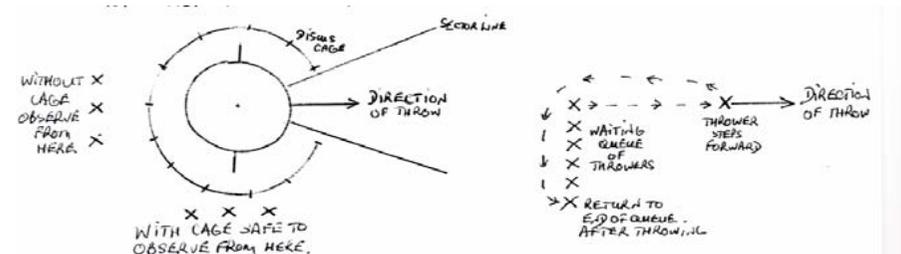


SAFETY

Care needs to be taken as the discus can sometimes fly off as a tangent if control is lost. While observing or waiting to throw, stand outside of discus cage and away from the netting. If a cage is not available stand at the rear of circle opposite to the direction of release.

When a group is involved form a queue in a straight line., The athlete throwing the discus steps forward, checks landing area and surrounds, then performs the throw. After completing the throw the athletes goes back to the end of the queue to observe other athletes throwing the discus one at a time in the same direction! When everyone on the group has finished their individual throw “all retrieve” their discus. Together, at the same time. Not throwing or rolling but carrying their discus back.

WATCH OUT FOR LEFT HANDERS!! Distance markers, lines or targets can be used for motivational purposes.



Do not allow athletes to throw or roll the discus to each other or try to catch it in flight

Discourage athletes from stopping rolling or skidding discus with foot or hand.

Remind athletes about checking landing area and surrounds before throwing.

Encourage athletes to wear flat shoes and have a towel handy.

Make young athletes aware of the rules by gradually introducing them during training. Most importantly remind them about the rules before competitions.

SOME IMPORTANT RULES

Athletes should commence throw from a stationary position within the circle.

Allowed to touch inside of circle rim but not top of rim or outside of circle during a trial

A trial maybe interrupted once only.

Athlete may lay the discus down inside or outside the circle.

May leave the circle with first contact behind extension of the line through the centre of the circle

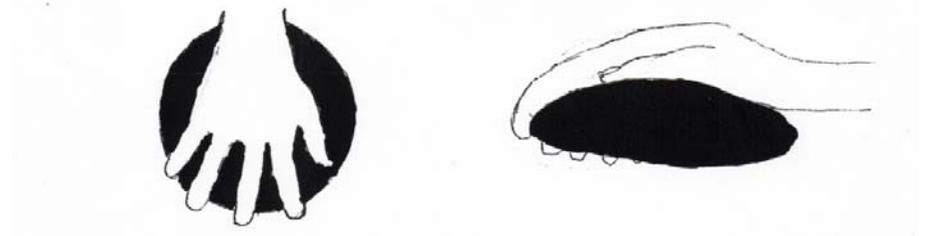
Do not leave the circle till discus has landed in sector

On sector line is out

From a standing position, leave the circle behind extension of the line through the centre of the circle.

HOLD AND RELEASE

Discus rests on last joint of comfortably spread fingers and flat against palm. Thumb rests on top of discus. Do not grip with all fingers and thumb. Discus is released by spinning it off the index finger in clockwise direction with palm facing downwards and thumb on top.



Familiarisation Drills:

- (i) Swinging discus backwards and forwards
Do with both arms
- (ii) Figure 8 swings
- (iii) Spins into air over top of cage or tree branch. Emphasise use of legs. Start left foot in front, body weight over rear right leg.

Both feet pointing in direction of throw then push off right foot to bring right hip and throwing arm into action and step forward with right foot to release discus over braced left leg

- (iv) Spinning discus hand to hand while waiting to throw.
- (v) Spinning discus with a swinging arm forward to make discus roll at a target.

Weights can be introduced to 15 years and up but strictly supervised.

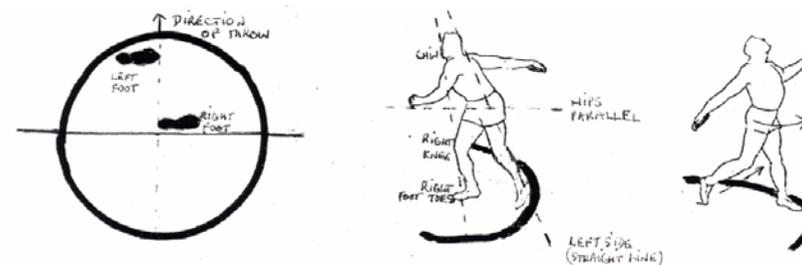
Exercises for strengthening fingers and wrists;

- (i) Both hands on a wall, leaning on thumb and fingertips. Palms not touching wall. Fingers close together. Lean towards wall, relax stiff fingers till base of fingers touches wall. Then stiffen wrists and fingers to push away from the wall
- (ii) Using heavier, larger discus
- (iii) Medicine Ball finger and wrist flips
- (iv) Using light shot to throw discus style be careful to remind athlete to keep elbow slightly bent fingers and forearm braced to avoid injury
- (v) Holding dumbbell or shot in hand twist wrist clockwise and anticlockwise. Wrist curls, holding dumbbell or shot. Bend wrist up and down

Sit ups (legs on chair)	Lying on back, lift shoulders with arms across chest - 20 reps
Triceps	Hands on chair behind, lower buttocks to floor and lift by extending arms back to starting position - 20 reps.
Leg circles	Lying on back, do small circles with raised straight legs together or one leg at a time - 10 each leg clockwise +10 each leg anticlockwise
Lungs	Long step forwards, front leg bent back leg straight, long step sideways, inside leg bent and outside leg straight - 5 each leg each way
Scissor Jumps	Backwards and forwards - 20 reps
Lateral jumps	out sideways and back - 20 reps
Calf raises	Stand on edge of steps with toes of both feet lift heels up and down - 15 reps toes pointing outwards - 15 reps toes pointing straight - 15 reps toes pointing inwards

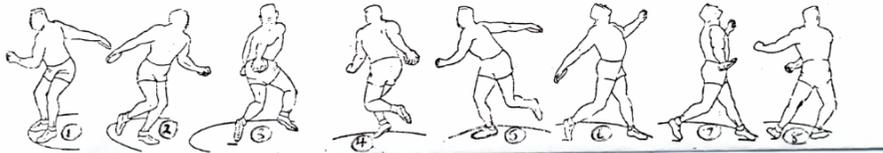
STANDING THROW

Stance similar to shot put. Throwing position achieved after a turn. Feet comfortable distance apart. Front left toe and rear right heel in line, chin, right knee and toes of right foot in vertical alignment, to maintain balance. Left side of body forms a straight line. This means body weight will be over bent rear right leg shoulders and head turn back to rear opposite to direction of throw. Left arm wraps around chest. Hips remain parallel to direction of throw to achieve wind up position (torque). Delivery action starts by the bent rear right leg, pivoting on the ball of the right foot (knee "inwards", heel "outwards") twisting towards the front of the circle. Extension of the right leg forces the right hip towards the front of the circle and the braced left leg. Keep left shoulder up "Throw tall"! Discus is released with a swinging action of the throwing arm. Reverse, spinout or combination used to stay in circle and avoid fouling.



Discus is thrown with a "Slinging" action and released with a flat spin, clockwise, off the index finger about shoulder height. Emphasis is on speed and balance, through use of legs, trunk and arm

Introduce Discus throwing by showing a picture sequence, video or a demonstration by an experienced thrower of the complete throwing action. This will give the young athletes a mental image of Discus throwing.



1. Last preliminary swing completed, left foot pivot begins.
2. Weight now over left foot which is pointing in direction of throw
3. Push off from left foot. Swing right leg to Centre
4. Right foot just about to land in centre of circle. Left leg passes right leg
5. Right foot lands and keeps pivoting. Right knee is flexed on landing , shoulders are held back, Discus arm trailing to complete wind up.
6. Thrower is now in delivery position. Body still over rear right leg. Left foot planted at front.

Knee flex	Lying on back, pull knees to chest, then straighten legs, keep feet off floor - 10 reps
Hip Extensions	Lying on stomach, arms and legs straight, lift opposite leg and arm together - 20 reps
Arm step ups	From push up position, lift one hand onto chair followed by other hand, do same back down to floor - 10 reps each arm
Sit ups(with flex)	Lying on back, arms straight by side, legs start straight, bend knees, lift shoulders, reach with straight arms to touch ankles - 20 reps.
Hip rolls	Lying on back, bend knees, roll from side to side - 20 reps.
Leg scissors	Lying on back legs straight, lift up and down then across - 10 each way
Leg step ups	Step onto chair forwards followed by other leg and back down off chair - 10 each leg

GENERAL STRENGTH

Start with exercises using own body weight as a resistance mainly on a variety of exercises for different parts of the body.

Push ups for shoulders

Finger and wrist flips off wall

Sit ups for abdominal

Trunk and back exercises

Leg strength through step ups, calf raises, single or double legged hopping. Hurdle hopping can be introduced later.

15 years and up can be introduced to core lifts like snatch, cleans, squats and bench press. Initially with machines followed by free weights like dumbbells and barbells. Strict supervision required at all times.

STRENGTH TRAINING WITHOUT WEIGHTS

(All ages) – takes about 20 mins

(can be done at home – twice a week or more)

Full squats – Wide stance, thighs finish parallel to floor – 20 repetitions

Sit ups (with twist) Lying on back, knees bent, hands behind head. Lift shoulders to touch elbow on opposite knee
- 20 reps.

Push ups Feet on chair 10 reps Hands on chair 10 reps

7. Push off right foot to push right hip to front. Keep left shoulder up. Release of discus is initiated by bracing left leg and pushing right side of body against the left side. Followed by the release with a swinging action of the throwing arm about shoulder height.
8. After release thrower reverses feet to remain in circle and avoid fouling.

DRILLS FOR STANDING THROWS

- (i) Imitation standing throws with a towel, sling ball or light shot (heavier than discus)
- (ii) Heavier discus if shoulder strength sufficient
- (iii) Two handed medicine ball throws – backward overhead and over shoulder (hammer style). Do both sides. Use legs. Keep feet still, twist hips and shoulders.

SHOULDER STRENGTH

Required for slinging action in delivery. Especially by young athletes. Push-ups-normal, incline or on knees
Arm step-ups onto and off a bench. Arm flings – horizontal (across chest), vertical (180 degrees, up and down in front of body.) Lateral arm lifts. Out to side; up level with shoulders.

TRUNK STRENGTH

Required for windup and delivery

Abdominal exercises.

Back exercises

Lots of mobility exercises like hip rolls, seated twists and rotators.

LEG STRENGTH

For speed and balance in discus throwing

Hopping – single or double legged. Up and down steps or grass slope.

Later over hurdles. As well as many other plyometric exercises, squats, calf raises and step ups can assist in strength in legs

SOME FUN COMPETITIONS

Spinning Discus for Distance – two straight lines of athletes facing in opposite directions. Each athlete has a discus, on signal all athletes throw, spinning, rolling their discus as far as possible. Winning team is first team back to throwing line with opposing teams discus.

Football – four markers set up to indicate goal and points post. Team scoring highest score wins. Aim is to spin Discus along ground between the posts. Be careful to place all athletes some distance on either side of the goal and points posts to avoid being struck by rolling discus. or use one set of goals only. Only one thrower to throw at any time.

- (v) If gym available, skipping, exercise bike or a circuit if exercises for upper body, trunk and legs, followed by stretching
- (vi) Exercise with discus, should be done before throwing it

THROWING AND DRILLS

Aim at doing about 20, increasing to 30 throws per session including drills. Try to arrange non throwing drills to imitate next throwing drill between throws.

‘Specific Strength’ usually done with heavier implement. Not too heavy!, or other resistance while imitating various movements involved in discus throwing.

GENERAL CONDITIONING

Maybe one session concentrate on agility, mobility and speed through various types of running, endurance, short sprints and starts. The other session multiple jumps like hopping, little bit of bounding and hurdling.

POWER EXERCISE

Would include single jumps for distance or height. Also include depth jumping and other dynamic plyometric exercises. How much depends on maturity and strength of athlete.

TRAINING:

Recommend twice a week for 10-14 year olds (1-1 ½ hours duration)

At least three times a week for 15 years and up (1 ½ - 2 hours duration)

Sample session (10-14 year olds)

Warm up 15 minutes

Throwing and drills 20-35 minutes

General conditioning 5 – 10 minutes

General strength exercises 10-15 minutes

Warm Down 10-15 minutes

Sample session (15 years and up)

Warm up 15-12 minutes

Throwing and drills (include specific strength) 35 – 45 minutes

General conditioning 10 minutes

Power exercises 5-10 minutes

General strength 10-15 minutes

Warm down 10-15 minutes

WARM UP or WARM DOWN

- (i) Easy jog and stretching
- (ii) Doing a continuous series of sprint and hurdles drills followed by stretching
- (iii) Playing ball games like soccer, touch football, Aussie rules or basket ball followed by stretching
- (iv) Running games including relays, shuttle runs backwards, forwards, sideways, in and out, around and many others, followed by stretching

TURN

Accelerates Discus on a longer path. Allows feet to get ahead of trunk to maintain torque (wind up). Emphasise footwork and upper body control and balance.

Introduce turning skills with:

- (i) 360° Rotations – turns anticlockwise every few steps whilst jogging along a line
- (ii) 90° 180° 270° 360° Two logged jumps:- anticlockwise and reverse on a line.
- (iii) Pivoting 180° on a line:- Start both feet on line, comfortable distance apart, knees bent. Put body weight over left leg and pivot on left foot. Knee “outwards” heel “inwards” till left toe points down line. After 180° rotation place right foot on line, transfer body weight to right leg. Then position on right foot, knee “inwards”, heel “outwards” till right toe points back down line. Can also be done around inside of circle rim. Emphasise position of body weight and heels to remain off ground, knees remain bent for balance.
- (iv) Pivoting in circle 90° 180° 270° 360°. Do with both legs
- (v) Step backs – Right foot already in centre of circle, left foot at back of circle. Start by transfer of body weight to right leg. Right foot pivots anticlockwise under body and left foot pushed past right foot (keeping knees close) to front of circle to arrive in throwing position.

- (vi) Turns up and down slopes or steps
- (vii) Repetition (continuous) turns
- (viii) South African Drill – (Jump Turn) to drive out of the back of the circle.

RELEASE

Discus should be released about shoulder height. Throwing arm finishes across front of face after release.

Into the wind release with a low flat spin

With the wind release with a high flat spin

Right crosswind is best for right handed throwers

If Discus flies off to right during premature release check hold, check if athlete is pivoting and extending on the right leg to bring hip around. Check strength of shoulders.

If Discus goes left, check if athlete is using arm only, leaning forward and lowering left shoulder to pull Discus around (“Bowling”). Check of torque (windup) is achieved or unwinding (“opening up”) too early.

Hold drills with heavier Discus (not too heavy and not too much!), also use lighter discus for improving speed or release.

RECOVERY

Reverse with or without spinout, used to stay in circle after release that is, exchanging position of feet. Right foot to front of circle and left foot back. Accelerates arm and slinging action as well.

To improve reverse and general agility for discus do twist jumps over a car into a jumping pit or onto a high jump bag as follows:

- (i) Start facing forward standing on a chair or box. Jump off forwards facing pit or high jump bag, then jump forwards into pit or onto high jump bag
- (ii) Standing on chair, back towards pit or high jump bag, jump off chair doing 180° twist to land facing pit or high jump bag. Then jump forwards into pit or onto high jump bag, can be done over a bar as well.
- (iii) Start facing forwards, off 180°, up backwards
- (iv) Start facing forwards, off 180°, up 180° forward
- (v) Start facing backwards, off 180°, up 180° backward
- (vi) Start facing forward, off forward, do 360° jump on ground then jump forward into pit or onto High Jump bag.