



THROWING EFFICENCY DRILLS



Prepared by:

Tim Coyle – National Fielding & Wicketkeeping Coordinator

Andy Utting – National Throwing Consultant



THROWING EFFICIENCY DRILLS

AIM:

Throwing efficiency built through gradual increase of the volume of throwing (progressive throwing program)

Implementation of rhythm and timing drills designed to increase movement experience and kinaesthetic awareness (feel)

KEY COACHING POINTS:

Drills to be performed at each training session or preferably 3 times per week (minimum)

Players will work in pairs and each have a catching mitt

Players should aim for 5-10 throws per activity in the early stage increasing this to 15 throws once the volume of throwing is at the required level. (ie: 3 weeks of throwing)

When warming up players should keep some arc in the path of the ball with throws at low intensity

When throwing players should aim for a small target at all times (ie: logo on shirt, partner's mitt)

The

throwing action should be:

**SMOOTH
CIRCULAR
CONTINUOUS**

These drills can be performed by players of all ages with volume and intensity monitored by coaches depending on the development stage of the players concerned.

For young players (10-15 years of age) or players of low skill, drills 1 to 4 should be the focus to develop proficiency around ball release, use of the front side and continuous ball path. The drills should be continued until players have achieved the correct ball release, efficient use of the front side and acceptable accuracy at low intensity.

As the players achieve the above, the gradual introduction of other drills is suggested always keeping the level of difficulty and intensity appropriate to the level of skill.



All throwing programs should be combined with a shoulder health program. Consult medical or physical performance staff for the appropriate strength and mobility programs.

THROWING EFFICIENCY DRILLS

Drill 1:

Players in pairs (with mitt) stand 10m apart

Chest on to partner with feet square

20 easy throws to partner's mitt

Ensure athletes are throwing across the seam and that the ball rotates with true backspin (straight up and down)

Drill 2:

Players remain in chest on position with feet square 10m apart

Using the front elbow like the sight of a gun, align shoulders towards target

10-15 throws to partner's mitt

Drill 3:

Players remain in chest on position with feet square increase distance to 15m apart

Ensure the front side is active (palm of mitt to target, palm of mitt to chest) to help generate both direction and rotational velocity. The thumbs (of both hands) should point towards the ground during this movement

10-15 throws to partner's mitt

Drill 4: Tap and Go

Athletes complete the same movement as the previous drills, but the focus is now on the rhythm and timing

Players remain in chest on position with feet square (15m apart)

Introduce 'tap & go' throws to partner's mitt

Hold ball in front of chest with hands 10cm apart tap ball to front hand (mitt) and continue to a smooth throwing action with front hand to chest

As soon as the ball leaves the glove it starts accelerating towards the throw without stopping.



10-15 throws

Drill 5: Single leg throws with tap & go

Players stand on left foot only (right hand throw) tap & go and release the throw concentrating on smooth continuous action whilst retaining balance and accuracy.

Switch to standing on right foot only (right hand throw) and repeat

Reverse for left hand throwers

10-15 throws

Drill 6: Maximising Trunk Rotation

Standing side on but with your throwing side facing your partner

With your feet still, tap and go, rotate 180 degrees, ensuring you get your front side in line to your partner and throw as per previous drills

10-15 throws

Drill 7: Tap and go from a side on position with a step.

Throwing over strong braced front leg and continuing toward the target

Tap the ball in the mitt, release and stride towards your partner – momentum to target.

Drill 8: Back to fronts

Introduce legs into throwing action. Stretching forward with arms straight and ball well in front of front foot. Take the ball back past the back leg, transferring weight then through the throwing action finishing with weight over the braced front leg in a balanced position with eyes level.

Drill 9: Jump backs

Side on position – take 4/5 short steps back and forth before a large jump and load onto back foot before transferring to front foot and throw.

Drill 10: Arm circles/swings

Swing arms in circles and find timing between feet and arms through the throwing action.

Alternatively swing arms across the body below the waist and complete as above



Start with arm circles in front of chest and coordinate the timing of the crow-hop such that you maintain the momentum of the ball through the arm-swing. Then try with waist height arm swings. Try 2 variations with the same concept, but slightly different timings.

Drill 11: Turn and burn/throwing with run up

Identify target then turn back to partner and run backwards before turning and moving into throwing action straight away. Momentum to target.

Alternatively run in aggressively at target (as in bowling run up) and throw on the run.

Drill 12: Ground balls

Practice fielding ground balls and throwing to a target without the mitt (receiver can still use mitt). Include the following points:

Stay low, replace your feet, follow your throw. In this shorter throw 20-25m a large crow hop is not always need. Focus on quick replacement of feet to encourage low body position.

Ensure active front side (as with previous drills) but without the feedback provided by the mitt



DEVELOPING THROWING ATHLETES

The development of the throwing athlete does not have to be a complicated process. Even in the absence of extensive or specific throwing expertise, coaches can help athletes develop their ability to throw if they understand basic learning theory and progressive overload.

As we all know, athletes learn through the following:

- Hearing an explanation of a skill/activity
- Seeing a demonstration of a skill/activity
- Being given an opportunity to practice

Athletes are now entering cricket programs with lower levels of physical competence than they ever have before, so even without detailed explanations, or fancy throwing drills, athletes will improve their throwing if given opportunities to practice. Using an outcome-based learning approach (eg. always try to hit a small target) and providing feedback on their results is more than adequate.

Throwing however, can be very stressful on the body, so doing too much too soon can cause injury. Introducing moderate amounts of throwing, and then increasing this (both volume and intensity) over time will develop the movement efficiency, increasing both power production and injury resistance as well as the level of skill of the athlete.

In order to improve the throwing of their athletes, coaches must:

- ***Provide athletes opportunities to throw, and***
- ***Use progressive overload to increase their volume and intensity over time***

Here is an example of a simple throwing session that regulates both the volume and intensity of throwing:

2min @ 10m

2min @ 15m

2min @ 20m

2min @ 25m

2min @ 30m

Assuming athletes throw at a rate of ~6 throws per minute this has them complete 60 throws in 10 minutes. This format allows for some individual flexibility whereby athletes who feel good can make more throws, and those who don't feel as good on the day can throw less, and it's simple for coaches to manage with a stopwatch.

You can also regulate throwing volume by specifically counting throws but this is often more difficult to manage, so you may be able to get athletes to count their own throws (eg. 5 throws at each distance before they move back).



Many coaches report they don't have the time to spend developing throwing in this manner but there's no reason why this managed throwing volume cannot include other skills including fielding ground-balls and throwing at stumps, or throwing to batters in the nets.

After any period of no throwing (eg. off-season break or after an injury), athletes should participate in a "Return to throwing" program that gradually develops some conditioning in the body to tolerate a normal training throwing load (please refer to "Return to throwing" program document).

When warming up athletes should focus on the following:

1. **Always aim at a small target** (no bigger than a 10 cent piece) and keep the eyes locked on this point throughout the throw - this will help with the direction and keep the body under control
2. **Use a loose, relaxed arm action** and ensure there is some 'arc' in the throw (reduces stress on the body and develops the most efficient motor pattern). Hard/flat throws should only be attempted after a thorough and specific warm up.

Here are some examples of appropriate throwing loads by age groups:

U13

In-season: 10mins 3-4xPW (10-30m)

Off-season: 10mins 2-3xPW (10-30m)

U15

In-season: 11mins 3-4xPW (10-35m)

Off-season: 11mins 3xPW (10-35m)

U17

In-season: 12mins 4-5xPW (10-40m)

Off-season: 12mins 3xPW (10-40m)

U19

In-season: 13mins 4-5xPW (10-45+m)

Off-season: 13mins 3xPW (10-45+m)



Throwing athletes should have a complete break from throwing at some stage throughout their annual calendar to facilitate complete recovery and regeneration from the stresses of a busy season.

The vast majority of throwing injuries are NOT overuse injuries, rather they are *overload* injuries, meaning they have not done the appropriate preparation in order to tolerate their current level of throwing. If you can regulate your throwing program (volume), even if throwers do develop soreness, you should be able to work out how much throwing an athlete can tolerate before getting sore.



PROGRESSIVE THROWING PROGRAM (RETURN TO THROWING)

After a period of no throwing (either from an injury or just from a break) it's important to progress both the volume and intensity of throwing gradually to prevent the onset of further injury. A progressive throwing program should be included as part of the rehabilitation process to condition the athlete for a 'normal' volume of work/training.

The purpose of the following throwing program is to progress an athlete from a state of 'no-throwing' to that of normal training. *Progression from one level to the next is only appropriate if the athlete remains pain free!* Each day of throwing should be separated by a day of rest (no throwing) until level 7 is completed.

Level 1:

- 20 throws at 10 meters
- 10 throws at 15 meters

Total: 30 throws

Level 2:

- 20 throws at 10 meters
- 20 throws at 15 meters

Total: 40 throws

Level 3:

- 20 throws at 10 meters
- 20 throws at 15 meters
- 10 throws at 20 meters

Total: 50 throws

Level 4:

- 20 throws at 10 meters
- 20 throws at 15 meters
- 20 throws at 20 meters

Total: 60 throws

Level 5:

- 20 throws at 10 meters
- 20 throws at 15 meters
- 20 throws at 20 meters
- 10 throws at 25 meters
- 10 throws at 15 meters

Total: 80 throws



Level 6:

- 20 throws at 10 meters
- 20 throws at 15 meters
- 20 throws at 20 meters
- 20 throws at 25 meters
- 10 throws at 15 meters

Total: 90 throws

Level 7:

- 20 throws at 10 meters
- 20 throws at 15 meters
- 20 throws at 20 meters
- 20 throws at 25 meters
- 10 throws at 30 meters
- 10 throws at 15 meters

Total: 100 throws

If all goes according to plan and the athlete remains pain free, this Progressive Throwing Program will take 14 days, however if the athlete does experience any pain, additional days of rest should be taken until the athlete is pain free again. The athlete should then resume the throwing program at the level they were at when they first experienced pain and only progress to the next level once they are pain free after 1 days rest. If returning from injury or a significant break the supervising coach/therapist may advise the athlete to progress at a slower (more appropriate) pace ie. at least 2 pain-free days at each level before progressing.

During this throwing program the athlete should not participate in any other throwing. Only after completing Level 7 is the athlete permitted to start throwing on consecutive days, participate in game play or complete additional fielding/throwing drills.

Progression from one stage to the next is only appropriate if the athlete remains pain free!