



RESISTANCE TRAINING

Resistance training conditions muscles, joints and ligaments and is an effective training technique for developing muscular strength, power and endurance. To be effective, the training load (resistance) must be great then that to which the muscle has previously been accustomed.

Training Guidelines			
	Maximal Strength	Power	Muscular Endurance
Repetitions	1-6	4-10	15-30
Sets	3-5	3-5	2-3
Rest (mins)	3-5	3-5	0-1
Speed	Slow/med	Explosive	Med/fast
Weight (% max)	90-100%	80-90%	40-60%

Recovery

Because resistance training is strenuous it is important to allow adequate recovery (24-48 hours) between sessions. Strength training should only be performed on alternate days unless performing a split routine; that is, training is divided into two sessions. (e.g. arms and legs are trained one day with chest, back and shoulders trained the following day). Each body part can still be trained up to 3 times per week on alternate days.

Resistance Training in Younger Players

It is suggested that resistance training may also enhance the performance of U21 and secondary school players. However it is important to be aware that **players at this age are still immature in their musculoskeletal system**. They will be more prone to injury during the growth process and all training should be carefully structured and supervised. The main precautions are:

- Players *should not* work with maximal resistances or heavy weights
- The emphasis should be on technique rather than on applying maximal stress
- Programmes are realistic and based on the needs and capabilities of each individual

Training Methods:

1. Weight Training
 - Body Weight
2. Machine Weights
3. Dumbbell Circuit / Bungee Cords / Plyometrics / Med Ball exercises

1. Body Weight Programme:

Reps x10-15 each

Sets 2-3

Rest 30 sec in between each set

1. Arm steps (prone hold position with a box/step) lift one arm at a time on to the step and back down to original position
2. Squats
 - progress to squat and ball press above head
3. Press Ups (toes)
4. Lunges alternating legs on the spot
 - progress to lunge and twist 10 each side, further progress to multi-directional lunge = forward, side, back x 12
5. Step ups
 - 30/60sec each leg, stand up nice and tall, core on, drive up through heels
6. Bicep Curls
7. Balancing on one foot 30 sec each leg, progress to eyes closed
 - progress further to adding ball passes x10 each leg (eyes open!)
8. Tricep Dips
9. Calf Raises
10. Sit Ups

2. Weight Training for Power programme (Machine Based):

Reps x9

Sets 2-3

Rest 30 sec in between each set

1. Quadriceps
 - Half squats/Leg Press
2. Pectorals
 - Pec Dec
3. Triceps
 - Tricep Extension
4. Calf Raises
5. Latissimus Dorsi
 - Lat Pulldown
6. Bicep
 - Bicep Curls
7. Power Step up with Dumbbells
8. Upper Body
 - Bench Press
9. Lunges with dumbbells
10. Sit ups

3. Plyometrics

An effective way to improve speed through a balance of speed training and plyometrics (power training). Care must be taken to ensure:

- Correct technique is maintained at all times
- A good warm up and cool down are performed
- A good surface is used (grass, sprung floor or carpet)
- Supportive footwear is worn

Player	Senior	U21	Secondary	Umpire
Reps	5-10	5-8	3-5	3-5
Sets	2-4	2-3	1-2	1-2
Rest between sets (mins)	2-3	2-3	2-3	2-3
# exercises	4-5	3-4	3-4	3-4
Sessions per week	2-3	2	1-2	1-2

Activities include:

Low Intensity Plyometrics	
<i>Skipping</i>	Single, alternate or double leg action. Emphasise fast feet. Keep head up and body upright, with feet shoulder width apart.
<i>Rope Jumps</i>	Attach a rope at waist height at one end and to a chair at the other (so the rope inclines/declines). Perform double foot jumps, side to side, forward and back. Start at the low end and gradually work up to the high end as power improves.
<i>Point Jump</i>	Mark out 5 points in a star formation and label 1,2,3,4,5. Perform double foot jumps in order. Aim for height and an explosive take off.
<i>Heel Flicks/Butt kicks</i>	Aim for fast footwork and keep body and head upright. Keep knees in line with hip during each flick and pull with hamstrings.
<i>Step Ups</i>	Use a knee height box step up and straighten legs at top position.
<i>Lunge Jumps</i>	Stand with hands on hips and feet 1 metre apart. Bounce twice and on the third jump change front leg. Aim for a fast change and height.
<i>90-180 Jump Turns</i>	Stand upright with feet shoulder width apart and hands on hips. Perform two small jumps on the spot and on the third jump aim for height and turn 90 degrees to the right then repeat to the left.

High Intensity Plyometrics	
<i>Alternate leg bounding</i>	To develop explosive hip and leg power for sprinting. Push off with back leg driving knee high and forward. Aim for height and distance and extend driving foot upon landing.
<i>Bench blasts</i>	Use a 30cm bench and start with one foot on the bench. Push off with front leg and land with alternate leg on bench. Repeat the exercise immediately.
<i>Bench Jump</i>	Start on one side of a 30cm bench and perform a double foot jump laterally across the bench
<i>Vertical Jump</i>	Gain maximum height with each jump. Bend knees and drop quickly to half squat position, then explode as high as possible with full body extension.
<i>Double foot cone jump</i>	Place 6 cones 50cm apart. Jump double foot over each cone aiming for height. At landing react explosively to jump the next cone. Variation – Place 2 cones 50cm apart and jump sideways to the right over each cone then repeat to the left.
<i>Step Ups or Lunge Jumps with resistance</i>	Start with 2-4kg dumbbells or a med ball. Emphasise technique before increasing resistance
<i>Kneetuck jumps</i>	Perform a vertical jump, drive knees high toward chest and aim to touch palms of hands held at waist height. Upon landing aim for minimal ground contact time. ¹ .

4. Med Ball Activities

Start with a 2-3kg med ball and emphasise technique before progressing to a heavier resistance,

- *Med Ball throws:*
 - o Kneeling: Isolate upper body. Release each pass with a powerful thrust emphasising speed
 - o Backward throw: hold the ball between your legs and squat down and then toss the ball over head (behind)
 - o Overhead throw: stand with ball overhead, step forward and throw the ball for distance
 - o Sit up and throw: with a partner
- *Med ball trunk twist/toss*
 - o Figure 8: Seated with legs straight out in front. Lift right leg and pass ball under from inside to outside then pass it over right leg. Repeat on left side.

- Crunchies: On the ground, place ball between legs. Pull knees towards chest, return to start position, repeat immediately. (Support trunk with hands behind your body).
- Lying rollover: Lying on your back with knees bent. Place ball between knees and rotate hips to lower ball to the ground, alternating sides.
- Side swing kneeling: Swing ball to the right, then to your left, back to right and throw to partner
- Seated Chest pass