



Special Olympics
Pennsylvania



**LONG DISTANCE RUNNING/WALKING
COACHING GUIDE**

July 2024



This 2024 edition of the Long Distance Running and Walking (LDR/W) Coaching Guide is designed for new and current LDR/W coaches. The Athletics Coaching Guide remains the best reference for track & field as opposed to LDR/W training needs.

Please contact the Special Olympics Pennsylvania LDR/W Sport Director (Scott Otterbein, ath.ldr@specialolympicspa.org) with any comments or suggestions for improvement of this guide.

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Warm-Up

A warm-up period is the first part of every training session or preparation for competition. The warm-up starts slowly and gradually involves all muscles and body parts. In addition to preparing the athlete mentally, warming up also has several physiological benefits.

The importance of a warm-up prior to exercise cannot be overstressed. Warming up raises the body temperature and prepares the muscles, nervous system, tendons, ligaments and cardiovascular system for upcoming stretches and exercises. The chances of injury are greatly reduced by increasing muscle elasticity.

Warming Up:

- ♦ Raises body temperature
- ♦ Increases metabolic rate
- ♦ Increases heart and respiratory rate
- ♦ Prepares the muscles and nervous system for exercise

The warm-up is tailored for the activity to follow. Warm-ups consist of active motion leading up to more vigorous motion. The total warm-up period should take at least 25 minutes and immediately precedes the training or competition. A warm-up period should include the following basic sequence and components.

Activity	Purpose	Time (minimum)
Slow walk / fast walk / run	Heats muscles	5 minutes
Dynamic stretching	Increases range of movement, not a static stretch	10 minutes
Event Specific Drills	Enhance coordination, prepare for training/competition	10 minutes

Dynamic Stretching

Flexibility is critical to an athlete's optimal performance in both training and competition. Flexibility is achieved through dynamic stretching. Dynamic means movement. Static stretching such as the old touch your toes does not have proven benefit, so we have advanced to dynamic, moving warmup.

After warm-up, carry out a series of dynamic drills.

- Swing arms back and forth simulating the pendulum swing.
 - Swing a leg back and forth, switch
 - Swing a leg side to side

A complete set of dynamic warm-up activities can be found at the Special Olympics Pennsylvania Sports Offered page under LDRW [here](#).

The cool-down is important as the warm-up. Stopping an activity abruptly may cause pooling of the blood and slow the removal of waste products in the athlete's body. It may also cause cramps,



soreness, and other problems for athletes. The cool-down gradually reduces the body temperature and heart rate and speeds the recovery process before the next training session or competitive experience. The cool-down is also a good time for the coach and athlete to talk about the session or competition. Note that cool-down is also a good time to do stretching, as muscles are warm and receptive to stretching movements.

Cool down

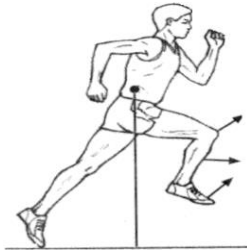
Activity	Purpose	Time (minimum)
Slow aerobic jog	Lowers body temperature Gradually lowers heart rate	5 minutes
Light stretching/ yoga moves	Removes waste from muscles	5 minutes



Basic Mechanics of Running

Running differs from walking in that, when walking, the athlete always has one foot in contact with the ground. However, in both running and walking events, the athlete must maintain a balanced and upright posture. The form for running sprints or distance events follows the same basic principles. However, in distance events the knee drive and arm carriage are a little lower. This section gives general guidelines for running mechanics. More specific, technical details are included in the sprints, middle- and long-distance sections.

Sprinter



Distance Runner



1. The athlete controls his/her speed by how much force is applied with each foot strike.
2. The quicker the foot strikes the ground, the faster the athlete runs.
3. When running fast, the heel must be lifted high under buttock.
4. Leg turnover and stride length determine the speed at which an athlete runs.

Getting Into Proper Running Form

1. Take a hips tall position with your trunk and head directly above the hips.
2. Let arms hang loosely at the sides of your body.
3. Close hands loosely with the thumbs up.
4. Lean forward slightly; bend ankles until body weight is centered on balls of feet.
5. Bend arms: bring hands to top of hips forming a 90-degree angle between lower and upper arms.
6. Keep head in a neutral position, looking forward, with facial muscles relaxed.



Lifting Knees/Driving Arms

1. Lift heel and push off with ball of foot.
2. Bend leg at knee and drive it forward.
3. Bring foot forward under knee.
4. Strike ground with ball (forefront) of foot while bringing the foot back under the body.
5. Swing the arms forward and back with no help from the shoulder muscles.
6. Stop hands at midline of torso at the top, and at the back of the hips at the bottom, shortening the angle slightly on the upswing and lengthening the angle slightly on the downswing.

Faults & Fixes – Running Basics

Error	Correction	Drill/Test Reference
Athlete not running in upright position.	Need to make sure drive leg is being fully extended (push off).	Bounding and strides.



Coaches' Tips for Running Basics – At-A-Glance

Tips for Practice

1. Demonstrate hips tall position emphasizing relaxed shoulders and arms.
2. Have the athlete walk with quick steps on balls of feet.
3. Emphasize the foot striking the ground under the runner's body, not ahead of it.
4. Have the athlete run straight at you to make sure that the shoulders stay parallel to ground and upper body is not twisting back and forth.
5. Do lots of running basic drill work.
6. Encourage athletes to train a minimum of 2-3 days at home.
7. Be patient.



Starts Skill Progression

Long Distance Run/Walk Stand-up Start

Your Athlete Can	Never	Sometimes	Often
Identify power foot (i.e., the foot you kick a ball with)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stand behind start line, relaxed, power foot in front on ball of foot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bend front knee slightly, balancing weight on both legs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remain still in "On Your Mark " position	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Push strongly off ball of power foot, swinging back arm forward	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals			

Starts

A good start can make all the difference in any track event, regardless of the distance. At the start of a race, athletes want to get out strong and fast. There are two primary types of starts – the stand-up and the block start. In LDR/W athletes use the stand-up start. Block starts are used only on tracks during athletics/track events.

Power Foot

In this start, the athlete puts his/her “power foot” forward for a strong launch. Determining the power foot can be easily accomplished by having the athlete pretend to kick a ball. The foot that is used to kick the ball is the back foot. The foot that is used to support the body is the front foot, the power foot.

Teaching Points - Stand-up Start

The fundamentals of the LDR/W start involve two commands: “on your mark”, and “go” (which can be the sound of a gun/whistle/horn or verbal command.”

“On Your Mark” Command

The “on your mark” command is used when the athlete comes to the starting line to begin the race.

1. Stand behind start line, relaxed, power foot in front and behind the start line
2. Place toe of back foot behind the heel of front foot, about 9-11 inches/30CM
3. Look up slightly, focusing 2 meters ahead

“Go” Command – Sound of the starter’s pistol or whistle

The “go” command is for the athlete to start moving. Repeat using the sound device most likely to be heard at upcoming races.

1. Drive back leg forward, leading with knee, swinging front arm back.
2. Push strongly off ball of front (power) foot, swinging back arm forward forcefully.

**Middle Distance Skill Progression**

Your Athlete Can	Never	Sometimes	Often
Run longer distances (400m/800m/1500m)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pace self (or can learn)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrate speed, strength and endurance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintain erect posture with hips tall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Settle more on the back of the feet and roll through the ball of the foot and push off	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Show spring, rhythm, and light touch in foot action	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have controlled, relaxed arm action	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Keep shoulders not hunched and elbows tucked in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Keep body relaxed and moving efficiently	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals			

Middle Distance

Middle distance events are the most demanding because they are long sprints. SOPA tournaments offer the following running race distances: 1500, 3000, 5000 and the 10,000-meter run. For walking the 1500 and 3000 are offered and the 5000 walk is offered at the Sectionals and Fall Games. 1500 meter is considered middle distance in LDR.W. A training program should be developed to meet individual needs.

Technique

When coaching middle distance runners, the coach needs to find the right combination of speed and endurance for each athlete.

1. It is important to have a comfortable stride and rhythm and to not over stride.
2. The foot strikes the ground less on the ball of the foot and more to the back of the foot, the foot rolls onto the ball and pushes off.
3. The knee has some flex.
4. Knee lift is lower than that of a sprinter.
5. Heel does not go as high.
6. Leg movement is smooth.
7. Swing arms from shoulders; elbows are bent at approximately a 90-degree angle but can straighten a little more on the down swing. Arms and shoulders should be relaxed.
8. Head straight; focus ahead ten to fifteen meters.



Training Focus (Workout Theory) for Middle Distance

The focus of middle-distance training is pace, with a balance between volume and intensity. Athletes need a good aerobic base to allow them to be able to pace themselves. However, they also need to incorporate speed training. They need good endurance to maintain speed over middle distance races. Aerobic means improved flow of oxygenated blood to the muscles that comes with extended training.

Middle distance runners should try and maintain a predetermined pace established by their coach. An example would be running 400m in 105 seconds every lap during a 1600m training run. As well, the coach should set appropriate times for the athlete to run set distances at certain time intervals; for example, the athlete would run 200m every three minutes. To improve, the athlete would increase speed or decrease time to shorter intervals.

To work on speed, the athlete can do “surges.” For example, have cones set out at intervals around the track or along a distance running course. The athlete will run at normal stride to first cone and then “surge,” or increase speed, to next cone and keep changing from normal to “surge” between cones.

Faults & Fixes – Middle Distance

Error	Correction	Drill/Test Reference
Runner is too erect.	Chin is too high; remind athlete to position the chin lower.	Observation.
Runner appears to be bobbing up and down (excessive bouncing).	Pull through elbows. Wrist needs to go hip to chin.	Observation. Do arm movement while standing.



Runner is “twisting.”	Keep torso in a forward direction and toes pointed forward.	Have runner run on a line or inside of the lane.
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Middle Distance Drills

Russian Workout

Reps: 5x, increase to 15

Purpose

- Develop speed endurance

Teaching Points

1. Run 5x200m at $\frac{3}{4}$ race pace.
2. Rest 60 seconds between each 200m.
3. After five repetitions, rest three minutes.
4. Repeat.

Points of Emphasis:	Speed endurance
When to Use:	Midseason

Distance Runs

Include a distance run of 40-70 minutes. This run is set at a pace that the runner can manage without too much stress. This run is one of two kinds, depending on the type of effort and recovery needed. One type is a flat, soft-surfaced, continuous run. Early in the season, do not worry so much about time. As the season progresses, mark each mile, and make necessary corrections.

Hill Running

The other long-distance run is more difficult. The first 15 minutes are flat. The next 20 minutes need to have a series of uphill climbs or a steady hill climb. As in the distance run, early in the season do not worry so much about time. As the season progresses, push the athlete to faster times over the same course but be watchful for knee tenderness or pain. Recovery time is important.

Interval Training

Adjust recovery times, as necessary.

1. Increasing speed/decreasing recovery reps
 - 2 sets of 4 x 200m
 - No additional recovery between sets
2. Speed intervals
 - 2 sets of 3 x 300m at set pace with jog



- Recovery between 300s: 100m at 30 seconds
 - Jog 800m between sets
3. Pick-up Reps
- 4 x 400m at set pace
 - Recovery between 400s: 90 seconds

Coaches' Tips for Middle Distance Runners – At-A-Glance

Tips for Practice

1. Demonstrate stand-up start with commands. (*See Starts section for review.*)
2. Demonstrate how to pass another runner by running around him/her on the outside. There are no “lanes” in LDRW but learning to pass is important. Otherwise, athletes sometimes stay with the same pack regardless of their own pace.
3. Ride along with runners on a bike with a pace running app to control running pace – tell the runners not to pass you or to get too far behind.
4. Establish split times with athletes for certain distances of the race.
5. Make sure athlete receives ample recovery time from training.
6. Train to race: Simulate race conditions as much and as often as possible.
7. Know when to say when; if an athlete is not running well, let it go. Practicing slow teaches you to race slow so it is best to move that athlete to weight and core work for the day.

Tips for Competition

1. Check the running shoes, tied and without long loops which can be a tripping hazard.
2. Save energy for last part of race.
3. Warm up properly.
4. Plan the race
5. Avoid meals just before race and during.



Long Distance Skill Progression

Your Athlete Can	Never	Sometimes	Often
Run longer distances	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pace self (or can learn)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintain erect posture with hips tall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Settle more on the back of the feet and roll through the ball of the foot and push off	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Show spring, rhythm and light touch in foot action	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have relaxed arm action	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Keep shoulders not hunched and elbows tucked in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Keep body relaxed and moving efficiently	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals			



Long Distance Running (3000m-10,000m)

Long distance events are great for those athletes who enjoy running and have a desire to maintain dedicated training throughout the week on a long-term basis. Success in the distance events comes from planning. Training must be consistent and progressive. The training sessions are designed to physiologically and psychologically enhance an athlete's potential to maximize his/her competition experiences.

Technique

1. It is important to have a comfortable stride and rhythm and to not over stride.
2. The foot strikes the ground less on the ball of the foot and more to the back of the foot; the foot rolls onto the ball and pushes off.
3. The knee has some flex.



4. Leg movement is smooth.
5. Swing arms from shoulders in a comfortable back and forward movement. Arms and shoulders should be relaxed.
6. Head straight; focus ahead ten to fifteen meters.

Faults & Fixes – Long Distance

Error	Correction	Drill/Test Reference
Athlete's leg drive may be causing the body to move upward instead of forward.	Make sure hips maintain same level – do not rise up and down.	Bounding. Observation.
Arms swing across the chest.	Arm movement should be back and forward and not across chest. Have athletes point where they are going with each arm swing.	Sit-down arm movement drill.
Athlete tenses up while running.	Exhaustion or poor technique is most likely the cause.	Concentrate on relaxation, especially facial muscles (relaxation drills). Improve aerobic/anaerobic endurance.
Head is swinging/ bobbing side to side.	Have athlete look straight ahead. Ensure arms are moving back and forward and not across the chest. Ensure athlete is running upright and not leaning back.	Concentrate on technique.



Coaches' Tips for Long Distance Runners – At-A-Glance

Tips for Practice

1. Have athlete stand with lead foot under center of gravity with drive leg fully extended.
2. Have athlete run in place bringing heels under buttocks.
3. Demonstrate rolling the foot forward, pushing off the balls of the feet.
4. Be quick off the foot.
5. Demonstrate a quick turnover.
6. Demonstrate a smooth foot strike with little vertical lift.
7. Have athlete be aware of when the toe leaves the ground to get better push-off.
8. Check for upper body twisting by looking at athlete from front view.
9. Check for crossover of feet or toes pointing outward
10. From side view, check that hands stop at midline on upward swing and back at hip on downward swing.
11. Demonstrate how arm tempo can help control rate of turnover.



Training Theory – Long Distance

There are several types of training techniques for long distance runners. When designing a training plan, it is important to match the plan to the athlete’s fitness and skill level. It is important to review the plan frequently and adjust it as required. To get the most benefit from training, it is important to use various techniques since they have different purposes.

Interval Training – repetitive training runs on a track. Effort and recovery are usually equal. Effort can be from one to five minutes. Recovery can be walking or slow running.

Fartlek Training – also known as “speed play.” Athlete combines normal run with varying bursts of effort (speed). Usually on a varied terrain (flat and hills).

Long Runs – athletes run for a specified distance or time at a moderate speed for longer distances.

Speed Training - to improve the speed at which the athlete can run relaxed and maintain running form. This training is done mostly at the end of the season just prior to the big meets. For example, the athlete runs 1x600m all out with a 20-minute rest interval, followed by 10x100m as fast as possible, with a 100m walk interval between each.

Long Distance Events Sample Workouts

The following are designed to help in creating workouts to meet the needs of athletes. However, as mentioned previously, athletes are individuals, and their uniqueness must be addressed in workouts. These workouts can be modified and adapted, as necessary.

A minimum 12-week training and competition program is suggested in preparing an athlete to run distances up to 10,000m. It is also recommended that a 4–5-day practice schedule be designed to increase an athlete’s performance level. Athletes can race once every two weeks or whatever is appropriate for their fitness and skill level.

The following key denotes the meaning of workout intensity and volumes below.

M = Miles Run	Ae = Aerobic	Ae / An = Aerobic/ Anaerobic walking
X = Intermittent Running	An = Anaerobic	
ME = Maximum Effort	E = Effort	RE = Relaxed Effort

SAMPLE TRAINING PLANS

5k & 10k – 12-Week Training Program

Begin each run by walking the first two minutes, then running 10 minutes easy. Cool down by jogging five minutes.

Week 1			
Day 1	Day 2	Day 3	Day 4
Warm-up	Warm-up	Warm-up	Warm-up
3.5 miles at Ae	3 miles at ME, Ae	3.5 miles at ME, Ae	5x800m at ME, Ae, An
Cool-down	Cool-down	Cool-down	Rest: Jog 3 minutes
			Cool-down
Week 2			
Day 1	Day 2	Day 3	Day 4



Warm-up	Warm-up	Warm-up	Warm-up
4 miles at Ae	4x1200m at ME, Ae	4 miles at ME, Ae	10 minutes run at Ae, An for distance
Cool-down	Rest: Jog 3½ minutes	Cool-down	Measure to nearest 1000m = 5¼ laps (refer to pace chart)
	Cool-down		Cool-down
Week 3			
Day 1	Day 2	Day 3	Day 4
Warm-up	Warm-up	Warm-up	Warm-up
4.5 miles at ME, Ae	4x400m at An	3 miles at RE, Ae	2-mile time trial
Cool-down	1 & 3 miles at Marathon pace	Cool-down	Cool-down
	2 & 4 miles at 5k pace		
	Rest: Jog 2:1		
	Jog 800m		
	4x400m at An		
	Cool-down		
Week 4			
Day 1	Day 2	Day 3	Day 4
Warm-up	Warm-up	Warm-up	Warm-up
4 miles at RE, Ae	3x1200m at 10k pace, Ae	4.5 miles at RE, Ae	4x400m at 5K pace, An
Cool-down	Rest: Jog 1:1	Cool-down	Rest: Jog 1:1
	Cool-down		Jog 800m
			4x400m at 5K pace, An
			Cool-down



5k & 10k – 12-Week Training Program, continued

Week 5			
Day 1	Day 2	Day 3	Day 4
Warm-up	Warm-up	Warm-up	Warm-up
4x200m at 5K pace	3 miles in hills at $\frac{3}{4}$ effort, up/easy down, Ae	4 miles at RE pace, Ae	5k race or time trial
Rest: Jog 3:1	Cool-down	Cool-down	Cool-down
Jog: 2x800m			
Cool-down			
Week 6			
Day 1	Day 2	Day 3	Day 4
Warm-up	Warm-up	Warm-up	Warm-up
1 mile easy	Run in hills at $\frac{3}{4}$ effort, up/easy down, Ae	2x200m at 5k pace	3k race or time trial.
2 miles at AE pace	Cool-down	Rest: Jog 3:1	Cool-down
1 mile easy at Ae, An		Jog 800m	
Cool-down		4x200m at 10k pace	
		Rest: Jog 2:1	
		Jog 800m	
		Repeat workout, An	
		Cool-down	
Week 7			
Day 1	Day 2	Day 3	Day 4
Warm-up	Warm-up	Warm-up	Warm-up
4x400m at 5k pace, An	3 miles at RE, Ae	20 minutes at RE	10k run
Rest: Jog 3:1	Cool-down	20 minutes at AT pace, Ae, An	Cool-down
Jog 800m		Cool-down	
2 sets of 12x400m			
Cool-down			
Week 8			
Repeat Week 7			



5k & 10k – 12-Week Training Program, continued

Week 9			
Day 1	Day 2	Day 3	Day 4
Warm-up	Warm-up	Warm-up	Warm-up
4x400m at 5k pace, An	4 miles at RE, Ae	3 miles hilly course, Ae	3x1 mile at 10k pace
Rest: Jog 3:1	Cool-down	Cool-down	Rest: Jog 5 min
Jog 800m			Cool-down
2 sets of 12x400m			
Cool-down			
Week 10			
Repeat Week 7			
Week 11			
Day 1	Day 2	Day 3	Day 4
Warm-up	Warm-up	Warm-up	Warm-up
5x800m	6x1000m at 10k pace	Easy 2-mile run	10k race
1 st 400m at 5k pace	Rest: Jog 3 minutes	4x400m at 5k pace	Cool-down, An
2 nd 400m at 10k pace	Cool-down	Cool-down	
Rest: Jog 3 minutes, Ae, An			
Cool-down			
Week 12			
Day 1	Day 2	Day 3	Day 4
Warm-up	Warm-up	Warm-up	Warm-up
Easy 2-mile run	Easy 2-mile run	Easy 2-mile run	Championship race
6x400m at 5k pace	5x400m at 5k pace	4x400m at 5k pace	Cool-down
Rest: Jog 3:1	Rest: Jog 3 minutes, Ae, An	Cool-down	
Cool-down, An, Ae	Cool-down		



3k – 8-Week Training Program

Begin each steady state run by walking the first two minutes, then running 10 minutes easy. Cool down by jogging five minutes, followed by 6x100m strides.

Week 1			
Day 1	Day 2	Day 3	Day 4
Warm-up	Warm-up	Warm-up	Warm-up
2 miles (EE) Ae	2.5 miles (ME) Ae	2 miles (75%E) Ae	2.5 miles (ME) Ae
Cool-down	Cool-down	Cool-down	Cool-down
Week 2			
Day 1	Day 2	Day 3	Day 4
Warm-up	Warm-up	Warm-up	Warm-up
3 miles at Ae	5x800m (ME)	5x400m (75% E)	10-minute hard run at 400m effort
Cool-down	3-minute jog rest, An, Ae	Jog rest 800m	Cool-down
	Cool-down	5x400m (75% E)	
		Cool-down	
Week 3			
Day 1	Day 2	Day 3	Day 4
Warm-up	Warm-up	Warm-up	Warm-up
4 miles at Ae	2x1600m at 10k pace	3 miles at marathon pace	3.5 miles at RE pace, Ae
Cool-down	Cool-down	Cool-down	Cool-down
Week 4			
Day 1	Day 2	Day 3	Day 4
Warm-up	Warm-up	Warm-up	Warm-up
3x1200m at 10k pace	4 miles at RE pace, Ae	2x1600m at 10k pace	3 miles at marathon pace, Ae
1:1 Rest, Ae	Cool-down	1:1 jog rest, Ae, An	Cool-down
Cool-down		Cool-down	
Week 5			
Day 1	Day 2	Day 3	Day 4
Warm-up	Warm-up	Warm-up	Warm-up
4 miles at RE pace, Ae	5x200m at 3k pace	4 miles at RE pace, Ae	1-mile run for time
Cool-down	3:1 jog rest, An	Cool-down	Cool-down
	Cool-down		



3k – 8-Week Training Program, continued

Week 6			
Day 1	Day 2	Day 3	Day 4
Warm-up	Warm-up	Warm-up	Warm-up
4x400m at 3k pace	3.5 miles at RE pace, Ae	1 mile at AT pace	3k race or time trial
3:1 rest, jog 800m, then repeat An	Cool-down	800m jog	Cool-down
Cool-down		4 x 400m @ 3k pace	
		1:1 jog, rest, Ae, An	
		Cool-down	
Week 7			
Day 1	Day 2	Day 3	Day 4
Warm-up	Warm-up	Repeat Day 1	Warm-up
4 miles at RE pace	400m hip flexibility		400m total flexibility
Pick up to 3k pace for 30 seconds, 6 times during run, Ae	2-mile walk for time		4x800m at mile pace, 3-mile pace
Cool-down	Cool-down		4 sets of 10 curl sit-ups
			Cool-down
Week 8			
Day 1	Day 2	Day 3	Day 4
Warm-up	Warm-up	Warm-up	Warm-up
3 miles at RE pace	10 minutes easy run	10 minutes easy run	Championship Race, An
Pick up to 3k pace for 30 seconds, 4 times during race, Ae	4x400m at 3k pace	3x400m at 3k pace	Cool-down
Cool-down	3:1 rest, An	3:1 jog rest, Ae, An	
	Cool-down	Cool-down	

**Half Marathon Skill Progression**

Your Athlete Can	Never	Sometimes	Often
Perform a stand-up start	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintain an erect posture with hips tall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Keep head level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintain rhythmic stride pattern	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Build a strong aerobic base	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Develop speed, endurance, and strength	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Develop anaerobic strength and endurance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Train over long distances at different speeds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintain a relatively flat foot strike under hips and body weight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Move continuously forward to ball of foot from flat foot strike	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintain comfortable arm swing without twisting body	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Run under control for entire race	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Totals**Half Marathon**

The characteristics of the half marathon are what make training and racing the half marathon unique. It can be too long for a 5-10k runner or it may be too short for the marathon runner. However, it can be the perfect distance for training and racing if planned accordingly. For the marathon runner, it can be used as race-pace training distance.

Training sessions are normally of high volume and long intervals with a high number of repetitions. The rest time between intervals can be short or moderate, but it never allows for a full recovery. The running pace is usually between slower than 10k pace and a little faster than marathon pace. The speed and the rest period between intervals can be manipulated according to the needs of the athlete, taking into consideration the goals the athlete is trying to achieve during training.

Training Components for Half Marathon

1. Building aerobic base
2. Developing speed, endurance, and strength
3. Developing anaerobic strength and endurance
4. Developing strength through tempo runs
5. Long runs to increase stamina and running economy
6. Short intervals - lactic acid tolerance workouts
7. Long intervals - lactic acid tolerance sustain workouts
8. Short recovery - long recovery
9. Race pace workouts
10. Running pace - training at different speeds
11. Competing

Most of the running sessions are done on the roads and/or dirt trails instead of the track. Interval sessions are run as Fartlek training or pick-ups. There is also a great emphasis on hill work and



tempo runs. During this training cycle the main concern is the development and improvement of cardiovascular strength and endurance.

Half-Marathon Training Plan – 18-Week Schedule

Principles: *Novice and first-time half-marathon athletes*

Builds endurance

Shorter timed runs during the week so athlete does not have to worry about distance; Sunday run ensures distances are being covered.

Monday – Rest or cross training with a moderate activity such as swimming or walking (little running motion)

Tuesday – Up-tempo runs or hill repeats of moderate incline about 250 meters long

Wednesday – Tempo pace during the middle of run

Thursday – Easy recovery from the week

Friday – High repeats/low weights; just toning, not building bulk

Saturday – Recovery

Sunday – Long slow run (65 to 75% of half-marathon pace – for example, for 2:15 half-marathon., 7-to-8-minute km pace)

Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	Rest / Cross-train	33 min	33 min	33 min	Weights	Rest Day	4 km run
2	Rest / Cross-train	33 min	33 min	33 min	Weights	Rest Day	6 km run
3	Rest / Cross-train	3 x hill training	44 min	44 min	Weights	Rest Day	6 km run
4	Rest / Cross-train	44 min	3 x hill training	44 min	Weights	Rest Day	8 km run
5	Rest / Cross-train	44 min	44 min	44 min	Weights	Rest Day	8 km run
6	Rest / Cross-train	3 x hill training	44 min	44 min	Weights	Rest Day	10 km run
7	Rest / Cross-train	55 min	3 x hill training	55 min	Weights	Rest Day	10 km run
8	Rest / Cross-train	55 min	55 min	55 min	Weights	Rest Day	12 km run
9	Rest / Cross-train	3 x hill training	55 min	55 min	Weights	Rest Day	12 km run
10	Rest / Cross-train	66 min	3 x hill training	55 min	Weights	Rest Day	14 km run



11	Rest / Cross-train	66 min	66 min	66 min	Weights	Rest Day	14 km run
12	Rest / Cross-train	3 x hill training	66 min	66 min	Weights	Rest Day	16 km run
13	Rest / Cross-train	66 min	3 x hill training	66 min	Weights	Rest Day	16 km run
14	Rest / Cross-train	66 min	66 min	66 min	Weights	Rest Day	18 km run
15	Rest / Cross-train	3 x hill training	77 min	44 min	Weights	Rest Day	18 km run
16	Rest / Cross-train	77 min	3 x hill training	77 min	Weights	Rest Day	20 km run
17	Rest / Cross-train	66 min	66 min	66 min	Weights	Rest Day	18 km
18	Rest / Cross-train	55 min	Rest	44 min	33 min	Race Day	Race

Marathon Skill Progression

Your Athlete Can	Never	Sometimes	Often
Perform a stand-up start	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintain an erect posture with hips tall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Keep head level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintain rhythmic stride pattern	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Build a strong aerobic base	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Run a minimum distance of 10k	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Develop speed, endurance and strength	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Develop anaerobic strength and endurance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Train over long distances at different speeds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintain a relatively flat foot strike under hips and body weight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Move continuously forward to ball of foot from flat foot strike	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintain comfortable arm swing without twisting body	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Run under control for entire race	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Totals

Marathon

Competing in a marathon can be a challenging athletic achievement. Whether it is going for a fast time, trying to go for a personal best or just to finish the race, runners are always looking for the best training program that will lead them to accomplish their goal. The individual runner will be faced with many questions concerning training, such as how many miles to run per week, the intensity and volume of the workouts, recovery, long runs and so on. There are no concrete rules because every runner is unique. A coach can prescribe a specific training program according to the athlete's ability and goal for that specific marathon.

However, training for a marathon is serious business. Not training properly can lead to failing to complete the race and the risk of injury. While training, distance should be gradually increased. Rest times should be planned and followed. The rest (recovery) day is an important part of training.

The most important part of any training program is designing its detail to match the needs and abilities of each athlete. Once the coach understands and incorporates the basic principles and components of training, he or she will be ready to develop a successful training program regardless of the athlete's ability.

The principles established to carry out the training plan are the foundation for the complete preparedness of the runner to achieve his or her goal. The coach must determine the athlete's training needs and maximize his or her abilities. One warning contained in almost all marathon running resources is, "Don't run a marathon without the proper training and hydration." It is essential that an athlete is trained and prepared to enter a marathon.

Marathon Training

It is very apparent that marathon training is a science, with several theories and techniques available. The energy systems challenged in marathon training and competitions are anaerobic (without oxygen) and aerobic (with oxygen). The key to a good marathon runner is to maximize the efficiency of his/her energy systems. There are several detailed sources available that discuss VO₂ max training principles (the ability of muscles to make use of the oxygen that they receive) if coaches desire to learn more technical details behind the principles of marathon training. Marathon training consists of phases, with cycles contained within each phase (and even the cycles can have cycles). Most running watch apps include measurements of VO₂ max,

VO₂ max

Fitness can be measured by the volume of oxygen that is consumed while exercising at maximum capacity. VO₂ max is the maximum amount of oxygen in milliliters one can use in one minute per kilogram of body weight. Those who are fitter have higher VO₂ max values and can exercise more intensely than those who are not as well conditioned.

Factors affecting VO₂ max

The physical limitations that restrict the rate at which energy can be released aerobically are dependent upon:

- the chemical ability of the muscular cellular tissue system to use oxygen in breaking down fuels
- the combined ability of cardiovascular and pulmonary systems to transport the oxygen to the muscular tissue system



Anaerobic and Aerobic Training

The anaerobic energy systems allow for short, intense efforts, while aerobic energy systems provide the energy for activity lasting longer than 2 minutes. Marathon runners require endurance, which is mainly conditioning the aerobic system. When a marathon runner is not processing oxygen quickly enough (aerobic), the anaerobic system kicks in. The anaerobic system creates by-products (of which one is lactic acid) that need to be removed. This is done by training the anaerobic system to allow the athlete's muscles to maintain intensity despite the by-products. The training for marathon contains runs that are short, runs that are long, runs that are intense and runs that are less intense. These components are included in the training programs for both half-marathon and marathon.

Aerobic conditioning consists of increasing the amount the athlete runs and including a longer run weekly in training runs. This results in greater endurance and improved running economy. This is the largest component of a distance runner's training program. To develop an aerobic base, training sessions consist of high volumes of continuous, longer distance running at below what an athlete's race pace would be. This works out to be at about 70-80 percent of the athlete's maximum heart rate. This would translate to an athlete being able to carry on a conversation while running. Of course, at times, the athlete's aerobic energy system training has to be increased with more intense runs.

Training for marathon and half-marathon consists of a combination of the following:

1. Long runs
2. Speed work/Tempo work/ Hill training /Interval training/Fartlek training
3. Rest

Some runs can be done as interval sessions or Fartlek training. Fartlek training is introducing short periods of slightly higher paced runs in an athlete's normal run. The pace should be picked up for a short period (200m to 400m), then dropped below normal running pace or slowed to a jog, until the athlete has fully recovered (breathing returned to normal). The athlete should repeat, slightly faster, later in the run. This type of training slightly stresses the system, which will lead to improvements in speed and anaerobic systems.

Rest forms an important part of training and needs to be planned appropriately. Rest days can contain some "mild" activity, such as walking your dog, but this should not be intense. Overuse results in injury, which leads to reduced training that will impact achieving goals.

Following are simple training plans for marathon and half-marathon training. These are only guidelines and need to be modified to meet the athlete's specific goals, ability and training schedule.

Note: 1 kilometer = .62 mile and 1 mile = 1.61 kilometers

**Marathon Training Plan – 18-Week Schedule**

Principles: *Novice and first-time marathon athletes*

Initial weeks – Smaller steps to build endurance

Middle weeks – Adding a rest week when runs are getting longer

Minimum competency – Athlete should be able to run 10 kilometers before starting marathon training

Monday/Wednesday – Up-tempo runs or hill repeats of moderate incline about 250 meters long

Tuesday – Rest or cross-training with a moderate activity such as swimming or walking (little running motion)

Thursday – Easy recovery from the week

Friday – High repeats/low weights; just toning, not building bulk

Saturday – Long slow run (65 to 75% of marathon pace – for example, for 4:30 marathon, 7- to 8-minute/ km pace)

Sunday – Recovery

Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	34 min	Rest / Cross-train	44 min	34 min	Weights	12 km	Rest Day
2	3 x hill training	Rest / Cross-train	44 min	55 min	Weights	12 km	Rest Day
3	55 min	Rest / Cross-train	4 x hill training	55 min	Weights	16 km	Rest Day
4	55 min	Rest / Cross-train	55 min	66 min	Weights	18 km	Rest Day
5	4 x hill training	Rest / Cross-train	66 min	66 min	Weights	20 km	Rest Day
6	66 min	Rest / Cross-train	5 x hill training	55 min	Weights	23 km	Rest Day
7	66 min	Rest / Cross-train	66 min	66 min	Weights	18 km	Rest Day
8	5 x hill training	Rest / Cross-train	77 min	77 min	Weights	25 km	Rest Day
9	77 min	Rest / Cross-train	6 x hill training	55 min	Weights	28 km	Rest Day
10	66 min	Rest / Cross-train	77 min	77 min	Weights	23 km	Rest Day
11	6 x hill training	Rest / Cross-train	77 min	77 min	Weights	32 km	Rest Day
12	66 min	Rest / Cross-train	6 x hill training	55 min	Weights	25 km	Rest Day
13	55 min	Rest / Cross-train	66 min	66 min	Weights	34 km	Rest Day
14	5 x hill training	Rest / Cross-train	66 min	66 min	Weights	25 km	Rest Day
15	55 min	Rest / Cross-train	55 min	66 min	Weights	36 km	Rest Day



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16	55 min	Rest / Cross-train	5 x hill training	55 min	Weights	21 km	Rest Day
17	4 x hill training	Rest / Cross-train	55 min	55 min	Weights	16 km	Rest Day
18	44 min	Rest / Cross-train	55 min	Rest	Weights	3 km	Race Day

M = miles

**Race Walking Skill Progression**

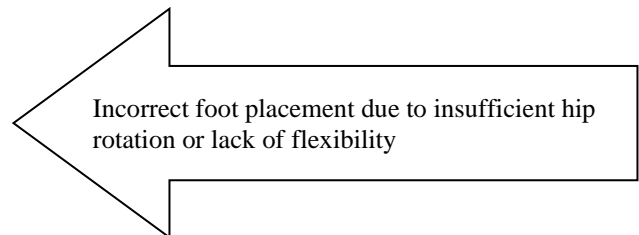
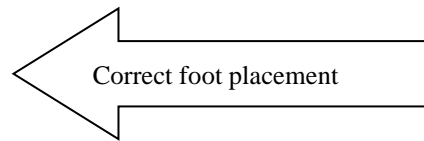
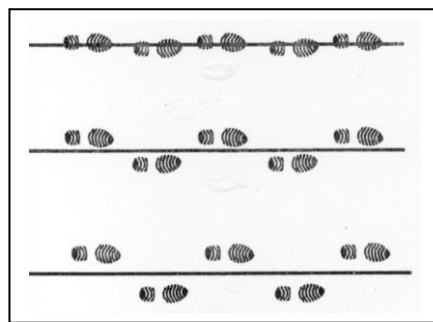
Your Athlete Can	Never	Sometimes	Often
From start, push off with rear foot and step forward with front foot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Swing arms vigorously to stimulate quick foot movement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Power body forward by lifting heel and pushing off with toes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Place feet in a straight line with toes pointed directly forward	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rotate hips forward and in with each stride	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drop and roll hips while twisting back and forth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bend the knee as leg is swung forward	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Straighten knee all the way back, pulling ground as the heel touches it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use toes and calf muscles to push body forward	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase drive off toes by rolling over and off them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walk with head up, torso erect and centered over hips	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hold hands with fingers bent, relaxed and loose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Swing arms across chest as they move back and forth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintain upright position with neck and shoulders relaxed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use relaxed hip movements as speed increases	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Race walk under control for entire race	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Perform proper heel-toe movement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals			



Race Walking

Walking by definition is propelling oneself forward while keeping at least one foot in contact with the ground. The art of race walking 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. Race walking is a race of endurance and quick leg movements.

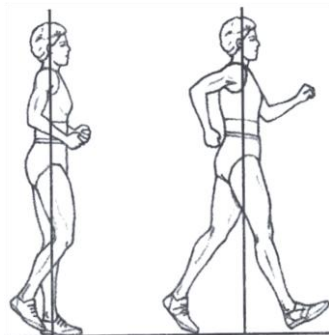
Race walking is a progression of steps taken so that unbroken contact with the ground is maintained. The lead foot, preferably the heel, must touch the track before the back foot leaves the ground. During stride, the leg must be straightened at least momentarily. The supporting leg must be straight in a vertically upright position. When a walker does not have continuous contact with the ground, he/she is not race walking and shall be disqualified.



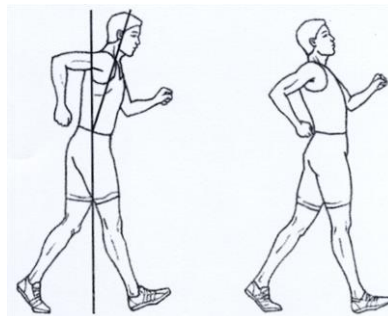
Begin Walking Motion and Acceleration

1. From a standing start, push off with rear foot and front foot simultaneously while stepping forward with rear foot.
2. Swing arms vigorously to stimulate quick foot movement.
3. Power body forward by lifting the heel and pushing off with toes.
4. Walk forward, swinging bent arms in opposition to legs.
5. The heel of the lead foot should touch the ground just before the toe of the trailing foot leaves the ground, in heel-toe movement. Feet are placed one in front of the other.
6. Hold hands so the fingers are bent, yet relaxed and loose.
7. Walk with the head up and the torso erect and centered over the hips.

Correct Form



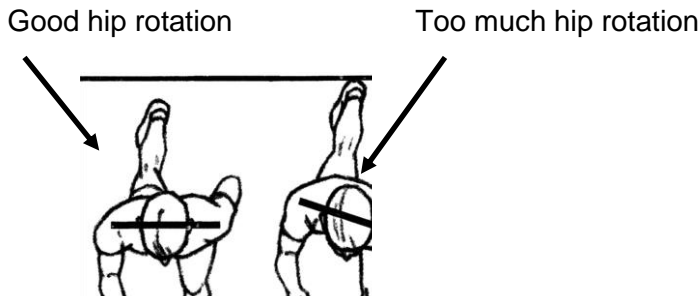
Incorrect Form





Maintaining Momentum

1. Let toe and calf muscle push body forward with feet landing in a straight line.
2. Let the hips rotate forward and in with each stride.
3. Hold arms at 90 degrees, swinging them vigorously forward and back.
4. Maintain an upright position with neck and shoulders relaxed.
5. Hips drop and roll while twisting back and forth. This allows your legs to move faster and easier and gives you a longer stride.



6. Arms are always bent at a 90-degree angle and pumping vigorously. Let them swing across your chest as they move back and forth. Forearms should be parallel to the ground, and arm swing originates from shoulders.
7. The knee bends and swings forward taking the step. This allows toes to clear ground.
8. The advancing leg must be straightened from the first moment of contact with the ground until it is in the vertical position.
9. Toes and calf muscles are used to push the body forward. Feet land in a straight line with toes pointed directly forward.
10. Keep neck and shoulders relaxed.
11. Body and head should always be upright.
12. Increase drive off toes by rolling over and off them.
13. Use relaxed hip movements as speed increases.
14. Race walk at highest speed possible while maintaining the correct form.
15. Complete race with a strong finish.

Faults & Fixes – Race Walking

Error	Correction	Drill/Test Reference
Hips are moving side to side, not forward/backward.	<ul style="list-style-type: none"> • Improve hip mobility. • Increase understanding of correct motion (or increase awareness of the error). 	Break steps down to demonstrate correct direction hips need to move.



Arms move too vigorously up and down and cross body.	<ul style="list-style-type: none"> • Swing arms forward and backward (like pistons), flexed at elbows. • Do not cross arms over the body. 	Practice standing; guide proper technique.
Rear foot leaves the ground before leading foot touches the ground.	<ul style="list-style-type: none"> • Get foot down quicker. • Remember grabbing motion into ground with foot. 	Slow down/reduce speed.

Race Walking Drill

Reps: 3x300m of increasing-decreasing patterns

Purpose

- ♦ Develop pacing
- ♦ Develop capacity to surge

Teaching Points

1. Start at slow pace.
2. Blow whistle after about 50m to indicate increase in speed.
3. Blow whistle again after another 50m to indicate another increase in speed.
4. Blow whistle 2x to indicate decrease in speed.



Points of Emphasis:	Maintain proper form
When to Use:	Beginning of skill work



Coaches' Tips for Race Walkers – At-A-Glance

Tips for Practice

1. Demonstrate to the athlete each component of this event: starting the race, keeping at least one foot in contact with the ground, and contacting the heel at a point just in front of the body's center of gravity.
2. Race walk 100m in smooth and easy strides, keeping continuous contact with the ground.
3. Race walk 100m with no lateral swinging of the trunk or hips.
4. Race walk 100m with the arms bent 90 degrees at elbows.
5. Race walk 100m at various speeds, maintaining the proper form and pace.
6. Race walk 100m at a high speed, concentrating on arm and leg drive and proper form.
7. Race walk 200m with no backward lean or forward sway.
8. Use arms to control speed.
9. Ask the athlete to feel the strong push off the toe of the back foot; have him or her concentrate on using strong pushes off the back foot to increase stride lengths while race walking 100-200m.
10. Emphasize using bent arms to increase the power of each leg drive.
11. Practice the arm swing while standing still.
12. Teach the athlete to pass without interfering the passed athlete
13. Roll up onto and off the toes of the back foot to increase drive; note that the back foot becomes nearly vertical at high speeds.
14. Note that the hip of the swinging leg reaches its lowest point, and the other hip reaches its highest point, as the feet pass each other.
15. Tell the athlete to think of walking “more easily” when walking faster.
16. Place feet directly in front of each other; try not to allow feet to turn outward.
17. Keep head up, looking at the finish line.



Unified Running and Walking

Unified sports are a rewarding experience that promotes friendship and athletic skill amongst athletes and volunteers. Consider developing a Unified LDR/W program at your site. A unified team consists of a Special Olympics athlete and a volunteer turned unified partner. Partners must have Class A background clearances and trainings.

The two-member Unified team runs (walks) with all other individual and Unified teams in that event. It is not a separate heat or race. The entry time is the total of the two partners' times in the event. While running or walking in the event the two partners do not necessarily run or walk side by side. They each go as fast as they can. Their finish times are totaled and compared against the total times of other Unified teams in their division to determine the place award. Teams can compete in all running and walking distances.

All attempts should be made to match the ability range of the two team members. The age range of athletes is categorized in LDR/W as under 21 or adults 21 and over. Guidance calls for partners to be within the same age category as their athlete partner. e governed by this guidance. Entry forms should be based on the athlete/Unified partner age and pace guidelines. Coaches are encouraged to plan to align their Unified program to meet this guidance.