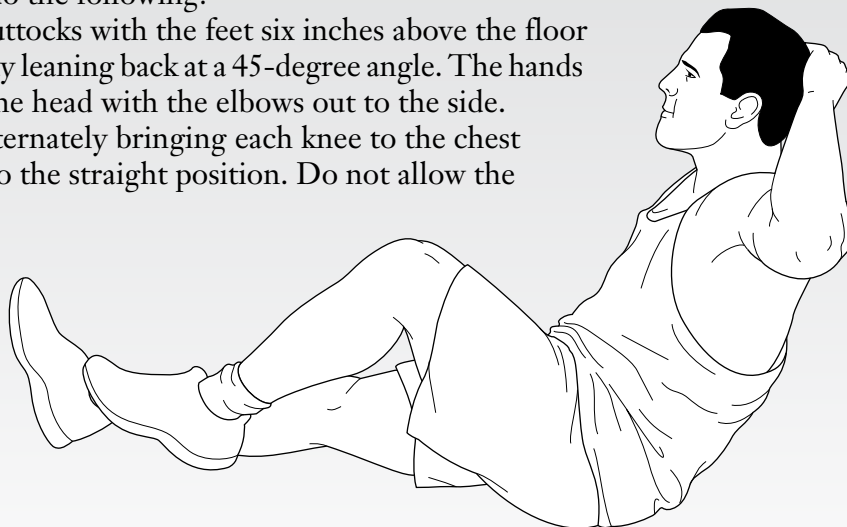
### **Purpose**

To strengthen the entire abdomen and trunk more than the basic abdominal exercises

### **Procedure**

The athlete should do the following:

1. Balance on the buttocks with the feet six inches above the floor and the upper body leaning back at a 45-degree angle. The hands are held behind the head with the elbows out to the side.
2. Cycle the legs, alternately bringing each knee to the chest and returning it to the straight position. Do not allow the legs to rest.



## Side Raise

### **Purpose**

To strengthen the trunk and lower-back musculature—rectus abdominis, erector spinae, serratus anterior, transverse abdominis, obliques, and gluteals

### **Procedure**

The athlete should do the following:

1. Lie on the side with the arms at the sides.
2. Have a partner hold the feet down, or if no partner is available, place the soles of the feet firmly against a wall or other support. This makes the exercise easier to perform and better isolates the working muscle groups.
3. Lift the torso off the ground, hold for two seconds, and then lower it back to the ground. During the lift phase, imagine touching the head of the humerus (middle deltoid) toward the ceiling.
4. Repeat the exercise on the opposite side.

### **Variations**

Clasp the hands together above the head and lift the torso and arms toward the ceiling. Increase the time interval during the lift as needed.

## Hip Rotation

### **Purpose**

To strengthen the rectus abdominis, obliques, and iliopsoas

### **Procedure**

The athlete should do the following:

1. Lie on the back with the hips flexed and knees flexed, and the arms and hands out to the sides for stability.
2. Rotate the hips and trunk to one side until they touch the ground.
3. Keeping the knees together, rotate them all the way until they touch on the other side. Touching both sides completes one full rotation.

