

SPECIAL OLYMPICS ATHLETICS SPORT SKILLS PROGRAM

THE BENEFITS OF ATHLETICS

The sport of Athletics offers athletes of all abilities and ages the opportunity to compete at their optimum level. Through an Athletics training program an athlete can develop all aspects of total fitness needed to compete in any sport. As with all Special Olympics sports, Athletics offers athletes the opportunity to learn through competitive settings, and the opportunity to be involved with large social settings.

In essence, success in Athletics depends on the athlete's determination and practice habits. Yet, merely by participating in an Athletics training program, the athlete will learn self-discipline as well as the ability to make independent decisions. Most importantly, the athlete will learn life-long fitness skills that will help him or her lead a more productive and independent life.

A PREVIEW OF THE ATHLETICS EVENTS OFFERED

The Special Olympics Athletics program has events appropriate for athletes of all ages and ability levels. Wheelchair athletes are not restricted to participating only in wheelchair races. Athletes with lower motor abilities may participate in Developmental Events and traditional track or field events. Special Olympics athletes can choose from a wide variety of events. Track events require endurance and some favor quick starts and sprints. Field events require eye-hand coordination, agility or coordination. The long jump and shot put events have been modified from the National Governing Body rules to be more appropriate for Special Olympics athletes. In Athletics, every athlete can find at least one event in which he or she can succeed and excel. A complete list of the Athletics events appears later in this Guide in the Official Athletics Rules.

PLANNING A TRAINING SESSION

Each training session should contain the same elements. The amount of time spent on each element will depend on the goal of the training session, the time of season the session is in, and the amount of time available for a particular session. The following elements should be addressed:

1. Warm-Up and Stretches (15-20 Minutes)
2. Specific Event Workouts (15-20 Minutes)
Event #1 of athlete's choice
3. Specific Event Workouts (15-20 Minutes)
Event #2 of athlete's choice
4. Conditioning Workout (15-20 Minutes)
5. Cool-Down and Stretches (15-20 Minutes)
Review day's workout with athlete

WARMING UP

The purpose of the warm-up is to warm the muscles used in training and increase their flexibility. An athlete's muscles will benefit more from the training program if he or she has warmed up properly. The warm-up should include three parts: jogging, stretching exercises, and acceleration runs. Each part plays an important role in preparing the athlete for training, and they should always be performed in the order listed below.

Plan 15-20 minutes at the beginning of each training session to go through a vigorous warm-up. The suggested warm-up described below is an example that progresses from low intensity to high intensity.

1. Jogging

Jogging increases the flow of blood to the athlete's muscles by raising the heart rate above resting level. Jogging at a slow pace will start this action. During the warm-up run, the athlete should use short, quick running steps for 7 minutes. As the flow of blood increases in the working muscles, these muscles become more pliable, and the body becomes more flexible.

2. Stretching Exercises - Major Muscle Groups

Begin with the upper body muscle group to stimulate the flow of blood back toward the heart.

ARM ROTATION

- Stand in an upright position.
- Swing one arm in a circular motion for 30 seconds.
- Swing the opposite arm in a circular motion for 30 seconds.
- Swing both arms in a circular motion for 30 seconds.

STANDING TRUNK (UPPER BODY) TWISTER

- Stand up straight with hands on hips.
- Rotate trunk 45° to the left keeping the hips stationary.
- Rotate trunk 45° to the right keeping the hips stationary.
- Hold each position for 3 seconds.

ABDOMINAL STRETCH

- Stand up straight with feet shoulder-width apart, hands on hips.
- Keeping back straight, slowly bend trunk as far left as possible and hold for 6 seconds.
- Return to starting position.
- Repeat bending trunk to the front, right, and back.

HAMSTRING STRETCH

- Stand up straight with feet spread comfortably apart.
- Bend knees slightly.
- Lean forward from hips and place hands on center of thighs.
- Lower hands to middle of shins.
- Lower hands to touch toes.
- Straighten legs at knees.
- Hold each position for 6 seconds.

CALF STRETCH

- Stand with feet together and face a wall.
- Place hands against the wall and lean forward.
- Keep legs straight. Do not bend at hips.
- Bend elbows slowly, bringing the chest to the wall; leave feet flat on floor and keep the back straight.
- Hold for 6 seconds.

SHIN AND FOOT STRETCH

- Stand in an upright position.
- Hold onto stationary object with left hand.
- Pull right foot back and up with right hand until heel touches buttocks; hold for 6 seconds.
- Slowly lower foot to ground.
- Repeat with left foot.

CURL-UP (CRUNCH SIT-UP)

- Lie on floor with knees bent.
- Clasp hands and rest them on abdomen.
- Keep back straight and slowly come up to "crunch" position (about 45°)
- Slowly return to lying position.
- Repeat exercise 5 times gradually increasing to 10 or more times.

KNEE STRETCH

- Lie flat on mat, both legs straight.
- Pull left leg toward chest, hold with hands until stretch is felt.

- Hold an easy stretch for 30 seconds.
- Repeat with right leg.

BUTTERFLY OR GROIN STRETCH

- Sit on mat with soles of feet together, toes away from groin.
- Place hands around feet; pull body forward until stretch is felt in groin.
- For stability, keep elbows on lower legs.
- Hold an easy stretch for 30 seconds.

UPPER BODY TWIST

- Sit on mat with legs straight.
- Keep right leg straight; cross left foot over the right leg, placing left foot outside of right knee and keeping the left knee bent.
- Bend right elbow, resting it against outside of left knee.
- Place left hand behind the body.
- Turn head slowly, looking over left shoulder until stretch is felt in lower back and side of hip.
- Hold an easy stretch for 15 seconds.
- Repeat with the other side.

HURDLER STRETCH

- Sit on mat with both legs straight, feet upright, toes and ankles relaxed.
- Bend left knee so that sole of left foot rests next to the right knee.
- Lean forward from hips and stretch hamstring of right leg.
- Hold an easy stretch for 30 seconds.
- Repeat with the left leg.

HIP STRETCH

- Squat down on mat.
- Bend left leg at 90°.
- Straighten right leg behind until right knee touches mat.
- Hold hands on ground in front of body for balance.
- Lower hips down to create a stretch in hip and groin.
- Switch leg positions and repeat.

QUAD AND KNEE STRETCH

- Stand and face a wall.
- Place left hand on wall at shoulder height.
- Reach behind with the right hand and hold top of the left foot.
- Pull the heel of left foot toward buttocks to feel stretch in knee and front of leg.
- Hold an easy stretch for 30 seconds.
- Repeat with the other leg.

CALF STRETCH

- Stand facing wall, left foot 3cm from wall and right foot 30cm behind left foot.
- Keep the heels on floor, toes straight.
- Lean against wall with forearms, head resting on hands.
- Keep right leg straight, move hips toward wall until to stretch calf of right leg.
- Hold an easy stretch for 30 seconds.
- Repeat with the other leg.

ARM, SHOULDER, UPPER BACK STRETCH

- Stand on mat.
- Arms straight overhead, fingers interlaced.
- Turn hands over so that palms are up.
- Push arms back and up until you feel stretch in arms, shoulders, and upper back.

- Hold an easy stretch for 15 seconds.

UPPER ARM, SIDE OF BODY STRETCH

- Stand on mat, legs shoulder-width apart, knees slightly bent.
- Hold arms overhead, placing right hand on left elbow.
- Pull left elbow behind head and lean to right side.
- Lean until a stretch in left arm and left side is felt.
- Hold an easy stretch for 10 seconds.
- Repeat with the other side.

3. ACCELERATION RUNS

Acceleration runs increase the athlete's blood circulation and oxygen intake, improve the athlete's running technique, and heighten the athlete's level of physical fitness. Acceleration runs should start out slowly, and increase in speed gradually, yet forcefully. Each successive run should also increase in speed so that by the final run, the athlete performs at about 80 percent effort. Runs should be about 50 meters long, and the athletes should jog/walk back to the starting line. The athletes should concentrate on good running technique during the runs.

Drills

Drills are progressions of learning that start at a low ability level, advance to an intermediate level, and finally, reach a high ability level. Encourage each athlete to advance to the highest possible level.

Kinesthetic movements are reinforced through repetitions of a small segment of the skill to be performed. Many times, the actions are exaggerated in order to strengthen the muscles that perform the skill. Each coaching session should take the athlete through the entire progression so that he/she is exposed to the total of all of the skills that make up an event.

FIELD EVENTS

Softball Throw Skill 1-

GRIP THE SOFTBALL

Assessing the athlete's readiness

____ Athlete has dominance in right or left hand. (If dominance is not demonstrated, set softball on ground and ask athlete to pick it up in one hand. Continue until a favored hand is established.)

Teaching the skill

- Pick up a softball with the dominant (throwing) hand.
- Place the thumb under the ball; the index, middle, and ring finger on top; and the little finger on the side. This grip may vary according to the size of the athlete's hand.
- Apply pressure by squeezing the fingers to keep the ball in the hand.

Suggestions for the teacher/coach

Demonstrate how to grip the softball. Draw fingers on the ball to show proper placement of fingers. Manually place the athlete's fingers on the ball. Have the athlete practice gripping the ball at home.

(Insert figures 1 and 2 here)

Softball Skill 2-

OVERHAND THROW TECHNIQUE

Assessing the athlete's readiness

____ Athlete can properly grip a softball in the throwing hand.

Teaching the skill (right-handed throw)

- Stand, one and one-half strides behind the foul line, left shoulder facing the direction of the throw, feet parallel and a little wider than shoulder-width, with toes pointing forward.
- Raise right arm, elbow pointing back, and hand gripping the ball, so that the ball is held behind the head.
- Bend left arm and hold it in front of the chest.

- Push off the right foot and take one step with the left foot toward the direction of the throw, staying behind the foul line.
- Rotate the shoulders and hips, swinging the left arm around counterclockwise.
- Transfer the body weight from the right leg to the left leg.
- Bring the right arm up and forward, leading with the elbow.
- Forcefully extend the right arm, snap the wrist and release the ball off the fingertips when the arm reaches a 45° angle upward.
- Finish the throw by having the right arm follow through, down and across the body.

Suggestions for the teacher/coach

Demonstrate the overhand throw. Manually move the athlete's shoulders and throwing arm through the throwing motion. Practice the throwing motion without a ball first, then with the ball. Place foot prints on the ground to help with correct foot placement. Practice throwing over a barrier, like a high jump standard. This teaches the athlete to release the ball at a high position.

(Insert figure 3 here)

**Softball Throw Skill 3-
OVERHAND THROW TAKING ONE STEP**

Assessing the athlete's readiness

___ Athlete can correctly pick up the softball with the throwing hand and apply the proper grip.

Teaching the skill (right-handed throw)

- Identify the throwing area and the foul line.
- Stand one and one-half steps behind the foul line, hold the softball in both hands, and face the direction of the throw with the feet a little wider than shoulder-width.
- Correctly grip the softball with the right hand.
- Take one step in the direction of the throw with the left foot, staying behind the foul line.
- Rotate the shoulders and the hips clockwise.
- Push off the right foot, rotate the upper body counterclockwise transferring weight from right foot to left foot, and release the ball.

Suggestions for the teacher/coach

Demonstrate the one-step approach. Place foot prints on the ground to help the athlete step with the correct foot. Manually place the athlete's foot in the proper location. Have the athlete practice the throwing motion without using a ball during this skill.

(Insert figure 4 here)

**Softball Throw Skill 4-
SOFTBALL THROW COMPETITION**

Assessing the athlete's readiness

- ___ Athlete can listen for the official to call his/her name.
- ___ Athlete can enter the throwing area from the rear.
- ___ Athlete can identify the foul line and assume the starting stance with enough room behind the line.
- ___ Athlete can perform one-step approach and throw the softball overhand out into the legal landing area, without stepping on or over the foul line.
- ___ Athlete can exit the throwing area from the rear.
- ___ Athlete can listen to the official call out the performance and identify the distance.

Suggestions for the teacher/coach

Have practice competitions at the practice session. Measure throwing area and landing area. Have the athletes perform the duties of the competition officials.

**Softball Throw Skill 5-
READY POSITION FOR THE SOFTBALL THROW FOR WHEELCHAIR ATHLETES**

Assessing the athlete's readiness

___ Athlete can grip a softball in one hand.

Teaching the skill (right-handed throw)

- Set the front wheels of the chair just behind the foul line and lock the back wheels.
- Sit upright in the chair with the buttocks against the chair back and the feet either on the ground or on the foot supports.
- Properly grip the softball.
- Bend the right elbow to 90°, lift it away from the body, and bring the ball back behind the head. The hand should be back of the elbow.
- Hold the left arm above eye level, and lean back slightly in the chair with a small arch in the back.

Suggestions for the teacher/coach

Demonstrate the proper throwing position for the wheelchair athlete. Emphasize holding up the throwing arm and throwing overhand. Manually move the athlete's arm in the throw. Note that the left shoulder is lower than the right, and the back is arched. This allows the athlete to apply maximum force to the throw.

(Insert figure 5 here)

Softball Throw Skill 6-

OVERHAND SOFTBALL THROW FOR WHEELCHAIR ATHLETE

Assessing the athlete's readiness

___ The athlete can assume the ready-to-throw position for the softball throw.

Teaching the skill (right-handed throw)

- Position the wheelchair behind the foul line when the athlete's name is called and lock the back wheels.
- Assume the ready-to-throw position.
- Initiate the throw by pushing the left arm to the right, then pulling it back down to the left.
- Raise the right shoulder as the left shoulder drops, keeping the right elbow up and away from the body.
- Bring the right arm up and forward, leading with the elbow.
- Extend the right arm sharply, high over the right leg, snap the wrist, and release the ball off the fingers when the arm reaches a 45° angle.
- The right arm follow-through down and across the body.
- Exit the throwing area from the back.

Suggestions for the teacher/coach

Demonstrate the overhand throw. Stand behind the athlete and move his/her arm through the throwing motion. Practice the throwing motion without a ball first, then with the ball. Practice throwing over a barrier, like a high jump standard with the crossbar. This teaches the athlete to release the ball at a high position.

(Insert figure 6 here)

THE SHOT PUT

STRETCHING EXERCISES FOR THE SHOT PUT

The following exercises should be done before a workout that includes any throwing.

Opposite Toe Touch: With feet spread apart wide, bend at the waist and touch the right foot with the left hand, then touch the left foot with the right hand. Remain bent at the waist, moving only the arms at the shoulder. Do 10 times.

Hurdler's Stretch: Keep one leg straight by resting it on top of a hurdle, or other horizontal surface. Reach down the leg toward the toes with the hands until a stretch is felt. Do not bounce, and hold for a count of 10. Repeat with other leg. Do 5 times.

Groin Stretch: While sitting, put the soles of feet together and hold onto toes. Gently pull the body forward, bending from the hips, until a good stretch is felt in the groin. A stretch in the back may also be felt. Hold for 30 seconds. Do 5 times.

Hamstring Stretch: Stand, feet shoulder-width apart. Grasp one ankle with both hands, hold for a count of 10. Switch and do the other ankle. Do both legs 5 times.

THROWING WARM-UP DRILLS

After the above stretches, the following throws should be done to warm the body up properly for any shot put practice or competition. All of these are done in the ring.

Underhand Toss: Stand facing the landing area. Holding the shot in front of the body with both hands, throw it up and out (away from the body) using an underhand toss.

Chest Pass: Stand facing the landing area. Holding the shot with both hands with the fingers behind the shot, push the shot out like a basketball chest pass.

Wrist Flips: Hold the shot in the throwing hand, against the neck. Cock the wrist, elbow behind the shot. Flip the shot forward using the wrist only.

Glide Drill: Stand with feet parallel in the back of the circle. Using a normal glide, drive backward off the left foot. Land in the power position. Rotate hips and feet on the drive back, with the shoulders kept square to the back of the circle, and open up the left foot and hip.

Shot Put Skill 1-

HOLDING THE SHOT CORRECTLY (READY-TO-PUT POSITION)

Assessing the athlete's readiness

- ___ Using two hands, athlete can safely pick up and hold a shot without dropping it.
- ___ Athlete can balance the shot in the palm of one hand.

Teaching the skill (right-handed put)

- Hold the shot with both hands at chest height.
- Remove the left hand from the shot.
- Extend the fingers of the right hand, spread them slightly apart, and rest the shot in the palm.
- Set the thumb and little finger wider apart for balance and support.
- Cradle the shot against the neck, beneath the back portion of the jaw, with the hand turned out.
- With the palm up and the elbow away from the body, apply pressure against the neck to hold the shot in.

Suggestions for the teacher/coach

Demonstrate the correct way to hold the shot. Explain the rules of the shot put; i.e., the shot must be "put," not thrown, from above the shoulder. The elbow must stay behind the shot. Start with a softball, which is lighter, to practice the proper grip. Have the athlete practice at home with a softball. Using the proper grip, have the athlete raise and lower the arm from a bent elbow position to a straight arm position to feel the support given by the thumb and the little finger.

(Insert figures 1 and 2 here)

Shot Put Skill 2-

STANDING PUT, FACING THE DIRECTION OF THE PUT

Assessing the athlete's readiness

- ___ Athlete can safely pick up and hold the shot in the proper position.
- ___ Athlete can enter the ring from the back of the circle.

Teaching the skill (right-handed put)

- Enter the ring from the rear.

- Stand with feet parallel about shoulder-width apart and face the direction of put, near the front of the circle.
- Hold the shot in one hand, next to the neck.
- Take one step with the left foot toward the toeboard.
- Use the right hand to put the shot.
- Exit the ring at the rear.

Suggestions for the teacher/coach

Demonstrate the proper way to enter and exit the ring. Have the athlete keep the right elbow high during the put. Move the hips forward and keep chest high and square to direction of the put. Extend the legs during the put, and put the shot with the fingers. Finish the put with right arm extended in front of body, hand above head level.

Shot Put Skill 3-

STANDING PUT, SHOULDERS ROTATE 90°

Assessing the athlete's readiness.

- ___ Athlete can place the shot put into the ready-to-put position.
- ___ Athlete can perform a standing put, facing the direction of the put.

Teaching the skill (right-handed put)

- Enter the ring from the back.
- Hold the shot in the ready-to-put position.
- Stand in the middle of the ring, facing the direction of the put.
- Step toward the toeboard with the left foot.
- Rotate shoulders 90° clockwise (away from the direction of the put).
- Drive the hips and chest counterclockwise toward the direction of the put.
- Extend the right arm, and snap the fingers to complete the put.
- Exit the ring from the rear.

Suggestions for the teacher/coach

Have the athlete practice the skill without a shot, then with a softball, and finally with the shot. The put begins with the extension of the legs. After extending the legs, turn the hips and chest in the direction of the put. Keep the right elbow at shoulder level.

(Insert figure 3 here)

Shot Put Skill 4-

STANDING PUT, FACING AWAY FROM THE DIRECTION OF THE PUT

Assessing the athlete's readiness.

- ___ Athlete can hold the shot properly.
- ___ Athlete can perform standing put, facing the direction of the put.
- ___ Athlete can perform standing put, shoulders rotate 90°.
- ___ Athlete can perform standing put, shoulders rotate 180°.

Teaching the skill (right-handed put)

- Enter the ring from the back of the circle.
- Hold the shot in the ready-to-put position.
- Stand with both feet together in the middle of the ring facing the rear of the circle.
- Reach back with left foot (towards front of the circle) into putting stance.
- Lower upper body and flex right leg to quarter squat.
- Rotate right leg and extend body upward to force hips around to direction of put.
- Thrust chest forward and extend both legs.
- Transfer weight to left leg.
- Extend the right arm and push shot with the finger tips.
- Release the shot, right arm extending in the direction of the put.

- Exit the ring from the rear.

Suggestions for the teacher/coach

In the putting stance for a right-handed athlete, the left foot is placed one length of the foot in front of the right foot. The feet should be slightly more than shoulder-width apart. Emphasize a strong leg push. Have the athlete practice the parts of the put, especially the release of the shot. Have the athlete practice without a shot, then with a softball, and finally with the shot.

(Insert figure 5 here)

Shot Put Skill 5-

THE GLIDE AND PUT

Assessing the athlete's readiness

- ___ Athlete can hold the shot properly.
- ___ Athlete can perform standing put, facing the direction of the put.
- ___ Athlete can perform standing put, shoulders rotate 90°.
- ___ Athlete can perform standing put, facing away from the direction of the put.

Teaching the skill (right-handed put)

- Enter the ring from the rear.
- Hold the shot in the ready-to-put position.
- Stand at rear of circle, facing away from the direction of the put, with weight on right leg.
- Place feet 10-20cm apart, left toe 15-30cm behind right heel.
- Place ball of left foot on throwing surface.
- Raise center of gravity in direction of the put.
- Extend left leg at knee and hip toward toeboard.
- Rotate trunk toward upright position.
- Rotate right leg and foot 90° toward the direction of put.
- Place ball of right foot under body, near center of circle.
- Shift weight from right to left foot, pivoting both feet and knees toward direction of put.
- Place the left foot near the toeboard.
- Keep right elbow away from body, and extend right arm forcefully.
- Keeping thumb down, put the shot, and forcefully snap the wrist and fingers outward.
- Exit the ring from the rear.

Suggestions for the teacher/coach

Remember, the athlete must keep the back straight and weight low during the glide. The right leg provides the majority of gliding force. Glide in a balanced position from the back to the center of the circle. Keep left toe close to throwing surface during extension, and ground foot quickly. Drive to the toeboard with the left foot; do not hop. Extend beyond toeboard to improve release point. Do not watch shot after release. Have the athlete practice the glide without using a shot.

(Insert figures 6-12 here)

Shot Put Skill 6-

THE REVERSE

Assessing the athlete's readiness

- ___ The athlete is able to perform any of the above puts.

Teaching the skill (right-handed put)

- After you have put the shot, the right arm continues past the body to the left.
- The left arm continues back around the body.
- The feet switch positions--the right foot moves toward the toeboard, and the left foot moves to the back. All of the weight is on the right leg.
- Bend the right knee to lower weight.

Suggestions for the teacher/coach

Look at a point behind the throwing ring to improve balance.

CHECKLIST DURING THE PUT

- √ Does the athlete enter the ring from the rear?
- √ Are there any problems in the athlete's technique? (Improper technique results in a weak and ineffective put.)
- √ Is the athlete balanced the entire time in the throwing circle?
- √ Does the athlete understand that the put starts with the legs and hips?
- √ Are the athlete's feet close to the ring's surface?
- √ Are the athlete's chin and chest straight and up?
- √ As the athlete puts the shot, does the non-throwing side of the body stop and the throwing side lead?
- √ Does the athlete perform the reverse to avoid a foul?
- √ Does the athlete leave the ring from the rear?

DRILLS FOR THE SHOT PUT

For all forms of throwing, use a soccer ball, basketball, or light medicine ball. Throwing can be from behind the head, between the legs or around the side of the body.

- **Push-Throw with the Ball:** Throw the ball against the wall with a pushing or putting action. Use the body to make the throw and extend the legs. Push the ball with the fingertips. Catch the ball on the rebound from the wall and repeat.
- **Push-Throw the Ball with Partner:** Partners face each other about 2-3 meters apart, and make a one or two-handed push pass with the ball to the other partner. Step toward the partner with the left leg if throwing with the right arm. Keep the elbow of the throwing arm at shoulder height.
- **Put the Ball for Distance:** Push the ball from as far back behind the body to as far forward as possible. Drive up onto the toes and push forward with the body. Use the whole body in this action, not just the arms. Release the ball so that the arms are fully extended in front of the body and above the head.
- **Putting the Ball for Height and Distance:** Stretch a rope between two high jump standards, 2 meters above the ground. Stand behind the rope and throw the ball over the rope. If successful, take two steps back away from the rope and repeat.

Shot Put Skill 7-

READY POSITION FOR WHEELCHAIR SHOT PUT

Assessing the athlete's readiness

- ___ The athlete can hold the shot in one hand.
- ___ The athlete understands the rules for shot put.

Teaching the skill (right-handed put)

- Set the front wheels of the chair behind the toeboard of the ring, and lock the back wheels.
- Sit upright in the chair with the buttocks against the chair and the feet on the foot supports.
- Grip the shot in the right hand.
- Place the shot against the side of neck, not under the chin.
- Keep the right elbow to the right side, pointing back away from the body.
- Grab the left armrest with the left hand for balance.

Suggestions for the teacher/coach

Athletes who have trouble controlling the shot can grasp it in the palm of the hand. Avoid setting the shot under the chin. Right-handed beginners should place the left hand on the left armrest for balance. However, as the shot put technique improves, the left arm may get more involved in the putting action. Stress sitting up straight in the chair. Have the athlete practice without a shot, then with a light softball, and finally with an actual shot.

(Insert figure 13 here)

Shot Put Skill 8- PUTTING THE SHOT FOR WHEELCHAIR ATHLETE

Assessing the athlete's readiness

- ___ Athlete can grip the shot in one hand.
- ___ Athlete can assume the ready to put position.

Teaching the skill (right-handed put)

- Enter the ring from the rear.
- Place the chair in the proper position.
- Place the shot in the ready-to-put position.
- Start the putting action by dropping the left shoulder and raising the right one.
- Forcefully extend the right arm up and out over the right front wheel of the chair.
- Release the shot at a high, extended position, with the wrist and fingertips pushing the shot away from the hand.
- The right arm continues across the front of the body.
- Exit the ring from the rear.

Suggestions for the teacher/coach

Maintain a strong erect posture in the chair during the putting action. Keep the shot next to the neck before the put, to avoid having it thrown rather than put. For advanced wheelchair putters, keep the left arm at eye-level. Start the putting action by twisting clockwise to the right then pulling the left arm back down to the left side. Lower the left shoulder, raise the right shoulder, and put the shot. Practice without a shot, then with a light softball, and then with an actual shot.

(Insert figure 14 here)

THE LONG JUMP

Selecting athletes for the Long Jump

Athletes who demonstrate the following would make good candidates.

- Good leg speed
- Good vertical jump ability
- Good standing long jump ability

Long Jump Skill 1-

THE READY-TO-JUMP POSITION FOR A STANDING LONG JUMP

Assessing the athlete's readiness

- ___ Athlete understands that he/she will jump off the ground with both feet together.

Teaching the skill

- Identify the takeoff board/line.
- Stand behind this board/line with feet shoulder-width apart.
- Hold chin up, head straight, arms extended in front of the body.

Suggestions for the teacher/coach

Demonstrate this ready-to-jump position to the athlete. Mark foot prints on the ground to identify the location for the proper foot placement. Give a verbal command such as, "Ready!" to the athlete to assume this position.

(Insert figure 1 here)

Long Jump Skill 2-

TWO-LEG TAKEOFF FOR A STANDING LONG JUMP

Assessing the athlete's readiness

- ___ Athlete can identify the takeoff board/line.
- ___ Athlete can assume the ready-to-jump position.

Teaching the skill

- Assume a ready-to-jump position in the proper location.
- Flex the knees and ankles and strongly swing the arms backward.
- Strongly swing the arms up and out toward the landing area as both legs drive and extend off the ground. The toes should be the last to leave the ground.

Suggestions for the teacher/coach

Demonstrate the two-leg takeoff, and emphasize taking off from both feet. Have the athlete jump with the coach or a partner. Pull the legs up underneath, to go as far as possible.

(Insert figure 2 here)

Long Jump Skill 3- FLIGHT TECHNIQUE FOR STANDING LONG JUMP

Assessing the athlete's readiness

- ___ Athlete can assume the ready-to-jump position.
- ___ Athlete can perform two-leg takeoff.

Teaching the skill

- Perform the correct takeoff from behind the board/line.
- While off the ground, extend the body with slight arch to the back; raise arms above the head.
- Bring the legs under the buttocks; then bring them forward by piking at the hips.
- Extend the legs forward (leading with the heels), and swing the arms downward past the legs.
- Keep the feet parallel and slightly apart.
- Keep the head forward to prevent falling backwards; look ahead of the landing.

Suggestions for the teacher/coach

Demonstrate the proper flight technique. Emphasize the back-to-front motion to keep the momentum going forward. Have the athlete practice jumping over a towel or two separated ropes on the ground to improve distance.

(Insert figure 3 here)

Long Jump Skill 4- LANDING TECHNIQUE FOR STANDING LONG JUMP

Assessing the athlete's readiness

- ___ Athlete can assume the ready-to-jump position.
- ___ Athlete can perform two-leg takeoff.
- ___ Athlete can perform flight technique.

Teaching the skill

- Perform a correct takeoff and flight for standing long jump.
- Extend the heels forward for extra length.
- Land in the pit or on the mat heels first.
- Swing the arms downward past the knees and hips.
- Bend the knees to absorb the impact of the landing.
- Fall forward, rolling over the toes.

(Insert figure 4 here)

Determining the favored leg for the running long jump

On the track, have the athlete take three consecutive hops from a standing start, using the right foot only and measure the distance traveled. Repeat with the left foot. The leg that was used to hop the farthest

is probably the favored leg. If a true preference is not shown, right-handed people probably will want to use their left foot as a takeoff foot. If the athlete feels more comfortable with the opposite leg, allow him/her to use it.

Long Jump Skill 5-

MEASURING AN APPROACH FOR THE RUNNING LONG JUMP

Assessing the athlete's readiness

- ___ Athlete can perform a good standing long jump.
- ___ Athlete can jump off of one leg.

Teaching the skill (left-footed takeoff)

- Measure approximately 18m from the edge of the takeoff board (the edge closest to the sand) down the runway.
- Athlete faces the takeoff board from this mark.
- Athlete steps forward on the non-takeoff foot.
- With a controlled run, athlete starts with the takeoff foot and runs nine strides toward the takeoff board. Run through the sand.
- Mark the spot where the takeoff foot hit the takeoff board.
- Adjustments can be made forward and backward to fit the individual needs of each athlete.
- When a consistent approach is made, record the distance for future practice and competitions.
- Have the athlete run the approach again and note the location of the first and third steps taken with the takeoff foot. These two check marks will help the athlete run a consistent approach.

Suggestions for the teacher/coach

Demonstrate the starting stance. Emphasize that the takeoff foot starts behind the other foot, and it takes the first step. Place different colored foot prints on the runway to help. Have the athlete practice the approach run as often as possible, so that a consistent run develops. Run beside the athlete down the runway.

(Insert figure 5 here)

Long Jump Skill 6-

SINGLE-LEG TAKEOFF FOR THE RUNNING LONG JUMP

Assessing the athlete's readiness

- ___ Athlete can locate his/her starting mark.
- ___ Athlete can locate the takeoff board.
- ___ Athlete knows that he/she must jump off of one leg.

Teaching the skill (left-footed takeoff)

- Perform a nine-step approach run and plant the takeoff foot on the board behind the foul line.
- Strongly take off from the board by extending the takeoff leg.
- Flex the other leg; drive the thigh up to the horizontal, and over the sand pit.
- Keep the upper body straight, head up, and vision focused ahead in the sand.
- Land in a running position on the non-takeoff foot and run through the sand.

Suggestions for the teacher/coach

Demonstrate the single leg takeoff. Have the athlete use a three-step or five-step approach. (The athlete should always take the first step with the takeoff foot.) Move the start back, always taking an odd number of steps, until a consistent approach is achieved. Have the athlete practice the takeoff by doing plyometric exercises (see Section IV), hop on one foot. Emphasize a strong extension of the takeoff knee and ankle and the vigorous lift and drive by the opposite knee and arm.

(Insert figure 6 here)

Long Jump Skill 7-

STEP-STYLE FLIGHT FOR RUNNING LONG JUMP

Assessing the athlete's readiness

___ Athlete can perform a legal single-leg takeoff behind the foul line.

Teaching the skill (left-footed takeoff)

- Approach the takeoff board.
- Perform a single-leg takeoff from the board behind the foul line.
- Drive the right knee and left arm forward and upward over the sand pit.
- While in flight, extend the lead leg with the takeoff leg trailing, appearing to be in a stride position mid-flight.
- Circle the right arm overhead and bring the left leg forward, so that the arms and legs are parallel.
- When preparing to land, extend the arms and upper body to reach forward .
- Drop the arms below the legs and bend the knees upon hitting the sand.
- Land in the sand heels first, with hands sweeping past the hips.
- Roll over on the toes, falling forward.

Suggestions for the teacher/coach

Demonstrate the step-style flight, leading the flight with the right knee. Have the athlete hold this knee up in front of the body during the flight. Have the athlete practice jumping as high as possible off the takeoff foot and use a short approach to practice the flight technique (pop-ups). Increase the length of the approach as the flight technique improves.

(Insert figure 7 here)

Long Jump Skill 8-

PROPER LANDING FOR RUNNING LONG JUMP

Assessing the athlete's readiness

___ Athlete can perform a legal single-leg takeoff from behind the foul line.

___ Athlete can perform any flight style in the air after taking off the board.

Teaching the skill

- Perform a single-leg takeoff and a step-style long jump.
- When coming down toward the sand, extend the legs forward and lean the upper body forward so that the chest is near the thighs.
- Swing the arms back past the legs in preparation to land.
- Land in the pit with the heels hitting the sand first. The hands should be behind the hips.
- Bend the knees to absorb the shock of the landing.
- Roll over the toes and fall forward.

Suggestions for the teacher/coach

Demonstrate the proper landing for the running long jump. Tell the athlete to land in a pike position, (knees up and feet out front). Make a mound of sand in the landing area to give the athlete a target in which to land. Have the athlete take a short approach on the runway and jump up higher than normal, (pop-ups).

(Insert figure 8 here)

Long Jump Skill 9-

HANG-STYLE FLIGHT TECHNIQUE FOR THE RUNNING LONG JUMP

Assessing the athlete's readiness

___ Athlete can perform the step-style flight for the long jump.

Teaching the skill (left-footed takeoff)

- Perform an approach and single-leg takeoff from the board behind the foul line.
- Drive the right knee and left arm forward and upward; hold the left leg and right arm back.
- Drive the left leg and right arm back to join the others, so that they are parallel.
- Arch the back to achieve the "hang" position.

- Move the arms in a circle clockwise.
- Lower the upper body toward the thighs, extend the legs, and reach the arms forward and then backward in preparation for the landing.
- Hit the sand heels first, bend the knees to absorb the shock of the landing, move the upper body forward, and roll over the toes to fall forward.

Suggestions for the teacher/coach

Demonstrate the hang-style technique. Have the athlete jump up and arch the back. Have the athlete jump off a box to give the extra height needed to perform the hang technique. Have the athlete start with a shorter approach; use an odd number of steps only.

(Insert figure 9 here)

CHECKLIST DURING THE RUNNING LONG JUMP

- √ Did each jumper have a good conditioning base before starting any jumping?
- √ Was enough time spent on the approach before working on the jump?
- √ Do any athletes have any heel injuries?
- √ Did each jumper practice the short run, "pop-ups," to work on the jumping techniques?
- √ Was jumping off the takeoff board emphasized?
- √ How is the lift of the non-takeoff knee and chest?
- √ Was the height reached by the feet during the flight emphasized?
- √ Is the athlete falling forward after landing?

DRILLS FOR THE LONG JUMP

- **Plyometric Bounding:** see Section IV for plyometric training exercises.
- **Cross the Brook:** Lay two ropes on the ground to form the "brook." Have the athletes jump from one side of the brook to the other. Space the ropes farther apart to work on hopping distance. This drill encourages jumping and falling forward.
- **Circle Jumping:** Lay a series of hoops, etc. on the ground. Hop or bound as required from hoop to hoop. Initially place the hoops close to each other, then set them progressively farther apart to demand long reaching strides and explosive leg action. Use a forward and upward swing of the arms to help each jump. Do this ten times.
- **Plyometric Hops (or Bounds) over Low Obstacles:** Use a yardstick on top of two marker cones, make five of these obstacles, and place these cones with the yardsticks one meter apart. Athlete hops or bounds over the yardstick, lands on the ground and immediately goes over the next one. Use the arms to obtain height and distance over the sticks. Go over all five to ten times.
- **Jump Up to Hit a Suspended Ball with the Head:** Suspend a volleyball or soccer ball from a rope. Take a three stride run up to head the ball with the top of your head. If successful, raise the ball higher. Use the arms in an upward swing to help gain the necessary height. Do this ten times.

THE HIGH JUMP

Athletes with long legs and good leg spring make good candidates for the high jump. Good runners can be effective participants in the High Jump.

High Jump Skill 1- ESTABLISH A TAKEOFF FOOT

Assessing the athlete's readiness

_____ Athlete can jump up into the air off one foot.

Teaching the skill

- Jump over a rope held by two people.
- Raise the rope higher as the height is cleared.
- As the rope gets higher, the dominant leg will become obvious and identifies the takeoff foot; the other leg will scissor over the bar.
- If it is more comfortable taking off on the left foot, start on the right side when facing the pit for the approach.

High Jump Skill 2-

PRACTICE TAKING OFF USING THE PREFERRED FOOT

Assessing the athlete's readiness

___ Athlete understands the rules for the high jump, one-leg takeoff.

Teaching the skill (left-footed takeoff, approach from right side)

- Stand next to the pit, without the bar; lift the right leg (closest to pit) up and place it on the pit.
- With the same starting position, drive both arms up, leave the ground on one foot, land on the pit, and sit on the buttocks.
- Roll over to the back side of the pit and get off.
- Go back three steps from the takeoff point at a 45° angle from the pit.
- Run toward the pit, starting with the left foot and taking three steps, take off on the left foot, raise the right knee up, drive both arms up, land in the pit, and roll out as before.

Suggestions for the teacher/coach

Do not use the crossbar while the athlete practices. Demonstrate the skill before having the athlete attempt it. Have the athlete jump into the pit often to become comfortable with it. Use foot prints or tape marks on the ground to guide the athlete. Have someone near the middle where the crossbar would be so that the athlete will see to take off before reaching him/her. If an athlete has trouble performing one of these tasks, go back to the point where he/she was successful and start again from there.

High Jump Skill 3-

SCISSOR HIGH JUMP USING A STRAIGHT THREE-STEP APPROACH

Assessing the athlete's readiness

___ Athlete can take off with one foot and land in the pit.

___ Athlete can perform a consistent three-step approach.

Teaching the skill (left-footed takeoff, approach from the right side)

- Place the bar just higher than the pit.
- Take the same three-step approach as before, starting with the left foot.
- Take the first step on the left foot.
- Take the second step on the right foot and swing both arms back.
- Take the third step on the left foot and forcefully swing both arms above the shoulders.
- Lift the right leg (closest to the bar) up and over the bar; the left leg follows to complete the scissor.
- The athlete should land in the pit on the buttocks.

Suggestions for the teacher/coach

Emphasize driving the thigh of the right leg up to the horizontal with the ground. Have the athlete keep the head up and the upper body upright.

(Insert figure 1 here)

High Jump Skill 4-

SEVEN-STEP APPROACH FOR SCISSOR HIGH JUMP

Assessing the athlete's readiness

___ Athlete can perform a three-step scissor high jump with one-foot takeoff.

Teaching the skill (left-footed takeoff, approach from the right side)

- Stand parallel to and an arm's length away from the crossbar, and a quarter of the bar's length from the right standard. This is the takeoff point to develop with some consistency in the approach.
- Take seven steps away from this point on a 45° angle to the right of the pit. This is the location of the starting stance.
- Face the pit, take the first step with the left foot, run straight to the pit, and accelerate with every step.
- Plant the left foot on the seventh step at the takeoff spot, and as before, jump into the air.
- Land in the pit on the buttocks.

Suggestions for the teacher/coach

Demonstrate the skill with the bar at a low height. Use foot prints or tape on the ground to help the athlete develop proper footwork and a consistent approach. Emphasize accelerating with each step; stress not using short, choppy steps. When first working on the approach, do not have the crossbar on the standards; have the athlete jump into the pit to become comfortable with it. If the approach does not feel right to the athlete, he/she should run along the bar and not break the plane of the crossbar because in competition this would be counted as a miss.

(Insert illustration here)

High Jump Skill 5-

SCISSOR HIGH JUMP, SEVEN-STEP APPROACH, WITHOUT THE BAR

Assessing the athlete's readiness

- ___ The athlete can perform a seven-step approach to the pit.
- ___ The athlete can perform a one-foot takeoff.
- ___ The athlete can perform a scissor high jump.

Teaching the skill (left-footed takeoff, approach from the right side)

- Perform the seven-step approach to the pit.
- Plant the left foot in the takeoff spot.
- Forcefully swing both arms from behind the body forward and upward; lift the right knee up.
- Take off on the left foot with a strong extension of the left leg and ankle.
- Lift and bend the takeoff leg to a position parallel with the lead leg (right). It should look as though you are in a sitting position in the air.
- Keep the head straight and hold the arms and legs up when going over the bar.
- Land in the pit on the buttocks.

Suggestions for the teacher/coach

Have the athlete practice jumping up and into the pit without an approach until the athlete feels comfortable landing in the pit. Emphasize to the athlete to keep the arms and legs up, and the head straight. Stress the importance of the proper use of the arms and lead leg in lifting the body off the ground. Watch the athlete's approach; the steps must be consistent. The takeoff should not be near the middle of the crossbar nor should the athlete lean too far back.

(Insert figure 5 here)

High Jump Skill 6-

SCISSOR HIGH JUMP OVER THE BAR AND INTO THE PIT

Assessing the athlete's readiness

- ___ The athlete has established a takeoff foot.
- ___ The athlete can perform a one-foot takeoff.
- ___ The athlete can perform a scissor high jump.
- ___ The athlete can perform a seven-step approach to the pit.

Teaching the skill (left-footed takeoff, approach from the right side)

- Set the cross bar at a low height.
- Go to the starting stance location (from High Jump Skill 4).
- Take the first step with the left foot. Take the normal seven-step approach toward the bar.
- Plant the takeoff foot on the seventh step and perform a scissor high jump over the bar.
- Keep the arms and legs up with the head held straight.
- Land in the pit on the buttocks.
- Roll to the rear of the pit and get off.

Suggestions for the teacher/coach

Demonstrate the skill with the bar at a low height. If the athlete is afraid of landing on the bar or having the bar fall on him/her, try using string or yarn instead of the crossbar. Then have the athlete practice with the bar at a low height to build confidence. Raise the height gradually. Let the athlete assist when handling the crossbar.

(Insert figure 6 here)

High Jump Skill 7- LEARNING TO JUMP BACKWARD INTO THE PIT

This is the first step to learning the flop high jump. The athlete has to feel comfortable and confident jumping and landing backward. When he/she jumps using the flop method in the high jump, he/she lands in the pit on the back, instead of the buttocks as with the scissor high jump.

Assessing the athlete's readiness

- ___ Athlete can do a scissor high jump over the bar into the pit.
- ___ Athlete does not have a great fear of moving backward.

Teaching the skill

- Have the athlete stand with his/her back to the pit, one foot length away from the pit.
- With a back-to-front swing of the arms, jump off both feet at the same time and land in the pit. The athlete should land flat on his/her back.
- Repeat the above. This time concentrate on lifting the legs. The sequence will be: jump up, arch the back flex the hips to a pike position, and land on the back.

Suggestions for the teacher/coach

Demonstrate jumping backward into the pit. For a left-footed takeoff, have the athlete start to look at the right shoulder when he/she is in the air. As the athlete starts to come down, the athlete should pull the knees up to the chest and flex the knees.

High Jump Skill 8- FLOP HIGH JUMP USING A STRAIGHT THREE-STEP APPROACH

Assessing the athlete's readiness

- ___ The athlete can perform a scissor high jump.
- ___ The athlete can perform a backward jump onto the pit.

Teaching the skill (left-footed takeoff, approach from the right side)

- Stand next to the crossbar one arm's length away and quarter of the bar's length from the right standard. This is an approximate takeoff point to be used.
- Walk backward three steps at a 45° angle from the bar. This is the spot for the starting stance. Coach marks the spot of the third step.
- Face the pit with the feet together. Take the first step with the left foot and run toward the pit.
- As the third step is taken, swing the bent right leg up toward the left standard; swing both arms from below the hips to above the shoulders in front of the body.
- Jump into the air, taking off on one foot.
- Arch the back; drop the shoulders; look at the right shoulder, and pull the knees toward the chest.
- Land in the pit on the back.

Suggestions for the teacher/coach

Demonstrate the three-step flop high jump. The athlete must run fast toward the bar. Use string or yarn instead of the bar, so that the athlete will not be afraid of being hurt. As the athlete takes the third step (the left/takeoff foot), the right knee is forcefully driven toward the left shoulder. When in the air, the athlete thinks of doing a sit-up and brings the knees to the chest.

(Insert figure 7 here)

High Jump Skill 9-

LEARNING TO RUN ON A CURVE

Assessing the athlete's readiness

- ___ The athlete can jump backward into the pit.
- ___ The athlete can perform the flop high jump using a straight three-step approach.
- ___ The athlete has good balance.

Teaching the skill (left-footed takeoff)

- Place four marker cones on the ground to make a circle that is 6m in diameter.
- Have the athlete run around the outside of the cones. If taking off from the left foot, the athlete runs counterclockwise around the cones.
- The athlete must run fast enough so that the body is leaning slightly towards the center of the circle.

Suggestions for the teacher/coach

Demonstrate the skill to the athlete. Place more cones on the ground or put tape on the ground to lay out the circle/curve to be followed.

High Jump Skill 10-

FLOP HIGH JUMP USING A FIVE-STEP CURVED APPROACH

Assessing the athlete's readiness

- ___ The athlete can jump backward into the pit.
- ___ The athlete can perform the flop high jump using a straight three-step approach.
- ___ The athlete can run on a curve.

Teaching the skill (left-footed takeoff, approach from the right)

- Locate the spot where the athlete will start the approach. Measure to the right of the right crossbar standard 3-5m. Mark this spot. Now measure 6-9m away from the pit. This is the athlete's approximate start location, facing the pit. This location might have to be adjusted to for each athlete.
- Start a five-stride approach with the left foot.
- The approach pattern will look like an upside down "J."
- On the fifth step with the left foot, swing a bent right leg up toward the left shoulder, and swing both arms from a low back position to high front position in front of the body.
- Takeoff from the left foot, using a strong leg extension of the knee and ankle.
- Turn the right shoulder away from the bar to rotate counterclockwise.
- Land on the back and roll off the pit.

Suggestions for the teacher/coach

Demonstrate the five-step flop high jump. Have spotters at the front of the pit to assist the athlete. Have the athlete accelerate on the approach and lean toward the inside of the curve (left). Start without a crossbar then use string or yarn until the confidence is developed. When starting with a crossbar, start at a low height. Use one check mark for the approach at the starting stance.

(Insert figure 8 here)

High Jump Skill 11-

FLOP HIGH JUMP, SEVEN-STEP CURVED APPROACH, NO CROSSBAR

Assessing the athlete's readiness

- ___ The athlete is able to perform a flop high jump using a five-step curved approach.

Teaching the skill (left-footed takeoff, approach from the right)

- Go to the starting stance location from the previous skill. Now take two more strides away from the pit. Adjust this location to fit the individual's stride length.
- Start a seven-stride approach with the left foot. The first two steps will be straight, and the last five will be curved. The approach pattern will look like an upside down "J."
- Use two check marks: one for the location of the starting stance and one at the location of the second left foot placement (where curve starts).

- On the seventh step, place the left foot about one arm's length from where the crossbar normally would be. The hips and shoulders should be at a 25° angle to the pit.
- Bend the right leg and swing it upward toward the left shoulder; swing the arms forcefully upward from a low position near the hips to a high position above and in front of the shoulders.
- Take off from the left leg using a strong leg extension of the knee and ankle.
- Tip the head back and turn it to the right to look over the right shoulder.
- Bring the arms down to the sides (which forces the hips up) and arch the back.
- Take a back layout position.
- Keep the heels together, but the knees stay apart.
- Raise the legs by flexing (bending) the body at the hips.
- Assume a pike position (looks like letter "L") when landing.
- Land in the pit flat on the back; roll out to the far edge.

Suggestions for the teacher/coach

Demonstrate the seven-step flop high jump to the athlete. Use foot prints or tape marks on the ground to assist the athlete in marking the approach. Keep repeating the skill until consistency is developed. Continue to work on the flop high jump with a short approach if the technique of the high jump is inconsistent.

(Insert figure 9 here)

High Jump Skill 12- FLOP HIGH JUMP OVER THE BAR, NINE-STEP CURVED APPROACH

Assessing the athlete's readiness

___ The athlete is able to perform all previously mentioned skills relating to the high jump.

Teaching the skill (left-footed takeoff, approach from the right)

- Start with the crossbar at a low height.
- Go to the location of the starting stance from High Jump Skill 10. Take two more strides away from the pit.
- Assume the starting stance with feet together.
- Start a nine-step approach with the left foot.
- Run straight toward the pit; on the fifth step, start the curve. Two check marks should be used: the first at the starting stance and the second at the start of the curve.
- On the ninth step, plant the left foot, and perform a flop high jump as in High Jump Skill 10.
- In going over the bar, arch the back, then raise the legs over the bar by flexing at the hips.
- Land in the pit on the back.
- Roll to the back edge and get off the pit.

Suggestions for the teacher/coach

Demonstrate the nine-step flop high jump. Use foot prints or tape to mark the approach. In competition, athletes are allowed one mark on the high jump apron. Use the one mark to identify the start of the curve. The athlete can walk back four strides to the location of the starting stance. The athlete can also use the other athlete's marks to find his/her starting spot. If the athlete's approach does not feel right, have him/her run parallel to the crossbar. The plane of the crossbar cannot be broken, or it counts as a miss. Stress this in the practice sessions. The rules allow the athlete 90 seconds from the time his/her name is called to initiate the jump. Practice and enforce this rule during practice so that bad habits are not formed. Start with the bar low. Work first on technique and on the development of confidence. Raise the bar gradually. Have a mini high jump competition at practice.

(Insert figures 10 and 11)

COACHING TIPS FOR A HIGH JUMPER

- Make sure that the athlete has a sound 5, 7, or 9-step approach.
- Make sure that the curve is five steps only and that the curve starts with the takeoff foot.
- Stress the importance of the speed of the approach, especially the last three steps.

- Observe the location where the athlete plants the takeoff foot. It should be about one arm's length from the crossbar. The left foot should be pointing toward the left standard.
- See if both arms are used in the jump, the knees are kept up while going over the bar and the head is looking at the left standard.
- Observe where the athlete lands in the pit (should be near the middle).

COACHING TIPS DURING A COMPETITION

- Concentrate during the practice sessions, then use those images at the meet. Picture yourself going over the crossbar in your mind.
- Practice planting the takeoff foot in the correct spot.
- Before jumping, perform some light warm-up exercises. Be aware of the jumping order so that the athlete is ready when called.
- Know at what height the athlete should start. In practice, the athlete should attempt some jumps at a higher height, so that he/she has an idea of what he/she is capable of jumping.

DRILLS FOR THE HIGH JUMP

- **High Knee Marching:** With each step the athlete drives the thigh of the leading leg up to the horizontal. Have the athlete drive up onto the toes of the supporting foot, work the arms, and drive the knee upward as powerfully as possible.
- **High Knee Running:** Have the athlete run slowly, raising the thigh of the lead leg up to the horizontal. The athlete should drive up onto the toes the whole time.
- **Jump to Head a Suspended Ball:** Suspend a ball 30-60cm above the athlete's head. The athlete should use a 3-5 stride run-up, jump up off the takeoff foot, and hit the ball with his/her head. This drill works on the athlete's vertical jumping.
- **Curve Sprinting:** The athlete sprints in a figure 8, curving to the left, then to the right, and leaning toward the inside of the curve while sprinting.
- **Plyometric Jumps:** See Section IV for plyometric training exercises.
- **Technique Jumps Over a Low Crossbar:** Have the athlete take about 10 jumps at a low height and work on all aspects of the jump.
- **Pop-ups Without a Crossbar:** The athlete takes a 3 or 5-step approach to practice the plant, takeoff, and arm action. See how high the athlete can pop-up on each plant. Try it 5 times.
- **Five-Step Curve Practice:** Keep the crossbar low. Work on the curve, plant, and takeoff. Concentrate also on the arms and hips as the athlete goes up and over the bar.

THE PENTATHLON

The pentathlon is an Athletics event which includes five individual events. The five events in order of competition are:

- 100 Meter Dash
- Long Jump
- Shot Put
- High Jump
- 400 Meter Dash.

Athletes' times and distances are converted into points. Special Olympic International has devised tables of scores ranging from 1 to 1200 points per event. The athlete who scores the greatest number of points in all five events wins. Place standings in each of the five events has no bearing on the final outcome.

Please remember that according to the Special Olympics International Official Rules for Athletics, athletes competing in the long jump and the shot put get three attempts to register a legal effort. This should influence the coach and athlete's strategy in approaching these events. If the athlete fouls on all three attempts, he/she does score any points for that event. It is a wise decision to register a safe legal effort on the first attempt and then use the next two attempts to obtain a better mark.

❖ Who should compete in the pentathlon?

If a coach has an athlete who can perform the long jump, shot put, and high jump, that coach might want to discuss with that athlete the possibility of competing in the pentathlon as a single event in Athletics. The athlete should demonstrate general overall conditioning, good speed, strength, endurance,

and flexibility. Along with these physical factors, the athlete should display the psychological aspects of dedication, motivation, and concentration.

❖ **Training components of the pentathlon**

The emphasis in a pentathlete's development is on the improvement of the athlete's general condition (speed, strength, and endurance). It is also on improving the technique of the weaker events. Once the athlete is well-conditioned, and the events are balanced as far as scoring is concerned, the focus shifts to the jumping events and the 100 meter. These events provide the greater share of points. The training components for the pentathlon follow.

- *Speed Training* is the most important aspect, because speed is directly related to the 100 meters and the long jump.
- *Technique Training* should be kept simple. Identify similarities in events. With a few hours of training, you can obtain more points in those events that require technique.
- *Strength Training* should focus on the general overall condition of the athlete.
- *Weight Training* should emphasize the large muscle groups.
- *Specific Strength Training* deals with plyometric exercises such as hops and bounds.
- *Rest and Recovery* is very important due to the demands on the body during training and competition. You want to avoid injuries and burnout.

Training for the pentathlon has two main phases, pre-season preparation and competition.

1. Pre-season Preparation Phase. This phase consists of the following:
 - Specific event training -- Train as one would practice for the regular high jump, long jump, and shot put. Include drills to promote specific conditioning. In addition, practice technique for each of the three.
 - Running -- Focus on endurance first and speed second.
 - Weight training -- Emphasize general strength first and then provide more training for explosiveness in the jumps and throw.
2. Competition Phase. This phase has its emphasis toward competing well.
 - Specific event training -- Training is even more specific. Focus on correcting technique faults.
 - Running -- Change the distance. The distance run is short, of high intensity, and of lesser amounts.
 - Weight Training -- Focus on strength maintenance, using heavier weights with low number of repetitions.

❖ **Training tips to make the most out of a short training time**

- Concentrate on training for speed and speed strength. Jumping and throwing power are two main keys of conditioning.
- Look at the scoring tables and see where conditioning and technique work can be used most wisely to produce the greatest number of points.
- Arrange the athlete's training to follow the normal order of events in a pentathlon competition.

❖ **Preparation for pentathlon competition**

Coaches play an important part in the preparation for this most demanding event in Athletics. All the time spent in workouts will be wasted if the coach and athletes do not address the following important issues.

1. A good *mental approach* is important. Both the coach and the athlete must realize that a low score in one event does not necessarily mean a poor result for the whole competition. The athlete cannot think about the next event, or dwell on the last event. Full concentration must be on the current event. Relax between events to be mentally ready for the next event.

2. Be prepared for the *facilities*. There probably will be different surfaces that the athlete will be competing on. The track and runway for the long jump will probably be the same surface. The high jump might be the same, or the approach might start on the grass. The shot put ring will probably be cement.
3. Be prepared for the *weather*. The pentathlon is a long event. The athlete will be out in the elements for about 2-3 hours, depending on the number of athletes entered. Have warm clothing if needed as well as protection from the sun, rain, etc. When not competing or between events, stay out of the sun.
4. Know about the competition. It is good to know what kind of performances are needed to do well against the competition. Prepare so that there are no surprises.
5. Know from the training what and how much athletes need to perform in order to be completely warmed up. This includes how many practice jumps should be taken for the long jump, how many practice throws for the shot put, how many practice jumps for the high jump.
6. Know at what height your athlete will begin the high jump competition. A safe jump is rewarded with points; a gamble is not. It is better to start low and progress, than to start high, miss, and get no points.
7. Keep track of each competitor's point totals from each event and his/her running scores. Prior to the last event (the 400) let your athlete know how fast he/she will have to run to reach a certain final score and place.
8. Be sure to replace fluids lost during the competition. Each athlete should drink juices or water until the athlete's thirst is satisfied. Athletes may also wish to eat. Bring light foods or fruit to the competition.
9. Be sure to keep the competition fun. Competition should be easier than training.

❖ **Sample Pentathlon Training Schedule**

First Session

- 800 meter warm-up
- Flexibility drills
- 100 meter work -- starts, high knee drills, fast leg turn-over, finish work
- High jump work -- check marks, takeoff work, clearance work, easy jumping
- Running endurance work
- Cool-down

Second Session

- 800 meter warm-up
- Flexibility drills
- Long jump work -- check marks, pop-ups, easy jumping
- Shot put work -- routine, standing put, across the ring
- Weight training
- Flexibility drills
- Cool-down

Third Session

- 800 meter warm-up
- Flexibility drills
- Long jump work (as in second session)
- Weight training with light amount of weights
- Endurance run
- Flexibility drills

- Cool-down

Fourth Session

- 800 meter warm-up
- 100 meter work (as in first session)
- High jump work (as in first session)
- Endurance run
- Flexibility drills
- Cool-down

Fifth Session

- 800 meter warm-up
- Flexibility drill
- 100 meter work (specific work on problem areas)
- High jump work (specific work on problem areas)
- Endurance run
- Flexibility drills
- Cool-down

Sixth Session

- 800 meter warm-up
- Flexibility drills
- Long jump work (specific work on problem areas)
- Shot put work (specific work on problem areas)
- Weight training (maintenance work)
- Flexibility drills
- Cool-down

Seventh Session

- 800 meter warm-up
- Flexibility drills
- Long jump work (as in sixth session)
- Plyometric training
- Flexibility drills
- Cool-down

Eighth Session

- 800 meter warm-up
- Flexibility drills
- 100 meter work (start and finish work)
- High jump work (easy jumping)
- Easy endurance run
- Flexibility drills
- Cool-down

TRACK EVENTS

RACE WALKING

Walking is not only a great aerobic exercise, but it is also an exciting Special Olympics track event. Walking by definition is propelling oneself forward while keeping one foot in contact with the ground at all time. The art of walking fast requires a great deal of practice. It requires that the athlete use quick steps while making sure that the heel of the lead foot touches the ground before the toes of the support foot leave the ground. A Special Olympics athlete can also compete in open walking races by learning to lock the knee of the support leg as the center of gravity passes over the support foot (according to the IAAF rules).

Race Walking Skill 1-

BALANCED STAND-UP POSITION

Assessing the athlete's readiness

Teaching the skill

- Stand behind start line with right foot forward and left foot back about 30cm.
- Flex front leg and center weight on front foot.
- Flex the arms forming a 90° angle between the upper and lower arm.
- Bring left arm forward to chest while dropping right hand to hip level.

Race Walking Skill 2-

BEGIN WALKING MOTION

Assessing the athlete's readiness

_____ The athlete can assume a balanced stand-up position.

Teaching the skill

- At the starting signal push off with the rear foot and front foot simultaneously while stepping forward with the rear foot.
- Use the arms vigorously to stimulate quick foot movement.
- Power the body forward by lifting the heel and pushing off with the toes.

Race Walking Skill 3-

MAINTAIN CONTINUOUS WALK AT A VIGOROUS PACE

Assessing the athlete's readiness

_____ The athlete can assume a balanced stand-up position.

_____ The athlete can begin the walking motion.

Teaching the skill

- Let toe and calf muscle push body forward with feet landing in a straight line.
- Let the hips rotate forward and in with each stride.
- Hold arms at 90°, moving them vigorously forward and back.
- Walk with a quick step.
- Maintain an upright position with neck and shoulders relaxed.
- Gain good position from the start.
- Walk at an economical goal pace.
- Complete race with a strong finish.

Race Walking Skill 4-

IAAF RULES

Assessing the athlete's readiness

Teaching the skill

- Stand with the right foot forward, with weight on rear foot.
- Push weight onto right foot while rotating the hip forward and in.
- Walk slowly, alternating right then left.

- Hips drop and roll while twisting back and forth. This allows your legs to move faster and easier and gives you a longer stride. Note how stripe on side of shorts moves front to rear.
- Arms always bent at a 90° angle and pumping vigorously. Let them swing across your chest as they move back and forth.
- Knee bends as leg is swung forward. This allows toes to clear ground.
- Knee straightened all the way back at this point and pulling ground as heel touches.
- Toes and calf muscles push body forward. Feet land on a straight line with toes pointed directly forward.
- Keep neck and shoulders relaxed.

- Body and head in upright position at all times.
- Always concentrate on correct technique. This helps time and effort pass quicker and makes you feel and look better.

Suggestions for the teacher/coach

Demonstrate to the athlete each component of this event: starting the race, keeping foot contact with the ground, and making contact with the heel at a point just in front of the body's center of gravity. Teach the athlete to stay in own lane when required. Have athlete practice short segments of the race at an economical pace. Teach the athlete to negotiate the designated course. Set up courses of specific distances in a safe environment. When the athlete becomes proficient under Special Olympics rules provide the opportunity to learn race walking under IAAF rules.

Race Walking Drill

- Have the athlete start at a slow pace. Blow a whistle after about 50 meters to indicate that the athlete must increase the speed. Blow the whistle again after another 50 meters to indicate another increase. Blow the whistle twice to indicate a decrease in speed. Remind athletes to maintain proper form throughout.

RACE WALKING 8-WEEK TRAINING PROGRAM

The following is a sample training program that details week by week what the athlete should be working on to be a successful race walker. This training program increases gradually in distance and intensity and can be modified according to the number and amount of time training is available. Each training program is based on 90 minute workouts twice a week with optional third and fourth days. Remember: every training session must begin with warm-up exercises and end with cool-down exercises.

Week 1 -- Day 1

1. Warm-up
2. Walk 50m emphasizing push off
3. Walk 50m emphasizing hip rotation
4. Alternate between emphasizing push off and hip rotation three times with a 20 second rest
5. Walk 5-10 minutes at an easy, continuous pace
6. Three sets of 10 crunch sit-ups
7. Cool-down

Day 2

1. Walk 5-10 minutes at an easy, continuous pace
2. Stretch for 15 minutes

Day 3

Repeat Day 1

Day 4

Repeat Day 2

Week 2 -- Day 1

1. Warm-up
2. Walk 50m emphasizing push off
3. Walk 50m emphasizing hip rotation
4. Walk 100m emphasizing push off
5. Walk 100m emphasizing hip rotation
6. Walk 50m twice emphasizing push off with a 20 second rest
7. Walk 50m twice emphasizing hip rotation with a 20 second rest
8. Three sets of 10 crunch sit-ups
9. Cool-down

Day 2

1. Walk for 10-15 minutes at an easy, continuous pace
2. Stretch for 15 minutes

Day 3

Repeat Day 1

Day 4

Repeat Day 2

Week 3 -- Day 1

1. Warm-up
2. Two sets of walking 50m emphasizing push off
3. Two sets of walking 50m emphasizing hip rotation
4. Two sets of walking 100m emphasizing push off
5. Two sets of walking 100m emphasizing hip rotation
6. Two sets of walking 200m emphasizing push off
7. Two sets of walking 200m emphasizing hip rotation
8. Walk for 5 minutes at a fast, relaxed pace
9. Three sets of 12 crunch sit-ups
10. Cool-down

Day 2

1. Flexibility exercises
2. Walk for 15 minutes at a steady pace

Day 3

Repeat Day 1

Day 4

Repeat Day 2

Week 4 -- Day 1

1. Warm-up
2. Walk 100m emphasizing push off with 1 minute rest
3. Walk 100m emphasizing vigorous arm movement
4. Walk 200m emphasizing hip rotation
5. Walk 200m emphasizing vigorous arm movement
6. Walk 400m at a fast pace following SOI rules
7. Walk 800m at a moderate pace
8. Three sets of 12 crunch sit-ups
9. Cool-down

Week 5 -- Day 1

1. Warm-up
2. Walk 200m emphasizing push off with 1 minute rest
3. Walk 300m emphasizing vigorous arm movement
4. Walk 200m emphasizing hip rotation with 1 minute rest
5. Walk 300m emphasizing vigorous arm movement
6. Walk 1200m at a moderate pace
7. Three sets of 14 crunch sit-ups
8. Cool-down

Day 2

1. Flexibility exercises
2. Walk for 20 minutes at a steady pace

Day 3

1. Warm-up
2. Walk 400m for time following SOI rules
3. Walk easy for 5 minutes
4. Walk 400m for time following SOI rules
5. Walk easy for 10 minutes
6. 14 crunch sit-ups
7. Cool-down

Day 4

Repeat Day 2

Week 6 -- Day 1

1. Warm-up
2. Walk 100m emphasizing push off with 30 second rest
3. Walk 200m emphasizing vigorous arm movement with 45 second rest
4. Walk 300m emphasizing push off with 60 second rest
5. Walk 100m emphasizing hip rotation with 30 second rest
6. Walk 200m emphasizing hip rotation with 45 second rest
7. Walk 300m emphasizing vigorous arm movement with 60 second rest
8. Walk 1200m at fast relaxed pace
9. Three sets of 16 crunch sit-ups
10. Cool-down

Day 2

1. Flexibility exercises
2. Walk for 30 minutes at a steady pace

Day 3

1. Warm-up
2. Three sets of walking 100m with last 25 minutes at fast pace and with 1 minute rest
3. Walk 40m at an easy pace
4. Race 400m or time trial
5. Recover fully then race 100m
6. Three sets of 16 crunch sit-ups
7. Cool-down

Day 4

Repeat Day 2

Week 7 -- Day 1

1. Warm-up
2. Walk 800m at moderate pace
3. Walk 100m for time following SOI rules
4. After full recovery repeat 100m walk for time
5. Walk 800m at moderate pace
6. Three sets of 16 crunch sit-ups
7. Cool-down

Day 2

1. Flexibility exercises
2. Walk for 45 minutes at a steady pace

Day 3

1. Warm-up
2. Walk 400m at comfortable pace

3. Walk 400m for time
4. Walk 1 mile at moderate pace
5. Walk 3 times 100m using vigorous arm movement
6. Three sets of 16 crunch sit-ups
7. Cool-down

Day 4

Repeat Day 2

Week 8 -- Day 1

1. Warm-up
2. Walk 400m at a moderate pace emphasizing push off with 3 minute rest
3. Walk 400m at a moderate pace emphasizing hip rotation with 3 minute rest
4. Walk 400m at a moderate pace emphasizing vigorous arm action
5. Walk 800m at a moderate pace with fast last 100m
6. Three sets of 16 crunch sit-ups
7. Cool-down

Day 2

1. Flexibility exercises
2. Walk for 50 minutes at a steady pace

Day 3

1. Warm-up
2. Race

RUNNING EVENTS

Running differs from walking in that the pace is too quick to have one foot in contact with the ground at all time. In both the running and walking events, the athlete must display a balanced and upright posture. The form for running the sprints and the distance events follow the same basic mechanical principles. The athlete controls the speed of the run by how much force is applied with each foot strike, the quicker the foot strike the faster the speed of the run. When running fast the heel must be lifted high under the buttock, shortening the angle between the upper and lower leg, the faster the race the higher the heels and the shorter the lever. During any running action the athlete strives to get his/her feet on and off the ground as quickly as possible.

Running Mechanics Skill 1-

MAINTAINING PROPER BODY POSITION

Teaching the skill

- Stand tall with trunk and head directly above the hips.
- Keep arms relaxed at sides.
- Focus on a point a few meters straight ahead.
- Lean forward slightly from the ankles.

Running Mechanics Skill 2-

Teaching the skill

- Assume a tall body position with head and trunk directly over the hips.
- Lean forward slightly bending at the ankles until the weight of the body is centered on the balls of the feet.
- Let the arms hang loosely at the side.
- Close the hands loosely with the thumbs pointing up.
- Bend the arms and bring the hands to the top of the hips forming a 90 degree angle between the lower and upper arms.
- Swing the arms forward and back with no help from the shoulder muscles.

- Stop hands at mid-line on the top and at the back of the hips at the bottom shortening the angle slightly on the up-swing and lengthening the angle slightly on the down-swing.

Running Mechanics Skill 3-

Teaching the skill

- Lift the heel and push off with the toe.
- Bend the leg at the knee and drive it forward.
- Bring the foot forward under the knee.
- Strike the ground with the sole of the foot while bringing the foot back under the body.
- The angle between the thigh of the lead leg and the drive leg should be approximately 100 degrees.

Suggestions for the teacher/coach

Demonstrate a tall body position emphasizing relaxed shoulders and arms. Have the athlete walk with quick steps before running with quick step. Emphasize the foot striking the ground under the runner's body, not ahead of it. Have the athlete run straight at you to make sure that the shoulders stay parallel to the ground and that the upper body is not twisting back and forth.

SPRINTING

Sprinting is the art of running fast. Special Olympics sprint distances are 50 meters, 100 meters, 200 meters and 400 meters. The object is to run as fast as possible while starting from an absolutely motionless position. Power and coordination are the essential ingredients in the production of speed. Coordination can be improved through practicing good running mechanics. Speed is mostly an inherent factor; however, both coordination and speed can be improved through proper training. Even though sprinting involves all-out effort, pacing oneself in order to evenly distribute the expenditure of energy is essential. Sprinting can be broken down into four phases: the start, acceleration, maintaining momentum, and the finish. The 50 meters involves mostly the start and acceleration while the 100, 200, and 400 involve all four phases.

Sprint Skill 1-

BALANCED STAND-UP SET POSITION, "ON YOUR MARK" POSITION

Teaching the skill

- On "on your mark," stand behind the start line, with the power foot in front of the other.
- Set the toe of the back foot 20-30cm behind the heel of the front foot.
- Flex the front knee to 120°, and place the weight on the ball of the front foot.
- Hold the arm that is opposite the front leg flexed out in front of the lowered body; hold the other arm back.
- Look up slightly focusing two meters ahead.

Suggestions for the teacher/coach

Physically manipulate the athlete's feet and arms to get them into proper position. Place a piece of colored tape two meters in front of the start line on which the athlete must focus while in the set position.

Sprint Skill 2-

STAND-UP SPRINT START

Teaching the skill

- At the sound of the gun, drive the back leg forward, leading with the knee, and swing the front arm back.
- Push strongly off the toes of the power foot while swinging the back arm forward forcefully.
- Stay low and use the arms to drive the body forward.

Suggestions for the teacher/coach

Stand behind the athlete and help his/her start by pushing from the small of his/her back. Emphasize first moving the back foot forward and the front arm back. Practice moving the arms and back foot at the sound of the gun.

Sprint Skill 3-

"ON YOUR MARK" POSITION IN THE STARTING BLOCKS

Assessing the athlete's readiness

- ___ The athlete attempts to sprint.
- ___ The athlete performs a stand-up start.
- ___ The athlete sprints under control.

Teaching the skill

- Set the front block two foot lengths behind the start line; the back block should be set one foot length behind the front block.
- Kneel on the track and position the feet firmly against the blocks so the toes barely touch the ground.
- Place hands shoulder-width apart on the track just behind the start line; set the fingertips down so the thumbs point in toward each other, the fingers out, and the arches formed by the index fingers and thumbs lie parallel to the start line.
- Roll the body forward slightly, and keep the arms straight and rigid, but not locked.
- Distribute weight evenly over hands and back knee.
- Hold the head up in line with the spine.
- Focus on a spot a few meters in front of the start line.

Suggestions for the teacher/coach

Set the blocks for a medium position, or when the athlete is kneeling in the blocks, the front knee barely touches the start line and the back knee is in line with the ankle of the front foot.

Sprint Skill 2-

"SET" POSITION IN THE STARTING BLOCKS

Teaching the skill

- Assume the correct "on your mark" position.
- Elevate hips so back leg forms a 120 degree angle at the knee, and distribute weight evenly over hands (hips should be slightly higher than the shoulders).
- Take a deep breath while rising to the "set" position.
- Hold the head in line with the spine and focus two meters down the track.
- Assume a balanced "set" position and concentrate on reacting to the sound of the gun (or command).

Sprint Skill 3-

SPRINTING OUT OF THE STARTING BLOCKS

Teaching the skill

- Assume the correct "set" position.
- At the sound of the gun (or start command), exhale forcefully and thrust the back knee and opposite arm forward strongly.
- Keep the body low and push hard off the power foot.
- Extend fully the power leg, then drive the legs and arms forward to accelerate into full sprinting stride.
- Sprint 15-20 meters, and slow to a jog.

Suggestions for the teacher/coach

At the start signal, give the athlete a slight push to initiate an explosive start. Emphasize using arm action to get out of the blocks quickly. Remind the athletes to wait for the starting signal so as not to commit a false start.

Sprint Skill 4-

ACCELERATION TO TOP SPEED

Teaching the skill

- Use short, quick steps out of the blocks allowing stride to increase in length as velocity increases.
- Make sure the feet strike the ground directly under the center of gravity.
- Use the arms vigorously, bringing the loosely-closed hands to the chest line during the upswing and stopping them at the back side of the hips on the downswing.

SPRINTING 8-WEEK TRAINING PROGRAM

Week 1

Day 1

Warm-up
5 easy stand-up starts
3 x 50 meter gradual acceleration from the blocks
2 x 75 meter at 75 percent effort from standing start
Cool-down

Day 2

Warm-up
Stride 3 x 180 meters striding with 240 meter jog/rest
2 x 400 meters at 50 percent effort while concentrating on running tall and relaxed
Cool-down

Day 3

Warm-up
5 stand-up starts
5 starts from the blocks
3 x 100 meter at 75 percent effort -- walk back to rest
3 x 120 meter strides at 50 percent effort
Cool-down

Week 2

Day 1

Warm-up
3 x 300 meter at 75 percent effort with 5 minutes of jogging for rest
6 x 100 meters striding on grass at 50 percent effort
Cool-down

Day 2

Warm-up
5 stand-up starts
5 starts from the blocks with the starting gun
3 x 40 for time with the starting gun
7 x 400 meters at god effort, jogging 400m for rest
Cool-down

Day 3

Warm-up
1 x 200 meters at 75 percent effort with 5 minute jog/rest
1 x 300 meters at 75 percent effort with 6 minute jog/rest
1 x 400 meters at a fast relaxed pace
Cool-down

Week 3

Repeat Week 1 with competition on Saturday.

Week 4

Repeat Week 2 with competition on Saturday.

Week 5

Day 1

Warm-up
2 x 60 meters at 75 percent effort with running start/jog recovery
2 x 120 meters a 75 percent effort with running start/jog recovery
2 x 200 meters at 75 percent effort with running start/jog recovery
Cool-down

Day 2

Warm-up

300 meters all-out sprinting relaxed with 8 minutes of jog recovery. Athlete does as many as possible while staying relaxed.

Cool-down

Day 3

Warm-up

Repetition relays -- 200 meters each leg. Each athlete runs as many as possible while staying relaxed. First few legs are pace work with the rest at competition pace.

Day 4

Race

Week 6

Day 1

Warm-up

5 form starts from blocks

3 x 75 meters from blocks

1 x 300 meters at hard effort

Cool-down

Day 2

Warm-up

Running as far as possible in 30 seconds while staying relaxed --jog/rest for 90 seconds

Week 7

Repeat Week 5 with competition on Saturday

Week 8

Repeat Week 6 with competition on Saturday

QUICK-STEP DRILLS

- **Quick-Step Skipping:** Practice quick-stepping where the instant the toes leave the ground, lift the heel to just under the buttocks. The higher the heel comes to the buttocks the shorter the lever. The shorter the lever, the faster the step. The length of the stride is determined by impulse of the foot striking the ground and the degree to which the drive leg is extended. The stride angle should equal at least 90 degrees.
- **Quick-Step Skipping with Knee Block:**
- **Quick-Step Running:** Run in place, bringing the heels up and under buttocks. Run forward in medium-length strides. Use a low knee lift. Carry upper body erect with a slight forward lean. Hold the head level and slightly forward. Run with a relaxed arm action. Maintain a smooth pace throughout the run.

NOTE: Turnovers are tallied by counting the number of times the right or left foot strikes the ground.

(insert illustrations X and XI)

STARTING DRILLS

- **Push the Wall:** Master the rear leg "push-drive through" actions
- **Reaction to Sound:** Push-up + Run/Jump/or Breakdown or Sit-ups + Run/Jump/or Breakdown
- **Partner Drill:** Two athletes assume a set starting position. As the second athlete passes the first one, the front runner watches for the passing the athlete to start his/her run.
- **Regular Start:** From a crouched start, the athlete, at any stimuli, takes off and sprints.
- **Low Crouch Start:** One or more athletes assume a crouched start position, and after a signal, execute starting actions, trying to beat each other.

RELAY RACING

Relay racing is the art of running with a baton and passing it from one teammate to the other, and making three exchanges with the fourth runner crossing the finish line with the baton. The most difficult concept to instill in Special Olympics athletes is running away from someone while trying to receive something from that person.

Coaches should incorporate relay passing in daily conditioning exercises. The coach may find that some athletes are better at handing off than receiving a baton. Place the athletes accordingly. The lead off runner only has to hand off, but must be consistent at getting a legal start. The second and third runners have to both hand off and receive the baton. The fourth runner only receives the baton but must know how to effectively finish a race.

The Special Olympics relay races include the 4 x 100m and the 4 x 400m. All runners in the 4 x 100m relay must stay in their designated lanes the entire race. In the 4 x 400 relay the lead off runner must stay in lane during the entire race. The second runner can break for lane 1 after running around the first turn. The third and fourth runners may break for lane 1 after receiving the baton.

Relay Skill 1-

PASSING THE BATON

Teaching the skill

- Grasp one end of the baton in the right hand with the fingers wrapped around the baton and the thumb lying on top of it.
- Run toward exchange zone in the inside (left side) part of the lane.
- Sprint into the exchange zone and pass the baton with an underhand snap of the right hand to the left hand of the outgoing runner.
- Remain in lane and slow down to a walk as outgoing runner continues relay.

Suggestions to the teacher/coach

Put a piece of tape around the baton indicating to the athlete where he/she should grip it; physically manipulate the athlete's fingers to achieve correct grip, and be certain the athlete grips it with the thumb on top.

Relay Skill 2-

RECEIVING THE BATON

Teaching the skill

- Identify the 20-meter exchange zone.
- Stand just in front of the first zone line (nearest the start line), and to the right side of the lane.
- Set the power foot forward (if right foot, stand on the right side of the lane) and look back over the left shoulder.
- Hold the inside hand back (left hand in this case) and keep the body weight forward slightly.
- Look back over inside shoulder for teammate (incoming runner).
- Begin running forward when incoming runner reaches a point 4-5 meters from exchange zone.
- Keep left hand back with fingers pointing to the left, thumb pointing down and palm down.
- Watch the incoming runner pass the baton underhanded into your left hand.
- Turn to look forward, switch the baton immediately to the right hand, and continue relay.

Suggestions to the teacher/coach

Explain and demonstrate and reason for staying to the right side of the lane while receiving the baton; i.e., giving incoming runner room in the lane to pass the baton from his/her right hand to the receiver's left hand. Place colored tape on the track 4-5 meters from exchange zone which, when reached by the incoming runner, indicates to the outgoing runner to start running.

Relay Skill 3-

4 X 100 RELAY INCOMING RUNNER

Assessing the athlete's readiness

_____ The athlete runs to teammate in proper lane.

_____ The athlete runs with baton to teammate until within reaching distance.

Teaching the skill

- Approach teammate at full speed.
- Continue to run fast until hand off is completed.

Suggestions for the teacher/coach

Demonstrate ready position for out-going runner. Demonstrate position of baton at hand off -- incoming runner delivers baton down into the up-facing palm of the out-going runner. Demonstrate start with baton in right hand. Demonstrate hand off between first and second runners -- right to left hand. Demonstrate hand off between second and third runners -- left to right hand. Demonstrate hand off between third and fourth runners - right to left hand. Demonstrate finish. Perform hand-offs while standing, walking, and while running easy. Perform hand off at each zone while running at perceived race effort. Place a 20cm strip of tape 7 meters in front of run up zone for starting signal for out-going runner.

(insert fig. R-IV through R-VII and R-IX)

Relay Skill 4-

4 x 100 RELAY OUT-GOING RUNNER

Assessing the athlete's readiness

- ___ The athlete attempts to participate in a relay race.
- ___ The athlete assumes a receiving position for a non-visual pass just inside the 10 meter run-up zone.
- ___ The athlete runs in lane while reaching back with designated arm.

Teaching the skill

- Identify the 10 meter run-up zone and the 20 meter passing zone.
- Look back at incoming teammate.
- Begin running forward in lane when incoming runner reaches designated takeoff point.
- Reach backward with designated arm with the palm up and thumb pointing inward.
- Grasp the baton that the incoming runner has placed there and continue running with the baton in that hand.

Relay Skill 5-

4 x 400M INCOMING RUNNER

Assessing the athlete's readiness

- ___ The athlete can locate teammate.
- ___ The athlete can run to teammate with baton.

Teaching the skill

- Assume a hand-off position for a visual pass.
- Run to teammate in proper lane.
- Extend arm to teammate with baton held at shoulder height.
- Allow teammate to grab baton.

Suggestions for the teacher/coach

Demonstrate correct stance for running start - Visual pass. Demonstrate correct hand position for receiving baton. Demonstrate correct hand position for handing off baton - Visual pass. Perform stationary hand off. Perform hand off while walking. While running slowly forward, demonstrate turning and grabbing baton out of the hand of incoming runner. Practice each hand off simulating the 1st, 2nd, 3rd, and 4th legs. Emphasize making the exchange as quickly as possible. Practice hand offs at perceived speed of actual race. Place 20cm strip of tape on the track 3 meters before zone to mark the in and out spot that the out-going runner will begin running when the incoming runner crosses it. Demonstrate finishing the race. Try to establish a running order as soon as possible and practice getting each runner in assigned lane and proper zone.

(insert fig. R-I through R-III)

Relay Skill 6-

4 x 400M RELAY OUT-GOING RUNNER

Assessing the athlete's readiness

- ___ The athlete attempts to participate in a relay race.
- ___ The athlete assumes a receiving position for a visible pass just inside the 20 meter passing zone.
- ___ The athlete runs in lane while looking back at incoming runner.
- ___ The athlete extends dominant arm backward with palm facing incoming runner.
- ___ The athlete runs to lane 1.

Teaching the skill

- Assume a receiving position for a visual pass.
- Identify the 20 meter passing zone.
- Look back over shoulder at incoming teammate.
- Begin running forward in lane when incoming runner reaches designated takeoff point.
- Reach backward with dominant hand with thumb up and grab baton from incoming teammate.
- Face forward and run in proper lane.

RELAY TRAINING PROGRAMS

4 x 100 RELAY

Train with sprinters doing starts, sprint techniques and conditioning. Work daily on hand offs while warming up. Begin with walking, then running easy. Practice in's and out's at each hand-off position during the acceleration strides as part of the warm up.

4 x 400 RELAY

Train with sprinters and middle distance runners for techniques and conditioning. Practice ins and outs on a daily basis during warm-up.

HURDLING

Hurdling is a sprint race that is run over barriers. The faster and more efficiently an athlete can clear a hurdle and begin sprinting again, the faster his or her time will be. The athlete must develop a concept of stepping over the hurdle rather than jumping it. Rhythm is the key to running a good race. The athlete who can clear the barriers with the least amount of stride alteration will be the most successful. The athlete should strive to use the same number of steps between each hurdle with the optimum being three. Basic speed is an essential ingredient for becoming a good hurdler.

Assessing the athlete's readiness

- ___ The athlete demonstrates the ability to start and finish a sprint.
- ___ The athlete attempts to step over a low barrier.
- ___ The athlete demonstrates the ability to step over a low obstacle while running.
- ___ The athlete demonstrates flexibility of the hips.

Teaching the skill

- Take position in the blocks with the foot of the lead leg to the rear of the blocks.
- At the starting signal, run from blocks to first hurdle keeping body erect while using good sprint form.
- Extend a slightly bent lead leg over the hurdle cross bar and lift up on the toes of the lead leg using the opposite elbow and lower arm for balance.
- Rotate the trail leg over the top of the hurdle by turning the knee and foot outward with the knee higher than the foot and the toes higher than the heel; continue the rotation until the knee is up to the chest, then bring the foot directly to the ground striking the surface on the ball of the foot.
- Land balanced after clearing hurdle.
- Sprint between hurdles.
- Sprint from last hurdle to finish line.

(insert illustrations H-I through H-IV)

Suggestions for the teacher/coach

Demonstrate clearing the trail leg by standing with the lead foot on the ground about 3cm in front of the hurdle cross bar. Let the athlete practice by walking beside the hurdle and clearing the lead leg only; repeat, clearing the trail leg only. Practice with three hurdles at first to master clearing both the lead leg and trail leg. As the athlete progresses, have him/her run slowly using five steps between hurdles. Then have the athlete start out of the blocks and establish a 3-step pattern between the hurdles. Show pictures or videotapes of the total sequence of clearing the hurdle: approach, takeoff, layout, trail leg clearance, and landing.

(insert illustrations H-a through H-e)

Drills

- **High Knee Lifts:** Stand in place and lift knee as high as possible. Switch legs and repeat. Gradually increase pace from walking in place to skipping to running for 10 repetitions of each.
- **Leg Extensions:** Stand in place and lift leg in front of body at high as possible. Switch legs and repeat. Gradually increase pace from walking in place to skipping to running for 10 repetitions of each.
- **Trail Leg Drill:** Stand in place and lift trail leg behind the body as high as possible. Switch legs and repeat. Gradually increase pace from walking in place to skipping to running for 10 repetitions of each. Have the athlete also practice by holding his/her lead leg in position while hopping on trail leg.
- **Trail Leg Flexibility Drill:** Set 5 hurdles 3m apart and negotiate each with trail leg as quickly as possible.
- **Jackknife Lunges:** Jump high and tuck.

Stretches

- Sit with feet and legs under body. Lean back slowly as far as possible using arms for balance. Hold 30 seconds.
- Start on "all fours," kneeling with hands on the ground in front of the body. Lift one leg behind the body as high as possible. Leg can be bent or straight. Hold for 30 seconds. Switch legs and repeat.
- Lie on stomach. Pick up thigh/leg as high as possible toward head. Partner may assist to lift leg. Hold for 30 seconds. Switch legs and repeat.
- Stand with legs slightly flexed at the knee. Bend trunk and reach down and backward with arms. Hold for 30 seconds.

(insert illustrations D-I through D-IX)

HURDLING 8-WEEK TRAINING PROGRAM

WEEK 1

Day 1

1. Warm-up - strength and flexibility drills
2. Hurdle routine
3. 5 x 1st 3 hurdles from standing start - concentrate on hurdle clearance by setting hurdles 3.5m apart and using 5 steps
4. 3 x 110 meter/rest - walk back to start
5. Cool-down

Day 2

1. Warm-up - strength and flexibility drills
2. Work with sprinters
3. 5 starts with gun or substitute signal
4. 1 x 300 meter fast relaxed
5. 3 x 180 meter - jog recovery
6. Cool-down

Day 3

1. Warm-up - strength and flexibility drills
2. Hurdle routine

3. 5 x 1st 3 hurdles out of blocks - concentrate on establishing consistence of steps between hurdles (aim for three steps)
4. 3 x 120 meter fast relaxed - jog recovery
5. Cool-down

Day 4

1. Flexibility exercises - hips and hamstrings

WEEK 2

Day 1

1. Warm-up - strength and flexibility drills
2. Hurdle routine
3. 5 x 1st 5 hurdles (standing start) concentrate on hurdle clearance
4. 3 x 110 meter fast relaxed - jog recovery
5. Cool-down

Day 2

1. Warm-up - strength and flexibility drills
2. Starts with sprinter (5 times with gun or substitute signal) with jog recovery; run fast relaxed the following distance, 75 meters, 150 meters, 200 meters, 150 meters, 75 meters
3. Cool-down

Day 3

1. Warm-up - strength and flexibility drills
2. 5 x 1st 3 hurdles - start from blocks - work on steps
3. 2 x full flight of hurdle - standing start using 5 steps
4. 3 x 100 meters foot relaxed - jog recovery
5. Cool-down

WEEK 3

Day 1

1. Warm-up - strength and flexibility drills
2. Hurdle routine
3. 3 x 1st 3 hurdles - concentrate on sprinting between hurdles
4. 2 x full flight of hurdles - concentrate on hurdle clearance
5. 3 x 75 meters fast relaxed - jog recovery
6. Cool-down

Day 2

1. Warm-up - strength and flexibility drills
2. 5 block starts with gun
3. 3 x 200 meters fast relaxed - jog recovery
4. 6 x 100 meters easy strides
5. Cool-down

Day 3

1. Warm-up - strength and flexibility drills
2. Hurdle routine
3. 3 x 1st 3 hurdles from blocks
4. 2 x full flight for time
5. 6 x 100 meters easy stride
6. Cool-down

WEEK 4

Repeat week 1 with race on Saturday.

WEEK 5

Repeat week 2 with race on Saturday.

WEEK 6

Repeat week 3 with race on Saturday.

WEEK 7

Repeat week 3 with race on Saturday.

WEEK 8

Day 1

1. Warm-up - strength and flexibility drills
2. Hurdle routine
3. 2 x 100 meters for time - 10 minute jog recovery
4. 6 x 100 meter strides
5. Cool-down

Day 2

1. Warm-up - strength and flexibility drills
2. Hurdle routine
3. 3 x 1st 3 hurdles from blocks
4. 3 x full flight with 1st 5 hurdles removed - jog recovery
5. 6 x 100 meter strides
6. Cool-down

Day 3

Same as day 1.

Day 4

Championship race.

800 METERS

The 800 meters is equally a sprint and an endurance race. Due to the nature of the race, the first 400 meters is usually run faster than the last 400 meters because the runners are all trying to get a good position from which to launch their finish. An athlete who wishes to race a distance of 800 meters must not only be strong, but also must possess some natural speed. The training for the 800 meters is made up of segments of work that produce speed endurance. Some 800 meter workouts are run on roads. The coach would do well to ride along with the runners on a bike with a pedometer to control the running pace.

Assessing the athlete's readiness

___ The athlete can run for 3 minutes at a steady pace.

___ The athlete can run for 30 seconds at a fast pace.

Teaching the skill

- Perform a stand-up start with commands "Stand at your mark," then "Set," and sound the gun.
- Run from starting position to the lane 1.
- Run at a steady pace from the 200 meter mark to the 600 meter mark.
- Attempt to run fast the last 200 meters.
- Run through the finish line after completing two laps of a 400 meter track.

Suggestions for the teacher/coach

Demonstrate stand-up start with commands "Stand at your marks," then "Set," and starting signal. Demonstrate getting to lane 1 from the starting position. Demonstrate how to run in the lane 1. Practice running in a group; demonstrate how to pass another runner by running around them on the outside and getting two strides ahead before cutting back in.

(insert illustrations I and II)

800 METER TRAINING PROGRAM

WEEK 1

Day 1

1. Warm-up - quick turnover drills
2. 8 x 200 meters at 50% effort with 400 meter jog/rest -- concentrate on running tall and relaxed with a quick turnover
3. Cool-down

Day 2

1. Warm-up - quick turnover drills
2. 6 x 300 meters at 50% effort with 400 meter jog/rest -- concentrate on running tall and relaxed with quick turnover
3. Cool-down

Day 3

1. Warm-up - quick turnover drills
2. 2 x 400 meters at 50% effort with 400 meter jog/rest
3. 1 x 800 meters at 50% effort -- record time
4. Cool-down

WEEK 2

Day 1

1. Warm-up - quick turnover drills
2. 1000 meters at 50% effort with 800 meter jog/rest.
3. 1200 meters at 50% effort
4. Cool-down

Day 2

1. Warm-up - quick turnover drills
2. 4 x 400 meters 75% effort with 400 meter jog/rest
3. 6 x 300 meters 75% effort with 400 meter jog/rest.
4. Cool-down

Day 3

1. Warm-up - quick turnover drills
2. 800 meters at best effort -- record and use time minus 2% for goal pace
EXAMPLE: 800 meter time = 2:40 - 2% = 2:36 goal pace
400 meter goal pace = 78 seconds

EXAMPLE: 800 meter time = 3:00 - 2% = 2:54 goal pace
400 meter goal pace = 87 seconds

WEEK 3

Day 1

1. Warm-up - quick turnover drills
2. 2 mile distance run on road alternating 3 minutes of running with 30 seconds of walking
3. Cool-down

Day 2

1. Warm-up - quick turnover drills
2. 4 x 400 meters at goal pace with 400 meter jog/rest
3. 800 meter jog then run 4 x 400 meters at goal pace with 400 meter jog/rest
4. Cool-down

Day 3

1. Warm-up - quick turnover drills
2. 1200 meters run at 75% effort with 800 meter jog/rest
3. 1000 meter run at 50% effort with 800 meter jog/rest
4. 4 x 200 meter run at goal pace with 400 meter jog rest
5. Cool-down

Day 4

1. Race or time trial - record new goal pace based on improved time

WEEK 4

Repeat Week 3

WEEK 5

Day 1

1. Warm-up - quick turnover drills
2. 3 mile run on road alternating 4 minutes of running with 1 minute of walking
3. Cool-down

Day 2

1. Warm-up - quick turnover drills
2. Run as far and as fast as possible in 30 seconds then jog/rest 90 seconds.
3. Run as far and as fast as possible in 60 seconds then jog/rest for 2.5 minutes.
4. Run as far and as fast as possible in 90 seconds then jog/rest for 4 minutes.
5. Cool-down

Day 3

1. Warm-up - quick turnover drills
2. 4 x 400 meter run at goal pace based on fastest 800 meter time to date with 400 meter jog/rest
3. Another set of 4 x 400 meters
4. Cool-down

Day 4

1. Race and compute new goal pace

WEEK 6

Day 1

1. 4 mile run on road with the first mile at easy steady state and the last 3 miles alternating between 2 minutes of hard running and 5 minutes of medium effort running
2. Cool-down

Day 2

1. Warm-up - quick turnover drills
2. 4 x 400 meter run at goal pace with 400 meter jog/rest
3. 2 x 300 meter run as fast as possible while staying relaxed with 8 minute jog/rest
4. Cool-down

Day 3

1. Warm-up - quick turnover drills
2. 200 meter run at goal pace - 200 meter jog, 300 meter run at goal pace - 300 meter jog, 400 meter run at goal pace - 400 meter jog, 500 meter run at goal pace
3. Cool-down

Day 4

1. Race

WEEK 7

Repeat Week 5

WEEK 8

Day 1

1. Warm-up - quick turnover drills
2. 6 x 400 meter run at fast relaxed effort with 4 minute jog/rest
3. Cool-down

Day 2

1. Warm-up - quick turnover drills
2. 4 x 400 meter run at fast relaxed effort with 4 minutes of jog interval
3. Cool-down

Day 3

1. Warm-up - quick turnover drills
2. 2 x 400 meters at fast relaxed effort with 4 minute jog/rest
3. Cool-down

Day 4

Participate in Championship race

(insert 5K & 10K 12-WEEK TRAINING PROGRAM .xls)

15-WEEK TRAINING PROGRAM FOR HALF-MARATHON AND MARATHON EVENTS

(insert HALF MARATHON/MARATHON 15-WEEK TRAINING SCHEDULE.xls)

THE COOL-DOWN PRINCIPLE

The cool-down is as important to an athlete as the warm-up. Abruptly stopping an activity may pool the blood and slow the removal of waste products in the athlete's body. It may also cause cramps, soreness, and other problems for Special Olympics athletes. The cool-down is the same as the warm-up but in reverse order: acceleration runs, stretching exercises, and then jogging. Be sure to include a good warm-up and cool-down in every Athletics meet.

An example of a good cool-down is to quick-step jog for 5 minutes then do 6 x 50 meters of easy effort jogging with 10 seconds rest between each. Perform strengthening exercises at the end of the cool-down while the muscles are warm and pliable.

MODIFICATIONS AND ADAPTATIONS

The focus of this Guide is to provide coaches with information which will enable them to assist athletes of all abilities to function at their maximum performance levels. Achieving this goal can be facilitated through the Individualized Education Program (IEP). Realistic goals and objectives should be developed that present a challenge to athletes but do not force them into experiences loaded with failure. To provide positive experiences means that many handicapped athletes will require instructional activities that are adapted to their particular needs. Some examples of activity adaptations include:

Modifications of Activities

Special Olympics athletes are often denied the chance to learn new skills or activities because they are not physically able to perform the skills exactly according to the coach or the instructional guide. The coach may modify the skills involved in an activity so all of the athletes are able to participate. For example, modify the game of tag by requiring the athletes to walk instead of run.

Accommodating the Athlete's Special Needs

In competition, it is important that the rules not be changed to suit several athletes' special needs. However, there are other ways to accommodate the athletes' special needs. For example, the distance

of a race may be decreased for Special Olympians with muscular deficiencies. The use of a sock with the runner holding one end and a runner at the other end can be used to help the visually impaired.

Changing the Method of Communication

Athletes sometimes require communication systems that are specific to their needs. For example, verbally explaining a task may not match up well with some athletes' information processing systems. Information which is more specific might be provided in other ways. The instructor or coach, for example, could simply demonstrate the sports skill. Also, an athlete could be permitted to "feel" the skill by holding onto the coach's arms as the coach demonstrates a skill such as putting the shot. Some athletes may need not only to hear or see a skill but also to read a description of the skill. This need can be met for poor or non-readers through the use of a poster board to which stick figures are attached to show the task sequence for a skill such as walking or running. The coach should seek instructional videos.

Modification of Equipment

Successful participation in sports for some Special Olympics athletes requires equipment which has been modified to their particular needs. Requests for purchase or construction of equipment can now be facilitated through the Individualized Education Program. If special equipment is necessary to help an athlete's progress in physical education, then it should be identified at the I.E.P. meeting and included on the I.E.P. form. Fortunately, special equipment is available such as shoes that compensate for unequal leg length.

Adaptations

More specific adaptations for associated impairments are listed below.

ORTHOPEDIC IMPAIRMENTS

- Use track surfaces that are flat, solid, and smooth.

AUDITORY IMPAIRMENTS

- Use flag or hand signals for start.
- Use smoke of the gun as a starting cue.
- Tag athlete to initiate start.

VISUAL IMPAIRMENTS

- In distance events, have a sighted partner run with the participant.
- Use brightly colored cones on the course.
- Set up guidelines throughout the course.

STRENGTH AND CONDITIONING ACTIVITIES

A brief overview of terms and conditioning concepts that are addressed in this section follows.

1. Muscle Strength - the greatest amount of force an athlete can exert at one time.
2. Muscle Power - the work done over a given period of time. Power is very important to those events in track and field that require explosive strength such as the long and high jumps.
3. Muscle Endurance - the ability to repeatedly continue the work without muscle fatigue. This is particularly important for distance runners.
4. Flexibility - the ability to move a body joint through its normal full range of motion.
5. Weight Training - the development of strength with the use of weight lifting and based on the overload principle.
6. The Overload Principle - the strengthening of muscles get stronger through one of the following methods.
 - a) Lifting the same weight as before more quickly.
 - b) Increasing the amount of weight lifted.
 - c) Lifting the same weight, but lifting it more times than before.

7. Progressive Resistance - gradually increasing the weight lifted as the body gets used to the new stress. When the muscle is stressed beyond its normal demand, the muscle responds positively and becomes stronger.
8. Repetitions ("reps") - the number of times a lift is made continuously, one lift after another and without rest.
9. Set - the number of repetitions marked off by a rest period.
10. Max - the maximum amount of weight that can be lifted for one rep.
11. Specificity - physical conditioning for an event in track and field which matches the physiological demands of the activity. For example: endurance training produces endurance, power training produces power, and strength training produces strength.
12. Plyometric Training - exercises characterized by powerful muscular contractions in response to rapid, dynamic stretching of the involved muscles. The muscle flexes and extends. Through this type of exercise this muscle reflex process is improved.

STRENGTH TRAINING

There are two types of strength training programs: general and specific. The exercises used in each program reflect the athlete's need for strength development. A general strength training program gives the athlete extra strength in the muscles that are particularly important to perform an event well. A general strength training program must provide the athlete with a suitable background for participating in a specific strength training program in the future.

It is recommended that Special Olympics coaches concentrate on developing the overall body strength of their athletes. The types of exercises used for an athlete's general strength training program should include the following.

Exercises to develop the trunk muscles (back and abdomen)

Curl-ups (Sit-ups)

- Lie on floor with knees bent.
- Clasp hands and rest them on abdomen.
- Keep back straight and slowly come up to "crunch," position (about 45°).
- Slowly return to lying position.
- Repeat exercise 5 times; gradually increase to 10 times or more.
- * Variation: Have athlete face upward, curl trunk forward until shoulders are approximately 3cm off the ground. Hold this position for 1 second. Repeat exercise with feet off the ground.

Trunk Lifts

- Lie face down on the floor with toes pointed back and hands behind the back.
- Slowly raise upper body off the ground as high as possible, and return.
- Avoid using arms for leverage; use trunk muscles.
- Keep hips, thighs, knees, and feet on the floor.
- Repeat exercise 5 times; gradually increase to 10 times or more.

Exercises to develop arm and shoulder muscles (flexors and extensors)

Push-ups

- With body inclined forward, place weight on hands and feet.
- Bend arms to drop the chest on the floor; then push up to original position. Do not bend back, hips, or knees. Keep head up.
- Repeat exercise 5 times; increase to 10 times or more.
- * Variation: Start from kneeling position. Walk hands forward until body is straight and inclined forward. Weight is on hands and knees. Bend arms to bring chest to floor then push up to original position. Knees are bent, but do not bend hips.

Medicine Ball Work

- Stand about 3m from partner.
- Grasp the medicine ball with two hands.
- Step forward with one foot and throw the ball to partner.
- Use an underhand throw or chest pass to throw the ball.

- Catch the ball with two hands when thrown from partner and throw it back as quickly as possible.
- Work vigorously for about 45 seconds, rest, and repeat 6-8 times.

Exercises to develop foot and leg muscles (flexors and extensors)

There are many types of exercises that cover each of these three muscle groups. Coaches should consider exercises for an athlete based upon the athlete's stage of development and level of ability. The exercises described below are acceptable in a general strength training program for Special Olympics athletes.

Jump and Reach

- Stand with feet slightly apart.
- Bend knees and hold arms down toward the ground.
- Swing arms forward and up, and reach as high up as possible while jumping straight up off the floor using a strong push off the feet.
- Flex knees and ankles to soften landing - then, jump again straight up off the floor.
- Perform 10-12 jumps in a row.

Kangaroo Hops

- Stand with feet flat on floor and slightly apart.
- Move weight up onto toes.
- Hop by bringing knees up to chest.
- Land on flat feet and hop again.
- Keep head up and arms out.
- Perform 10-12 hops in a row.

Knee Bends

- Stand with feet apart and pointing forward.
- Hold arms straight out in front of the body.
- Bend the knees slowly to a quarter squat (45° angle).
- Keep the head up and back straight.
- Perform 10-12 knee bends in a row.

Alternate Knee Bends

- Stand with one leg in front of the other, feet pointing forward, and hands on hips.
- Bend the front knee slowly to a 60° angle (nearly half squats). Keep the head and back erect.
- Return to upright position.
- Switch legs and repeat bend with other knee.
- Perform 10-12 knee bends with each leg.

Mountain Climber

- Squat down so chest touches knees and hands are on floor in front and to the outside of the feet.
- Extend one leg straight back, resting it on its toes.
- Support the weight of the body with the bent leg and the hands.
- Switch the legs quickly, moving one forward and one back.
- Repeat the switches 20 times in a row to resemble climbing up a mountain.
- Keep the head up, and stay on the toes.

Bicycle Riding

- Lie on the floor with legs together and hands behind and beside the hips.
- Lift straight legs together until the feet are directly over the chest.
- Bring one knee toward the chest while holding the other leg straight.
- Extend bent leg and bring straight leg's knee to the chest (i.e., switch legs).
- Repeat switches 20 times rapidly to resemble bicycle riding.
- Keep the head up and legs off the floor.
- Hands may be used to support hips.

PRINCIPLES OF STRENGTH TRAINING

1. Stretching

After warming up, major stretching exercises should be performed to promote flexibility, increase blood and muscle temperatures, and reduce injuries. The easy stretch is characterized by slight tension and should be held for 5-30 seconds. The easy stretch gets the muscles ready for a developmental stretch. After an easy stretch, go a little farther in the same stretch until you feel slight tension again. Hold this for 5-30 seconds. Basic rules for stretching include:

- Stretch slowly, with control.
- Do not bounce.
- Do not feel pain.
- Do not compare your flexibility with others.
- Breathe slowly and rhythmically; do not hold your breath.

2. Range of Movement

Exercises are performed properly when done in a controlled manner with no bouncing. The joint involved in the exercise is moved through the entire range of movement for that joint.

3. Muscle Balance

Remember to train both the front and the back muscles when strength training. These are the two muscles that are in opposition to each other. For example: if training the biceps, also train the triceps. This is important in preventing injury.

4. Supervision

Appropriate supervision depends on the needs and characteristics of the particular group of athletes that are training. The different needs might be: motivation, behavior, handicap condition, seizures, assistance in counting reps, and adding weights. This is especially important during the initial stages and should be continued until the athlete demonstrates the necessary coordination and balance requirements of each exercise.

5. Selection of Exercises

The exercises selected will work each of the following major muscle groups in this order: stomach, thigh, chest, back, shoulders, triceps, and biceps. The emphasis is always on total body condition.

6. The Order of Exercises

The order in which the athlete performs the exercises is very important in getting the most out of each exercise. Lifts that work many muscle groups and require a lot of mental concentration should be performed early in the workout. Lifts working the small muscle groups and requiring little concentration should be performed last. A suggested order of exercises is: curl-up (sit-up), leg-curl, bench press, lat pull-down, military press, triceps curl, and biceps curl.

7. Frequency of Training

Always include one day of rest between strength training workouts.

8. Number of Sets

One set of each exercise is recommended during the first week or two of training. After that, 2-5 sets is appropriate.

9. The Amount of Weight to Use

Begin with a light bar, without any weights or even a broom stick. Use this until the proper technique is learned. After the technique is perfected and the bar is lifted under control, weights may be added. If an athlete can do 10 reps without tiring, the weight is too light. If the athlete cannot do 6 reps, the weight is too heavy. The weight must be heavy enough to give sufficient stimulation. It is better to lift 100 pounds for 10 reps than 80 pounds for 15 reps.

10. Rest Between Sets

The amount of rest between sets depends upon the desired results of the workout. If muscular endurance is desired, little rest should be taken between sets. If strength-power is desired, more rest between sets is needed.

11. Weight Room Safety

The most important consideration for operating a weight training facility is **SAFETY!** A key element of a strength training program is the proper use and care of equipment.

- a) Constantly look for equipment that sticks or is squeaky and that has loose nuts and bolts, broken welds, worn pulleys, frayed cables, loose wall or floor mountings, broken barbell plates and weight plates, and worn or torn covers or padding.
- b) Keep the weight room clean. All weights must be put away after each exercise, not after the workout is completed. If chalk is used, limit its use and area by using a box or container.
- c) **ALLOW NO HORSEPLAY!** Allow others to lift without distractions.
- d) Emphasize proper use of all equipment.
- e) Dress appropriately to allow freedom of movement and safety (always wear a shirt).
- f) Load barbells properly. Both ends are loaded equally. Plates are pushed all the way onto the bar; collars are used to secure weight plates.
- g) Use the safety equipment when it is available.
- h) Use proper lifting form. Focus on stance, head, and back.
- i) Breathe while lifting. Typically, one should exhale during the exertion and inhale during the relaxation.
- j) Know one's limits.
- k) Finish all lifts and hold onto the bar until it is safely back on the rack.
- l) Do not drop the weights. If you can lift it, you can place it down.

12. Use Spotters

The coach is responsible for instructing and supervising athletes for proper spotting techniques. The lifter depends on the spotter for safety. Some of the following items are the responsibility of the lifter as well as the spotter.

- a) Be Alert! The spotter should keep his mind on the task at hand.
- b) Provide enough spotters. If the coach cannot handle a missed lift alone, then the coach must get more help.
- c) Load the bar properly and secure collars on both ends of the barbell.
- d) Know how many repetitions will be attempted by the athlete.
- e) Establish a cue for the athlete to signal for help with a lift.
- f) Help with lifting the bar off and returning it to the rack at the completion of the lift.
- g) Watch for sliding weights and know how to correct this problem.
- h) Have a solid stance; be ready for anything.
- i) Use two hands to spot.
- j) Watch the lifter's form.
- k) Encourage the lifter.

- 1) Rest after a lift before spotting again. Do not be too tired to spot.

PRE-SEASON/IN-SEASON ATHLETICS WEIGHT TRAINING PROGRAM

The following exercises can be done on a weight machine. These machines are found in most high school weight training facilities. The major reason to use this kind of weight training versus free weights is that the athlete will not be placed in a dangerous position due to letting go of the weight and having it fall on themselves. There will still be a need for spotting and supervision, but high level athletes can do most of these exercises by themselves, after they have been properly trained. Lift the weight in two counts and return to the starting position in four counts.

Bent Knee Curl-Ups (Sit-Ups) on a Inclined Board (1 set of 10 reps)

- Lie flat on back on the board.
- Hook feet under strap or pads on the board.
- Bend knees at 45°.
- Cross hands to opposite shoulder.
- Sit up so that elbows touch thighs.
- Return to starting position.
- Exhale when coming up; inhale going back down.

(insert figure 10)

Leg Curls on the Stomach (1 set of 10 reps)

- Lie on stomach on machine.
- Hook the heels under the foot pad.
- Place hands on front of machine for leverage.
- Bring the legs up to 90°.
- Return the legs to starting position.
- Inhale when lifting legs up; exhale when lowering legs.

(insert figure 11)

Bench Press (1 set of 10 reps)

- Lie flat on back on bench, feet on floor.
- The bar should be directly above the chest.
- Place the hands on the bar with palms up.
- Push the bar up to a straight arm position.
- Return the bar to the starting position.
- Keep the hips and the head on the bench.
- Inhale when pushing the bar up; exhale when lowering the bar.

(insert figure 12)

Lat Pull Down (1 set of 10 reps)

- Kneel facing the machine.
- Grab the bar with elbows at 90° angles.
- Pull bar down until even with upper chest.
- Raise bar back to starting position.
- Pull bar down again, this time behind the head and even with the neck.
- Raise the bar back to starting position.
- Inhale when pulling bar down; exhale when raising it.

(insert figure 13)

Seated Military Press (1 set of 10 reps)

- Sit on floor, legs crossed, facing away from the bench press station.
- Hold bar slightly wider than shoulders.

- Push bar up to straight arm position.
- Lower bar to starting position.
- Inhale when pushing bar up; exhale when lowering it.

(insert figure 14)

Standing Triceps Press Down (1 set of 10 reps)

- Stand facing machine, feet shoulder-width apart.
- Grab bar, palms down, hands slightly apart.
- Keep elbows bent and close to body.
- Press down on bar to straight arm position.
- Return back to starting position.
- Inhale when pulling bar down; exhale when raising it.

(insert figure 15)

Standing Bar Curl (1 set of 10 reps)

- Stand facing machine.
- Position feet far enough away from machine to clear exercise.
- Hold bar with palms up and arms straight.
- Keep elbows close to body.
- Bring bar up toward the body until it reaches chin.
- Lower bar to starting position.
- Inhale when raising bar up; exhale when lowering.

(insert figure 16)

Seated Lower Pad Toe Raise (1 set of 10 reps)

- Sit on seat, hold handles on side of seat.
- Place balls of feet on lower pad.
- Push until legs are straight and knees locked.
- Press on pads with the feet as far forward as possible.
- Hold this position for count of 10.
- Return legs to starting position.
- Inhale when pushing feet forward; exhale when bringing them back.

(insert figure 17)

If a weight machine is not available, free weights may be used instead. Remember, proper supervision and instruction must be used to prevent injuries.

Bent Knee Curl-Ups (Sit-Ups) on an Incline Board (1 set of 10 reps)

- See previous directions.

Barbell Front Lunge (1 set of 10 reps)

- Place hands on barbell wider than shoulders.
- Place barbell behind the head near the neck.
- Stand with the feet straight and slightly apart.
- Step forward with left foot until thigh is parallel to floor, keep the head up.
- Keep right leg straight when stepping with left.
- Step back to starting position.
- Repeat with the right leg.
- Inhale when stepping forward; exhale when stepping back.

(insert figure 18)

Barbell Bench Press (1 set of 10 reps)

- Lie on bench on back, feet flat on floor.
- Grab barbell with hands placed wider than shoulders.
- Lower barbell to just above chest.
- Raise barbell to straight arm position.
- Lower to chest again.
- Keep head and hips on the bench.
- Inhale when lowering bar; exhale when raising.

(insert figure 19)

Bent Over Two-Arm Long Bar Rowing (1 set of 10 reps)

- Place empty side of barbell against wall.
- Put weight on side of barbell to be lifted.
- Stand with one foot on each side of barbell.
- Bend at hips so that back is parallel to floor.
- Bend knees slightly.
- Hold barbell with both hands close to weights.
- Pull barbell toward chest until weights touch chest.
- Keep back straight during lift.
- Do not allow weights to touch floor when lowering.
- Inhale when lifting barbell; exhale when lowering.

(insert figure 20)

Barbell Military Press (1 set of 10 reps)

- Sit on end of bench, feet slightly apart and flat on floor.
- Place hands on barbell, palms up, wider than shoulders.
- Raise barbell up to shoulders.
- Push barbell to straight arm position, keeping the back straight.
- Lower barbell back to starting position.
- Inhale when pushing bar up; exhale when lowering it.

(insert figure 21)

Barbell Triceps Curl (1 set of 10 reps)

- Stand with feet straight and slightly apart.
- Place hands on barbell shoulder-width apart, palms down.
- Raise barbell over head to straight arm position.
- Lower barbell behind head until hands are near shoulders, keeping elbows close to head.
- Return to starting position.
- Inhale when lowering barbell; exhale when raising it.

(insert figure 22)

Barbell Curls (1 set of 10 reps)

- Stand straight with feet slightly apart and head up.
- Place hands on barbell slightly apart, palms up.
- Start with barbell resting against legs.
- Raise barbell up until elbows are bent.
- Keep elbows close to body.
- Lower barbell to starting position.
- Inhale when raising barbell; exhale when lowering it.

(insert figure 23)

Barbell Toe Raises (1 set of 10 reps)

- Hold the barbell wider than shoulder-width.
- Place barbell behind head on shoulders.
- Stand with toes on a low platform and heels on the floor. Keep feet straight.
- Push up on toes, raising heels off the floor.
- Lower back to starting position.
- Inhale when raising up; exhale when lowering.

(insert figure 24)

PLYOMETRIC TRAINING

Most competitive sports, particularly Athletics, require a rapid deceleration of the body followed by almost immediate acceleration in the opposite direction. This rapid deceleration and acceleration is called the stretch-shortening cycle. Plyometric exercises train the muscles, connective tissue and nervous system to effectively carry out the stretch-shortening cycle thereby improving the athlete's performance. Carefully applied plyometric exercise programs are no more harmful than other forms of sports training and competition, and may be necessary for safe adaptation to the rigors of "explosive" sports.

Coaches should follow these guidelines for plyometric training:

- Start with one set of each exercise, working toward three more sets.
- Judge whether the athlete has the proper motor skills for properly executing the drills. If the athlete has poor form, stop the drill.
- Always start with simple drills and progress to the more difficult.
- Properly warm up and stretch before each plyometric workout and follow with a proper cool-down.
- Have the athletes execute the drills with maximal effort to ensure best training results. The rate of muscle stretch is more important than the magnitude of the stretch.
- Take a 1-2 minute rest between successive exercise sequences.
- Perform a number of repetitions ("reps") according to the intensity of the drill and the condition of the athlete. The athlete will only benefit from the reps performed properly.
- Never perform plyometric drills the same day as a weight training session.

Drills for the Legs and Hips - there should be a 2-minute rest between each set of drills.

Bounds (1 set of 8 reps)

- Start in half-squat position with arms down at sides, back straight, head up.
- Jump outward and upward, trying to attain maximum height and distance.
- Upon landing initiate the next bound.
- This drill is good for all running events.

(insert figure 25)

Hops (1 set of 10 reps)

- Begin by jumping upward as high as possible.
- Flex the legs completely, with feet under buttocks. Emphasis is on maximum lift.
- Upon landing, jump quickly upward again, using arms to achieve maximum lift.
- Work at gaining height and distance but do not sacrifice repetition rate.
- This drill is good for all running events.

(insert figure 26)

Squat Jumps (1 set of 15 reps)

- Start in a half-squat position, hands locked behind the head.
- Explode upward.
- Upon landing, repeat the sequence.
- Emphasis is on maximum height for each jump.

(insert figure 27)

Skipping (1 set of 10 skips)

- Begin with one leg forward.
- Drive off the back leg; start a short skipping step with the opposite leg.
- Thrust the knee up toward the chest.
- Upon landing, repeat with other leg.
- Emphasis is on gaining as much height as possible with maximum "hang time."
- This drill is good for long and high jumps.

(insert figure 28)

Drills for the Trunk - there should be a 2-minute rest between each set of drills.

Horizontal Swings (1 set of 10 reps)

- Stand with feet shoulder-width apart.
- Hold a dumbbell with both hands straight out in front of the body at chest level.
- Start a swing toward one side.
- As momentum increases, check the motion by pulling in opposite direction.
- Allow work to come from the shoulders and arms.
- This drill is good for the shot put.

(insert figure 29)

Ball Twist (1 set of 10 throws)

- Stand with feet spread wider than shoulders and hold a ball next to the body.
- Begin by rapidly twisting the torso in the opposite direction of the ball.
- Check the twist, with one in the opposite direction, releasing the ball toward a partner.
- Concentrate on rapid cocking action before twisting in the direction of the throw.
- Use a lighter ball (like a soccer ball) in the beginning and works towards using a heavier ball.
- This drill is good for the shot put.

(insert figure 30)

Drills for the Upper Body - there should be a 2-minute rest between each set of drills.

Ball Chest Pass (1 set of 20 reps)

- Partners may stand or kneel facing each other.
- One partner holds the medicine ball or basketball with hands behind the ball and knuckles touching the chest.
- Rapidly push the ball toward the partner, extending the arms to full length.
- Partner catches the ball and repeats the sequence rapidly back to the partner.
- This drill is good for the shot put.

(insert figure 31)

Dumbbell Arm Swing (1 set of 20 swings)

- Hold a dumbbell (2.5 to 5 pounds) in each hand.
- Stand in comfortable position.
- Begin action by driving one arm upward to a point above the head, and the other arm drives back behind the body.
- Before either arm reaches a maximum stretch, check the motion by swinging back in the opposite direction with both arms.
- This drill is good for all running events.

(insert figure 32)

CROSS TRAINING

Cross training is a modern day term which refers to the substitution of skills other than the skills directly involved in the performance of an event. Cross training came about as a result of injury rehabilitation and is now also used in injury prevention. When runners sustain injuries in the legs or feet that keeps them from running, other activities can be substituted so that the athlete can keep up his/her aerobic and muscular strength. Cross training for runners comes in the form of swimming pool workouts, bicycling, cross country skiing and resistance training.

Swimming Pool Workouts

Have athlete swim or perform running actions in the pool. Have athlete swim at a steady state for a minimum of 2 minutes (aerobic). Using a flotation vest or inner tube, have athlete perform running actions while in an upright position. Use intervals of 30-120 seconds with 2:1 rest.

Bicycle Workouts

Have athlete ride bicycle doing interval and steady state workouts. Athlete works out on a stationary bike or spinning bike doing aerobic and anaerobic workouts. Athlete rides an outdoor bike for 2 minutes to an hour at various paces.

Cross Country Skiing

If the athlete can cross country ski, have him/her ski on a cross country course for 2 to 60 minutes. If available, have athlete do an indoor workout on a cross country ski trainer machine for 2 to 60 minutes.

Non-Impact Resistance Training Workouts

Have athlete stand on the stairs or low platform with heels hanging over the edge. Athlete slowly extends the front part of the foot, then slowly lowers the heel below the plane of the platform.

- a. Perform two sets of 10 with toes pointed forward.
- b. Perform two sets of 10 with toes pointed outward.
- c. Perform two sets of 10 with toes pointed inward.

Have athlete step up on platform 20-30cm in height first, with one foot, then the other, then step down, one foot at a time. Perform 2 x 1 set of 10.

Have athlete do step lunges by stepping forward with one foot, then lowering the center of gravity by bending at the knee until upper and lower leg is at a 90° angle. Return to standing position and repeat with other leg. Perform 2 x 1 set of 10.

NUTRITION BASICS

Nutrition influences performance. Athletes need nutrients including:

CARBOHYDRATES - are the primary energy sources and 50-60% of the daily diet - bread, cereal, rice, pasta, potatoes, etc. Simple carbohydrates are high in calories but empty in nutritional value - sugar, candy, syrup, etc.

FATS - are secondary energy sources and 20-30% of the daily diet, should come from primarily polyunsaturated (vegetable) sources.

PROTEIN - repairs and replaces cells and helps in regulating blood fluids, 10-20% of the daily diet - lean meat, fish, poultry, eggs and dairy products.

VITAMINS - regulate growth and development and should come from a well-balanced diet.

MINERALS - regulate fluid exchange and should come from a well balanced diet.

WATER - is used in digestion, removes waste and transports nutrients, and is the best sports drink. Athletes need 8 glasses of fluid a day, at least four of those being water.

Athletes should eat a meal at least 1.5 hours prior to a competition or hard practice. This meal should be high in complex carbohydrates, avoiding proteins and fats. Baked potato, spaghetti, rice and cereal all make good choices. Cold water needs to be available before, during and after training and competition.

CARE FOR COMMON MINOR INJURIES

It is the coach's job to maintain as safe an environment as possible. It is strongly recommended that coaches have certification in CPR and First Aid or that volunteer be recruited who already has first aid, medical athletic training or emergency care certification. Athlete medical forms should be reviewed prior to the start of practice and on hand at all training and competition. There should be a plan for emergencies. Using the Coach's Safety Checklist will help to prevent injury by assuring adequate supervision, equipment, facility, warm-up and stretching.

When an injury does occur, *STAY CALM, and administer only basic first aid.* When in doubt, or when more care is needed consult the athlete's family and a physician.

TREATING FLOOR BURNS, STRAINS, CONTUSIONS, MINOR BUMPS AND BRUISES:

- R - Rest, stop any pain-causing activity.
- I - Ice for 24-36 hours after the injury
- C - Compress with elastic bandage if needed.
- E - Elevate to avoid edema and subsequent swelling

CONDITIONS REQUIRING MEDICAL ATTENTION:

- Significant swelling or dislocation of an extremity.
- Obvious deformity of an arm or leg.
- Severe pain.
- Inability to bear weight on a lower extremity.
- Lacerations with or without fractures.
- Significant swelling of a joint, i.e. elbow, wrist, knee, ankle.
- Loss of sensation in an extremity.

CONDITIONS MANDATING THAT ONLY EXPERIENCED MEDICAL PERSONNEL MOVE THE ATHLETE:

- Loss of consciousness.
- Neck or back injury with loss of sensation or motor power in arms or legs.
- Head injury with disorientation and/or visual changes.

Always have someone familiar with Basic Life Support and Cardiovascular Resuscitation (CPR) at every training session, even though the possibility of cardiac arrest is much greater in the spectator section than with the athletes, it is always present. Initial measures include:

- Establishing unresponsiveness
- Calling out for assistance
- Positioning the victim.

REHABILITATION TREATMENT FOR INJURIES

1) Blisters

- Keep pressure off new blisters using a felt "doughnut."
- Where the skin is torn, use extreme care.
- Keep it clean and cut skin halfway around the perimeter without removing the skin.
- Apply antiseptic ointment and a sterile dressing.
- When underlying tissue toughens, cut away the remaining flap of skin.

2) Abrasions and contusions (floor burns and deeper bruises)

- Keep them clean.
- Expose them to the air when possible.

- Keep them dry.
 - Encourage gentle activity.
- 3) Chronic knee pain, thigh muscle overload, tendonitis, stress fractures, and ligament strain. Follow the doctor's directions, which will generally include:
- Rest for 5-7 days.
 - Ice for pain.
 - Stretch related muscles to strengthen them.
 - Move gently, stopping at the point of pain.
 - Exercise to strengthen afflicted area as it heals.

HEAT EMERGENCIES

These problems often occur when athletes play too long and hard or stay too long in the sun. People do not always realize how the sun can affect them.

Because sunlight reflects off shiny surfaces such as bodies of water, being around water can increase your exposure. Sunburn can occur on overcast days as well as on sunny days. When athletes are in the sun, they should wear a water-resistant sunscreen lotion, which provides maximum protection. Sunglasses and a hat provide added protection.

The following information tells how to recognize heat stroke, heat exhaustion, and heat cramps, and what to do for victims of these conditions.

Heat Stroke

Signs and Symptoms

- Hot, red skin
- Very high body temperature
- Shock or unconsciousness

What to Do

- Treat heat stroke as life-threatening emergency, and call the paramedics.
- Get the victim by immersing in a cool bath or wrapping in wet sheets and fanning.
- Care for shock by laying the victim down and elevating the feet.
- Give nothing by mouth

Heat Exhaustion

Signs and Symptoms

- Cool, pale, moist skin
- Rapid, weak pulse
- Weakness/dizziness
- Nausea/vomiting

What to Do

- Treat heat exhaustion as an emergency, and call the paramedics.
- Get the victim into the coolest place available.
- Place the victim on the back with the feet elevated.
- Cool victim by applying wet sheets or towels to the body and by fanning.
- Give ½ glass of water to drink every 15 minutes if the victim is fully conscious and can tolerate it.

Heat Cramps

Signs and Symptoms

- Muscular pains and spasms, usually in the legs or abdomen

What to Do

- Get the victim into the coolest place available.
- Give ½ glass of water to drink every 15 minutes for an hour.

Prevention

- Seek protection from the sun and extreme heat.
- Replace fluids by drinking water, sports drinks, or fruit juices.

GETTING READY FOR COMPETITION

TAKING ATHLETES TO A COMPETITION

It is the coach's responsibility to have the athletes prepared physically and mentally for the competition he/she is about to enter. This involves ensuring that all uniforms are ready, all athletes have proper footwear, all equipment is present, meals and transportation are available, and all entries are correct. Below are a few tips for coaches to follow during pre-meet, meet, and post-meet situations.

Before the Meet

- ___ Make final check of all equipment and athlete needs.
- ___ Be confident and relaxed.
- ___ Be sure your athletes are warmed up, stretched, and ready to compete.
- ___ Be sure to have the proper shoes for each event.
- ___ Be positive and upbeat but do not over psyche.

At the Meet

- ___ Encourage and support your athletes, but do not yell and scream. Keep cool and offer positive reinforcement at the competition.
- ___ Restrict coaching from the bleachers to positive comments that the athlete can use at the time of competition.
- ___ Tell parents to be supportive, but not to coach athletes.
- ___ Keep substitutions simple. Have substitutes ready for relays in case of injury or no-show.
- ___ Commit yourself to equal participation across the season.
- ___ Give different athletes the chance to compete in new events for which they have trained. Be a coach who allows the athlete to progress to new levels.
- ___ Make sure that the athletes have plenty of fluids.

After the Meet

- ___ Say "well done" or "good effort" to all your athletes when appropriate.
- ___ Be sure to collect all the equipment from each athlete.
- ___ Cool down after competition to prevent soreness.
- ___ Spend time reviewing the athletes' performances and prepare some useful comments for the beginning of the next practice.

DIVISIONING IN SPECIAL OLYMPICS ATHLETICS

When divisioning any Special Olympics athletics competition, it is important to follow the guidelines as stated in the Official Special Olympics Summer Sports Rules.

MANAGING A SMALL COMPETITION

It is recommended that the coach or coaches conduct a mini-meet to prepare athletes for competition. This should include having the athletes involved with all aspects of an actual meet including staging and adherence to the rules. It is through these competitive situations that both the athlete and coach can learn what areas of adjustments to the training schedule need to be made before the athlete enters his/her first actual competition. It is important that the coach contact the meet officials of the athlete's first competition and discuss any specific circumstances that the athlete may encounter. For example, the athlete may wish to use his/her own starting blocks in the meet. However, the meet director states that the athlete must use blocks provided. The athlete must be trained to adapt to this situation.

VOLUNTEERS AND OFFICIALS NEEDED

When conducting a small competition, the coach(es) should recruit at least one National Governing Body certified official to oversee the actual competition. This will enable the official to make sure that rules are followed and that the athletes are properly trained. A small competition is also a good time to train volunteers who wish to be certified officials for future Special Olympics Athletics meets.

OFFICIALS - TRACK EVENTS

- 2- Announcers
- 1- Starter

- 1- Recall starter
- 2- Clerk of Course
- 1- Timer per lane
- 1- Place picker per lane
- 4- Inspectors

OFFICIALS - FIELD EVENTS

- 1- Recorder (who may also call fouls)
- 2- Markers and measurers
- 2- Implement retrievers for throwing events
- 2- Rakers and shovelers for long jump pit
- 2- High jump bar replacers in case of misses
- 6- Hurdle crew

OFFICIALS-STAGING

- 1- Head of staging
- 15-20 people to assist with staging depending on size of meet

Please review your National Governing Body rule book for official's job descriptions and further information.

Equipment Checklist

- ___ Starting pistols
- ___ Starting shells
- ___ Batons
- ___ Stopwatches (enough for all lanes of the track)
- ___ Tape measure-50m
- ___ Tape measure-100m
- ___ Numbers for the competitors
- ___ High jump cross bars
- ___ High jump standards
- ___ Rakes
- ___ Shovels
- ___ Lap counter
- ___ Cones
- ___ Starting blocks
- ___ Shot puts (weights for all age groups and classifications)
- ___ Softballs
- ___ Tennis balls
- ___ Umpire flags
- ___ Foul line indicators
- ___ Competition rule books

Note: Equipment manager distributes and collects all equipment.

Facility Checklist

- ___ High jump pits
- ___ Hurdles
- ___ Gates unlocked
- ___ Tents set up
- ___ Tables
- ___ Office supplies
- ___ Award stands
- ___ Pennant flags
- ___ Rope
- ___ Flowers
- ___ Field benches

- ___ Signage in place
- ___ Garbage cans
- ___ Public address systems
- ___ Medical staff in place
- ___ Water available
- ___ Restrooms clean and ready
- ___ Concessions

Note: "G" team is responsible for setting up facility and clean-up.

SAMPLE COMPETITION SCRIPT 1

OPENING CEREMONIES

MC:

"All Special Olympics athletes, honored guests and celebrities please report to the march staging area. The march will begin in a few minutes."

If band is used, MC introduces band as they enter and take their places.

MC:

"Good morning/afternoon/evening ladies and gentlemen. Welcome to the Opening Ceremonies of the (year)(facility or community) Special Olympics Competition. Let's give a big hand to the athletes as we begin our ceremonies."

Music begins and march of Special Olympics athletes commences.

If there is a banner, athletes carrying the banner will lead, followed by the other athletes and coaches.

The final individuals in the march will be the athlete and honored guest chosen to recite the Special Olympics Oath and open the event."

MC:

"(Name of athlete from class/school/program) and our special guest (name of honored guest) will now lead us in reciting the Special Olympics oath."

Special Olympics athlete:

"Fellow athletes, please stand; repeat after me..."

Let me win (pause as others repeat);

But if I cannot win (pause as other repeat),

Let me be brave in the attempt (pause as others repeat)."

Honored Guest:

"I declare the (year)(facility or community) Special Olympics Competition open."

MC:

"That concludes the Opening Ceremonies of the (year)(facility or community) Special Olympics Competition. Ladies and gentlemen, please join me in saluting our Special Olympics athletes and coaches as they begin the competition."

*If a torch is used, the designated athlete should be introduced and will carry in the torch symbolizing the Flame of Hope at this point.

SAMPLE COMPETITION SCRIPT 2

AWARDS CEREMONY

A volunteer brings the athletes to the awards area as soon after competition as possible, in correct order of placement:

Participant (if any):

8th

6th

4th

2nd

1st

3rd

5th

7th

Start the music as athletes move from the awards staging area to the presentation area.

MC:

"Ladies and gentlemen, it is my pleasure to announce the results in the (division) of the (age and gender group)(event). In eighth place, with a time/score of (time/score), (name)...(pause for award presentation). In seventh place, with a time/score of, etc."

For a competition, the awards area should be large enough to hold the largest division or heat. If a Special Olympics banner is available, it is an appropriate back drop. An awards stand with enough placement boxes for an entire division is also an option, but not required for a small contest.

SAMPLE COMPETITION SCRIPT 3

CLOSING CEREMONIES

MC:

"Special Olympics athletes and coaches, please assemble for the Closing Ceremonies. And now, after a hard day of competition and in a spirit of friendship, we will begin the parade to form the friendship circle."

Introduce the participating athletes or programs as they form the circle.

MC:

"This Special Olympics Competition would not have been possible without the efforts and dedication of the volunteers and officials under the leadership of (competition organizer's name). The (facility or community) Special Olympics Competition has come to an end, but the memory of this wonderful competition will remain with us for many days to come."

MC:

"Athletes, you should be proud of your accomplishments and of your hours of hard work and training. You are all winners. Now, as the competition comes to a close, let us join hands in the circle of friendship."*

MC or Honored Guest or Head Coach:

"I declare the (year)(facility or community) Special Olympics Competition closed."

*If a torch is used, the designated athlete should be introduced and will carry the torch out at this point.

SAMPLE COMPETITION SCRIPT 4

DURING ATHLETICS COMPETITION

There is no set script for announcing Special Olympics Athletics events. The announcer should consider the following items as part of the meet management.

- 1st, 2nd, and 3rd calls -- the "1st call" is made 15 minutes before and event is to start. The "2nd call" is made 10 minutes before the event starts. The "3rd call" is made 5 minutes before the start. For example: "1st call, female 200-meter dash ages 16-21."
- When possible, give results of the events as they are completed.
- Observe the field events and bring to the spectators' attention any events occurring and the progress of the events.
- If time permits, read names of athletes competing in heats of races.
- Announce split times of lead runners during races that are more than one lap.
- DO NOT announce a race like a horse race. Show respect for the athletes.

The Official Special Olympics Rules shall govern all Special Olympics Athletics competitions. As an international sports program, Special Olympics has created these rules based upon the International Amateur Athletic Federation (IAAF) and National Governing Body (NGB) rules for Athletics. IAAF or National Governing Body rules shall be employed except where they are in conflict with the Official Special Olympics Sports Rules. In such cases, the Official Special Olympics Sports Rules shall apply.

1. General Rules and Modifications - Points of Emphasis

a) Running Events

- In races up to and including the 400 meters, the athletes have the option of using or not using blocks.
- In competition, regardless of whether the athletes are using blocks in races 400 meters or shorter, the commands of the Starter, in his own language, shall be "on your marks," "set," and when all competitors are set, the gun shall be fired.
- In those races longer than 400m, the commands shall be "on your marks," and when all of the competitors are set, the gun shall be fired.
- A runner shall be liable for disqualification if he/she interferes, obstructs, or gains an advantage over another runner or runners. Athletes are not automatically disqualified for leaving assigned lanes if no advantage is gained.

b) Running Long Jump

- An athlete must be able to jump at least one meter, which is the minimum distance between the toe board and the sand pit.
- Each competitor shall be allowed three non-consecutive jumps. The athlete's best jump will be used for scoring.
- All three jumps shall be measured and recorded for the purpose of breaking ties.

c) Standing Long Jump

- When starting, competitor's toes shall be behind the take-off line.
- A competitor shall use both feet on the take-off.
- Each competitor shall be allowed three non-consecutive jumps. The athlete's best jump will be used for scoring.
- All three jumps shall be measured and recorded for the purpose of breaking ties.

- When possible, it is strongly suggested that the standing long jump event be conducted in sand filled jumping pits. The take-off line shall be placed at the end of the running long jump runway.

d) High Jump

- The minimum opening height for all high jump competition shall be 90cm.
- The competitor shall take off from one foot.
- Competitors shall not dive forward over the bar or take off from a two-foot takeoff.
 1. If during warm-up, a competitor performs a deliberate forward dive or two-foot takeoff, that competitor shall be disqualified from the high jump and receive a participant ribbon.
 2. If during competition, any competitor performs a forward dive or two-foot takeoff, that competitor shall cease competition, and be given the proper place from the last legally cleared height. If this occurs during the pentathlon, the competitor receives the points for the legally cleared height.

e) Shot Put

- A legal put must be initiated from the shoulder and the crotch of the neck with one hand only so that during the attempt the shot does not drop below the shoulder or beyond the sagittal plane through the shoulder joint. A competitor must start from a stationary position inside the circle, and must exit the back half of the circle upon the completion of the put.
- Each competitor shall be allowed three non-consecutive throws. Measurement of all throws is required for the purpose of breaking ties.

f) Softball Throw

- Each competitor shall be allowed three non-consecutive throws. The longest measurement of the three throws will be used for scoring. Throws will be measured from the inner edge of the arced throwing restraining line. Measurement of all throws is required for the purpose of breaking ties.

g) Wheelchair Events

- Check diagrams, they do not match the written rules. The 30 and 50 meter motorized wheelchair slalom diagram has the cones at 5/15/25/35/45. They should be at 5/10/15/20/25, etc.
- Check diagram for 25 meter motorized wheelchair obstacle course. The box should be 3 meters square. The picture looks like a rectangle in the diagram.

2. National Governing Body Rules (taken from USA Track & Field) - Points of Emphasis

Rule 60

- In races over 400 meters in outdoor competition, the command shall be "On your Marks" and when all competitors are steady, the pistol shall be fired.
- When a pistol is used, it should not be less than .32 caliber.
- The starter or any recall starter, who is of the opinion that the start was not fair, shall recall the competitors by firing a gun.
- No penalty shall be imposed for the first false start, but the starter shall, disqualify the offender or offenders on the second false start. In the pentathlon disqualification is on the third false start.

Rule 62

- The 200 meters shall be run in lanes around one turn.
- The 400 meters shall be run in lanes around two turns.
- When possible, the 800 meters shall be run around the first turn in lanes.

Rule 63

- All measurements must be made with a certified tape, graduated in centimeters.
- In the high jump, all measurements shall be made perpendicularly from the ground with the tape to the lowest part to the upper side of the crossbar.

Rule 66

- During the progress of an event a competitor who shall receive any assistance whatsoever from any other person may be disqualified by the referee.

Rule 72

- If one number is provided, it must be worn visibly on the front.

Rule 73

- Protests relating to matters which develop during the conduct of the competition must be made to the referee at once and not later than 30 minutes after a result has been announced.
- Protests may be made in verbal or in written form.

Rule 74

- In field events where the result is determined by distance, the second best performance of the tied competitors shall resolve the tie. If the tie still remains, the third best performance of the tied competitors shall resolve the tie.

Rule 90

- The high jump, long jump, softball throw, and standing long jump should not exceed 90 seconds after the competitor's name is called.
- In all throwing events, no flags or markers will be placed in the landing sector.

Rule 91

- In the shot put and softball throw, the measurement of each throw shall be made from the nearest mark made by the fall of the shot or softball to the inside of the circumference of the circle along a line from the mark to the center of the circle.
- In all throwing events, the measurement of each throw shall be made immediately after the throw.

Rule 93

- Before the high jump begins, judges shall mark the front and underside of the crossbar. The bar is always replaced with the same surface uppermost and forward each time.
- Unless there is only one competitor remaining, the bar should be raised 2.4cm after each round. The increment in raising the bar should never increase.

Rule 94

- The measurement of the jumps shall be made at right angles to the take-off line (or the take-off line extended) to the nearest break in the landing area made by any part of the body of the competitor.

Rule 121

- If a baton is dropped, it must be recovered by the runner who dropped it.

- In all relay races, the baton must be passed within the takeover zone. Within the takeover zone, it is only the position of the baton which is decisive, and not the position or location of the body or limbs of the competitors.
- In the 4 x 400 meter relay, the first leg as well as the part of the second leg through the end of the first turn of the second leg shall be run entirely in lanes. However, where there are two or three teams competing, it is recommended that only the first turn of the first lap should be run in lanes.

Rule 160

- There shall be an interval of at least 30 minutes between the time one event ends and the next event begins.
- The scores of each competitor, separately and combined, should be announced to the competitors after the completion of each event.

HOME TRAINING PROGRAM

If athletes only train once a week with their coaches with training on their own, progress will be very limited. Home training programs consist of simple warm-up and stretching exercises, basic skills practice, and agility and conditioning activities. Not only do home training programs improve athletic performance, but they also promote social interaction between athletes and their families. Warm-up and conditioning exercises are appropriate for athletes participating in any Athletics event. Skills practice exercises will vary according to event.

WARM-UP (15-20 minutes)

1. Jogging - Start with a walk and continue to a slow run for about 7 minutes. If you are running around a 400 meter track, run 2 laps.

2. Stretching Exercises - major muscle groups

Arm Rotation

- Stand in an upright position, arms extended at sides.
- Rotate arms forward making 15 small circles.
- Drop arms and rest.
- Repeat, rotating the arms backward 15 times.

Trunk Twister

- Stand in an upright position, feet spread shoulder-width apart.
- Keeping the hips stationary, rotate the trunk (upper body) 45° to the left, hold for 20 seconds.
- Rotate to face center.
- Repeat, rotating trunk to the right.

Abdominal Stretch

- Stand with feet shoulder-width apart, hands on hips.
- Keep the back straight.
- Slowly bend the trunk as far to the left as possible, hold for a count of 6.
- Bring trunk back to the center.
- Repeat, bending trunk to the front, right, and back.

Calf Stretch

- In a push-up position against the wall, place one leg forward and one leg back, keeping heels flat on the ground and toes pointed toward the wall.
- Move the hips forward until you feel a stretch in the calf of the back leg.
- Hold the stretch for a count of 20.
- Change leg positions and repeat.

Quad Stretch

- Face the wall and lift one foot behind your body holding the ankle in the opposite hand.
- Slowly pull up on the foot until you feel a stretch in the thigh.

- Do not pull the knee back too far.
- Hold the stretch for a count of 20.
- Repeat on the opposite leg.
- Do twice to each leg.

Groin Stretch

- While standing, step to the side in a side lunge position, (1 leg straight, the other leg is bent at the knee, toes forward).
- Place both hands on the bent knee for balance.
- Hold for a count of 20.
- Repeat to the other side.
- Do twice.

Hurdler Stretch

- Sit on the ground, left leg extended straight forward, bend right leg at 45° angle toward the left leg.
- Keep the right knee on the ground, placing the bottom of the right foot against the inside of the left knee.
- Grab the left ankle, slowly bring the chin toward the left knee.
- Hold for a count of 20.
- Relax the stretch for a count of 20.
- Repeat the sequence on the opposite leg.

Straddle Stretch

- Sit on the ground, legs extended.
- Spread the legs as far apart as possible, keeping the toes pointed up.
- Reach forward with both hands between the feet as far as possible, slowly bringing the chin toward the ground.
- Hold for a count of 20, relax for a count of 20 and repeat.

Knee Lift

- Lie on your back, legs straight, feet together.
- Bring one knee up toward the shoulder, clasp the knee with both hands and pull toward the body.
- Hold for a count of 20.
- Repeat sequence with the other knee, then with both knees together.

3. Acceleration Runs. Run straight on level ground for 30 meters. Start slow and build up the speed to a sprint and then slow down by the time you reach the end. Turn around and walk back to where you started from. Repeat the sequence 5 times.

SKILL IMPROVEMENT

With the many different events in Athletics, and the proper event equipment required to practice safely, not all of the events will be able to be practiced at home, such as the high jump and the running long jump. All of the running events, except the hurdles, walking events, softball throw, and the standing long jump can benefit from this home training. The practice emphasis for the athlete will be improved cardiovascular strength and endurance.

1. **Softball Throw** - All work should start with about 4 minutes of throwing a ball easily to your partner, standing 10 meters apart.
 - Technique work. Stress throwing with the legs and hips moving first, followed by the arm and wrist snap. Do this first without a ball. Then take several easy throws at 80% effort. This should take about 20 minutes.
 - Throw 10 times at 75% effort. Stress throwing easy and work on the follow-through action. Emphasize keeping the head up.
 - Warm up by throwing the softball to your partner for 4 minutes. Using a throwing area foul line, take 4 to 6 throws for maximum distance.

2. Standing Long Jump

- From a line, see how far you can jump in total with three successive 2-footed jumps (rabbit hops). Try to keep all 3 jumps equal in length. Avoid jumping upward, jump low and forward. Do this 10 times.
- Lay a series of hoops, paper plates, etc. on the ground. Hop or bound as required from hoop to hoop. Initially place the hoops close to each other, then set them progressively farther apart to demand long reaching strides and explosive leg action. Use a forward and upward swing of the arms to help with each jump. Do this 10 times.
- Suspend a volleyball or soccer ball from a rope at various heights. Take a 3-stride run-up to head the ball with the top of the head. If successful, raise the ball higher. Use the arms in an upward swing to help gain height. Do this 10 times.

3. **Running workouts** - These workouts can be run at a 400 meter track. The track is equally divided into 4 parts. Each straight is 100 meters and each turn is 100 meters. If you cannot get to a track, lay out this pattern on a flat area where your training will take place. Another option is to run at the track and see how long it takes to run a lap on the 400 meter track. Then run at home for the same amount of time. Use this distance for your workouts.

Intervals - Run a short distance (interval). Interval training has 5 variables:

1. Length of the interval
2. Speed of the interval
3. Number of intervals
4. Length of the recovery (time between intervals)
5. Nature of the recovery (stand still, walk, jog)

Sets - Groups of intervals run in descending order. Usually run each interval in a set at a slightly faster pace than the longer interval before it. As their intervals become shorter, the pace speeds up. The rest interval ranges from an equal distance/time to twice the length of the fastest interval.

- a) Workouts for **100-200**. Pick 1 workout. A build-up is like the acceleration run. Start slow and get faster.
 - 4 x 150m at 90% effort, rest 3 minutes between each.
4 x 100m build-ups, rest 2 minutes between each.
4 x 50m at 100% effort, rest 2 minutes between each.
 - 4 x 100m build-ups at 90% effort, rest 2 minutes.
4 x 75m build-ups at 90% effort, rest 2 minutes.
4 x 50m build-ups at 100% effort, rest 4 minutes. 4 x 50m build-ups at 90% effort, rest 2 minutes.
- b) Workouts for **400**. Pick 1 workout. Your running time is based on how long it takes you to run 400m. (Example: if it takes you 80 seconds to run the 400, your 300m time would be 60 seconds, 200m would be 40 seconds, 100m would be 20 seconds.) If you cannot time the run or do not know how to figure out what time to run, just run the distance and don't worry about the time.
 - 300m run, rest, 200m run, rest, 100m run.
 - 500m run, rest 300m run, rest, 100m run.
 - 300m run, rest 150m run, rest, 75m run.
- c) Workouts for **800** and **1,500**. Pick 1 workout. Use same method as above to find workout pace.

- 600m run, rest, 400m run, rest, 300m run, rest, 200m run, rest, 100m run.
- 400m run, rest 600m run, rest 400m run, rest, 200m run.
- 200m run, rest 400m run, rest, 200m run.

d) Workouts for **5,000-10,000**. Pick 1 workout. Use same method for finding your workout pace.

- 600m run, rest, 400m run, rest, 300m run, rest, 200m run, rest, 100m run.
- 400m run, rest, 600m run, rest, 40m run, rest, 200m run.

e) Workouts for **High Jump, Running Long Jump and Shot Put**.

- 5 x 100m wind sprints. Walk back to start and repeat.
- Run 50m, jog 50m for 800m

f) Workouts for **Distance Runners/Walkers**.

- Set up a 1.5m loop course near your home in a park, or count the number of blocks around where you live that adds up to a kilometer. Teach the athlete to run/walk with a partner on this safe course. Have the athlete run the loop course for 10 minutes, then increase the time as the athlete's condition improves, 15, then 20, then 25, then 30 minutes.

STRENGTHENING EXERCISES

A general strength training program gives the athlete extra strength in the muscles that are particularly important to perform an event well. Overall body strength is the goal.

1. **Curl-ups.** Lie on the back, knees bent, hands on abdomen. Slowly come up to a "crunch" position (about 45°). Return to the starting position and repeat exercise 5 times, gradually increase to 10 or more times.
2. **Trunk Lifts.** Lie on the stomach, toes pointed back, hands behind the back. Slowly raise the upper body off the ground as high as possible and return to the starting position. Be sure that the thighs, hips, knees, and feet stay on the floor. Repeat the exercise 5 times, gradually increase to 10 or more times.
3. **Push-ups.** Lie on the stomach, weight on the hands and feet. Keeping body straight, push up to a straight arm position, then bend the arms so that the body is lowered toward the ground, with just the nose touching the ground. Do not bend the back, hips, or knees. Repeat the exercise 5 times, gradually increase to 10 or more times.
4. **Jump and Reach.** Stand with the feet slightly apart, knees bent, arms down toward the ground. Swing the arms up and reach as high as possible while jumping straight up off the ground using a strong push off with the feet. Flex the knees and ankles to soften the landing, then repeat again. Perform 10 jumps in a row.
5. **Kangaroo Jumps.** Stand with the feet on the ground, slightly apart, with the weight up on the toes. Jump straight up by bringing the knees up toward the chest. Keep the arms out in front for balance. Land on the toes and repeat the exercise 10 times.
6. **Knee Bends.** Stand with the feet apart, pointing forward, arms held straight out in front of the body. Slowly bend the knees to a quarter squat (45 degrees). Keep the head up and back straight. Repeat the exercise 10 times.
7. **Mountain Climber.** Squat down so that the chest touches the knees, hands are placed flat on the ground, in front and to the outside of the feet. Extend one leg straight back, resting on its toes. Support the body weight with the bent leg and the hands. Switch the legs quickly, moving one

forward and one backward. Repeat this exercise 20 times to resemble climbing a mountain. Keep the head up and stay on the toes.

- 8. Bicycle Riding.** Lie on your back, legs together, hands behind and besides the hips. Lift straight legs together until the feet are directly over the chest. Bring one knee toward the chest, while holding the other leg straight. Switch the leg positions rapidly to resemble riding a bike. Repeat the exercise 20 times. Keep the head up and the legs off the floor. The hands may support the hips.

COOL-DOWN

Repeat the warm-up sequence, only this time in reverse order: acceleration runs, stretching exercises, then jogging.

GLOSSARY OF ATHLETICS TERMS

Adaptation - When a muscle fiber or organism is over-loaded beyond its normal environment, that muscle fiber or organism will adjust to the added stress and become stronger unless too much stress is placed on it.

Aerobic - (with oxygen) - A cellular process in which foods (carbohydrates) are completely oxidized by the oxygen in the air, and the maximum chemical energy from foods is produced. Aerobic activities use the largest muscle groups that can be maintained continuously and whose function is rhythmical in nature. Examples include walking, jogging, swimming, bicycling, etc.

Anaerobic - (without oxygen) - A cellular process in which foods (carbohydrates) are never completely oxidized because the oxygen in the air is not used. Anaerobic metabolism produces significantly less chemical energy from foods than does aerobic metabolism.

Arm Swing - The movement that the arms take as they are moved forward and back as a counter balance to the opposite leg.

ATP (Adenosine Triphosphate) - The cell's primary source of energy for metabolic processes such as muscle contraction and the formation of many chemical compounds. ATP is formed using energy produced by the breakdown of carbohydrates or other foods. During aerobic conditions the production of ATP is 19 times as great as it is under anaerobic conditions.

Base - Running that does not specifically train any system; however, it is aerobic running that provides the basic string to do specific running.

Blood Pressure - The pressure of the circulating blood in the vessels of the body caused by the pumping action of the heart, measured in millimeters of mercury (mm Hg). A blood pressure reading is made up of two numbers. The first number is the systolic pressure, which measures pressure as the heart contracts to push blood through the main arteries. The second number is the diastolic pressure, which measures blood pressure against vessel walls when the ventricles in the heart are relaxing and refilling.

Cadence - The coordination between the length of stride and the number of strides taken during a specified period of time and pace.

Cardiac Output - The volume of blood ejected by the heart per unit time, usually expressed in liters/minute (l/min). Cardiac output is the product of stroke volume times heart rate. Resting cardiac output is about 5 l/min, increasing to 20-30 l/min. for most people during strenuous exercise. Highly trained endurance athletes have maximum cardiac outputs of 35-40 l/min.

Center of Gravity - The point at which a line drawn through the head and torso would extend to the ground.

Duration - The time or frequency of stress placed on an organism.

Fast Relaxed Pace - The fastest pace which one can run or walk for a given period of time without tiring or tightening up.

Flexibility - The ability to move a body joint through its normal full range of motion.

Foot Strike - Striking the ground with the foot lever supplying the mechanical force that propels the body forward.

Forward Lean - The angle that the torso assumes during running or walking that is initiated at the hips.

Hip Rotation - The forward rotation of the hips that takes place during a stride while running or walking.

Intensity - The degree of stress placed on an organism.

Kick - An acceleration of pace at the end of a race.

Lactic Acid - A simple sugar that forms in the cells as the end product of glucose metabolism in the absence of oxygen. The body produces lactic acid even at rest or in mild exercise, but the lactic acid does not accumulate because its removal rate equals its rate of production. During strenuous exercise, when the rate of oxygen delivery or utilization is often inadequate, lactic acid may accumulate. As this accumulation increases, the regeneration of energy in the form of ATP cannot keep pace with its utilization, fatigue sets in (often described as a "burning" sensation), and exercise slows or stops.

Lean Body Weight - The weight of all fat-free tissue in the body such as bone, muscle, skin, water, organs, etc. Lean body weight is calculated as total body weight minus the weight of body fat.

Max - The maximum amount of weight that can be lifted for one rep.

Mechanics - The manner in which one puts one foot in front of the other striking the ground in an action that tends to push the earth backward causing the body to be propelled forward.

Metabolic Rate - The sum of all the chemical and physical changes per unit time that enable continued body growth and functioning. The minimum level of energy required to sustain the body's vital function is called the basal metabolic rate (BMR). The greatest influence on metabolic rate is physical activity, which can generate metabolic rates 5-10 times the BMR.

Muscle Endurance - The ability to repeatedly continue the work without muscle fatigue. This is important for distance runners.

Muscle Fibers - Long strings of muscle cells that form the basic structure of the body's three muscle types: skeletal, visceral, and cardiac. Muscle fibers are often studied by taking a biopsy from a skeletal muscle and analyzing its structure and function. This has led to the identification of two basic types of skeletal muscle fibers fast-twitch (FT) and slow-twitch (ST). The distribution of skeletal muscle fibers is primarily determined by genetic factors. Fiber conversion with training (i.e., FT to ST, ST to FT) is minimal, if it occurs at all.

Muscle Power - The work done over a given period of time. Power is very important to those events in Athletics that require explosive strength such as the long and high jump events.

Muscle Strength - The greatest amount of force an athlete can exert at one time.

Overload Principle - The strengthening of muscles get stronger through one of the following methods:

1. Lifting the same weight as before more quickly.
2. Increasing the amount of lifted.
3. Lifting the same weight, but lifting it more times than before.

Plyometric Training - Exercises characterized by powerful muscular contractions in response to rapid, dynamic stretching of the involved muscles. The muscle flexes and extends. Through this type of exercise this muscle reflex process is improved.

Power Phase - The time from which the foot makes contact with the ground through the extension of the power leg until the toes lose contact with the ground.

Progressive Resistance - Gradually increasing the weight lifted as the body gets used to the new stress. When the muscle is stressed beyond its normal demand, the muscle responds positively and becomes stronger.

Recovery Phase - The time from which the foot loses contact with the ground until it again strikes the ground.

Repetitions ("reps") - The number of times a lift is made continuously, one lift after another and without rest.

Set - The number of repetitions marked off by a rest period.

Specificity - Physical conditioning for an event which matches the physiological demands of the activity. For example: endurance training produces endurance, power training produces power, and strength training produces strength.

Stress - The overload that is placed on a muscle fiber or organism.

Strike Impulse - The amount of time that the foot lever is in contact with the ground during the strike phase.

Stroke Volume - The amount of blood ejected by the ventricle of the heart with each beat, usually expressed in milliliters (ml). Highly trained endurance athletes have considerably higher cardiac outputs than sedentary individuals, oftentimes accompanied by a slightly lower maximum heart rate. A higher cardiac output is primarily due to an increase in stroke volume.

Tempo - The amount of foot turnovers required to run or walk at a given pace.

Torso - That part of the body which extends from the hips to the top of the shoulders.

Turnover - The number of times that the right or left foot strikes the ground in a given period of time.

Tying Up - The point at which the muscles can no longer perform at a given intensity.

VO2 Max - A measure of the maximum oxygen uptake of the whole body. It is based on the following events.

- movement of air in and out of the lungs
- movement of oxygen from the lungs to the blood
- the blood picking up the oxygen
- the heart pumping the blood
- the delivery of blood to the muscles via arteries, arterioles, and capillaries
- the availability of nearby cells to extract and use the oxygen carried in the blood.

Weight Training - The development of strength with the use of weight lifting and based on the overload principle.

TYPES OF TRAINING

Overdistance - Steady pace running in excess of 10 minutes in duration and the basis of any distance running or walking program. This is an aerobic workout. This is the only type of workout carried on year-round. Long Slow Distance (LSD) running is accomplished at a pace approximately 65% of VO2 Max.

Interval Training - Specified distances of 2-5 minutes in duration run repeatedly with a specified period of rest separating each repeat. Usually the period of rest is equal to the period of the run. This is an aerobic workout.

Rest - That period of time allotted to recovering from a period of stress usually spent in rapid walking or slow running.

Repetition Training (Reps) - Specified distance from 30 seconds to 2 minutes run repeatedly but separated by long periods of rest allowing the heart rate to return to approximately 120 beats per minute.

Sprint Training - Repeated quality runs of 50-150m in duration with rest periods that allow complete recovery and are run in excess of 75% of the runner's basic speed. This is an anaerobic workout.

Basic Performance Speed - The speed with which the runner can complete a distance of 400m.

Fartlek - A Swedish term meaning speed play. A type of workout which allows the runner while on a continuous run to use fast, moderate, or slow periods of running alternated as desired by the runner. This workout is both aerobic and anaerobic.

LIFE BENEFITS OF SPECIAL OLYMPICS

Special Olympics can provide opportunities to develop other skill areas in addition to sports and fitness skills. These areas include life, social, vocational, and transitioning skills. Coaches can play an important role in the development of these important skills.

LIFE SKILLS

Money management --

At a Special Olympics event, give athletes the opportunity to buy a meal, T-shirt, etc. Involve them in the choosing and purchasing of uniforms and equipment.

Personal grooming habits --

Establish team guidelines. Encourage athletes to wear clean clothes, groom their hair, brush their teeth, shower after practice, wash their own uniforms, etc.

Transportation access --

Teach athletes how to ride a bus, use the subway, and ride a bicycle. Enable athletes to get out and interact with the community.

SOCIAL SKILLS

Negotiation --

Enable athletes to negotiate with parents and employers for changes in their family and work schedules in order to participate in a Special Olympics event.

Relationship building --

Enable athletes to interact with volunteers, peer coaches, and teammates, to get along with others, and to make new friends.

Self-esteem and worth --

Provide opportunities and reinforcement for each athlete to contribute to the group as well as to improve individual skills.

VOCATIONAL SKILLS

Commitment and dedication --

Ask athletes to make a commitment to themselves and the team to attend practice and competition. Employers value reliability and dependability.

Focus and concentration --

Focusing on a specific skill in a sport relates to performing a specific skill and learning a new task on the job.

Working with others --

Teamwork learned through team sports relates to working with others in the job setting.

Stamina and fine and gross motor skills --

Sports participation can improve stamina and complement fine and gross motor skills required to be successful on the job.

TRANSITIONING SKILLS Change --

Sports training improves athletes' abilities and allows them to progress to higher levels of sports participation. This often means adjusting to changes in training and competition sites, teammates, and rules. Athletes who play more than one sport also must make these same adjustments from sport to sport. Learning to adapt to change prepares the athlete for similar changes when moving from school to school and from student to adult.

INFUSION CHART

The Infusion Chart offers examples of life, social, vocational, and transitioning skills that the athlete can also acquire while mastering the sports skills described in this Guide. There are numerous possibilities for expanding and improving each athlete's overall quality of life. Coaches should work closely with the athlete's teachers and counselors to incorporate the athlete's sports skills into his/her overall learning experience. When an instructor wants to teach the athlete functional skills, the instructor can use examples relative to the athlete's sports experience. For example, recognition of numbers in Athletics scoring relates to mathematics. By using the Infusion Chart, the coach can assist full inclusion in the community.

ARTS:

Chooses and designs team insignia, mascot.

Makes team pennants.

Helps make signs to show the direction to run during a cross-country race.

SCIENCE:

Describes different running paces, stride length, and turn-over rate.

Notices differences in various running surfaces.

INDUSTRIAL ARTS:

Constructs a simple scoreboard.

Helps mark the course for races.

Makes different colored flags for turning directions during race.

MATHEMATICS:

Measures courses.

Times events.

Keeps track of splits.

Computes cost of attending an Athletics meet (tickets, transportation, refreshments).

HOME ECONOMICS:

Dresses appropriately for athletics.

Mends and hems sportswear.

Washes and dries sportswear.

HEALTH:

Performs warm-up and cool-down exercises, before and after participating in Athletics.

Takes a shower after strenuous exercise.

Practices safety skills when running.

Applies basic first aid for minor injuries.

Wears appropriate clothing when running in a variety of temperatures.

PHYSICAL EDUCATION:

Demonstrates the rules and skills of running and walking.

Recognizes the importance of team spirit.

Improves running and walking skills; recognizes the value of practicing the skills.

Expresses the importance of running and remaining physically fit.

READING/LANGUAGE:

Listens to instructions and follows directions.

Expresses himself/herself during competition (cheers, encourages).

Reads instructions for setting up cross-country courses and finish chutes for distance races.

SOCIAL STUDIES:

Identifies and locates neighborhood facilities where Athletics can be practiced.

Participates in the establishment of teams and rules for organizing an Athletics meet.

Follows current events and reads about the history of Athletics and can identify current leading runners.