

## What is Plyometrics?

Plyometrics is a form of training that is used by athletes to load their muscles an energy to produce power and explosiveness. This type of training enables an athlete's muscles to reach maximum power in a short time. The maximum power is loaded into the muscle by an Eccentric movement (Lengthening/Stretching) action, followed immediately by a Concentric movement (Shortening) action.

The Eccentric movement phase (Lengthening/Stretching) is caused by, when a weight is lowered down i.e. Leg Press being lowered on a Negative, by this happening the muscle is being stretched to produce an elastic energy which is then stored into that muscle area. Immediately after the Eccentric movement, comes the Concentric movement phase (Weight being pressed) with the stored elastic power being produced into a greater force of power.

## What are the Benefits of Plyometrics?

The benefits of applying Plyometrics into an athlete's training routine can have great effects on their performance in their area of sport. As Plyometric training produces stored power in muscles from the movements of eccentric (lengthening/Stretching) into concentric (Shortening), it would allow an athlete to utilise this power into jumping vertically higher, and increase speed and quickness.

Plyometric training is very good sports such as:

- Basketball
- Football
- running
- jumping
- Rugby
- mixed martial arts
- Boxing
- Volleyball
- Netball

## What are Plyometric Exercises?

Plyometric exercises are as follows:

### **- Plyometric push ups**

(Push ups but push off the floor then back into press up position and repeat).

### **- Single arm throws**

(Using a medicine ball throw it in the air then catches and repeats)

### **- Side throws**

(Using a medicine ball, stand side wards near a wall and twist your body so that the ball hits the wall and bounces back for you to catch and throw again.

### **- Slams**

(Take a medicine ball and throw it on the floor when it bounces catch it and repeat the movement again)

### **- Bounding**

(Jogging but, pushing each leg off the floor)

**- Zig zag hops**

(Hopping side to side)

**- Lateral box jumps**

(Jumping from one side of a box to the other side without rests in between)

**- Squat jumps**

(Squat down then explode up straightening the body then straight back down into squat position)

**- Depth jumps**

(Standing on a chair or high bench, jump down then explode and jump forward)

**- Squat throws from chest**

(Squat down then throw ball to wall from chest as you jump up)

**- Hurdle jumps**

(Line of little jumps (like tyre jumps) that you have to jump over each one)

**- Wall throws**

(Using medicine ball, throw against wall and catch.)

**- Rotations**

(Hold a medicine ball and twist hips)

**- Sit up then throw**

(Do a sit up, but as you come up throw the ball against a wall then catch it again and repeat)

**- Push away leg raises**

(Hold on to some ones ankles and bring your legs up then the other person pushes your legs down but don't let your feet touch the ground)

**- Medicine ball twists**

(Stand back to back with a partner and pass the ball to each other)

**- Pulsing dips**

(Bench dips but faster and explosive)

**- Burpees**

(Squat down in a frog like position then jump up and straight back down)

**Knee jumps**

(Jumping as high as you can but bring your knees up to your chest)

**Double stair jumps**

(Jumping two steps at a time)

**Exercises should be done in 3 sets and 8-10 reps.**