BlazeSports
Strength and Conditioning Manual for Track and Field

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BlazeSports Training Manual for Track and Field

SPORT-SPECIFIC METHODS OF STRETCHING

All the exercises below are described to be performed actively, but can be just as easily performed passively (adapted from Allerheiligen, 1994).

Wheelchair Track and Field

Chest stretch (chest, shoulder, biceps) – sitting with the left wheel at a 45-degree angle to a wall, extend the left arm slightly above shoulder height with the palm facing the wall; placing the palm flat against the wall, gently rotate the upper body away from the wall until a stretch is felt in the chest, shoulder, and biceps; repeat with the right arm

Chicken Wing (triceps and back) – right arm is bent at the elbow and the elbow is raised above the head; right hand reaches down toward the left shoulder and the left hand grasps the right elbow; elbow is pulled behind head; repeat with the left arm

Cross Arm (upper and lower back) – right arm is slightly flexed; left hand grasps right arm slightly above the elbow and pulls it across the chest; repeat with the left arm

Arms behind back (chest and shoulders) – both arms are placed behind the back with fingers interlocked and palms facing each other; arms are straightened fully and then slowly raised

Overhead lean (upper and lower back) – lean forward and grasp a chair, fence, or another object; keeping the spine straight, bring the chest forward toward the knees until the back is in a stretched position

Side Bend (back, abdominal, triceps) – right arm is bent at the elbow and the elbow is raised above the head; right hand reaches down toward the left shoulder and the left hand grasps the right elbow; elbow is pulled behind head while the torso leans to the left side; repeat with left arm

Forearm stretch A (forearm/wrist flexors) – extend the left arm and flex the wrist so that the fingers point up; grasp the left hand’s fingers with the right hand and pull backward gently; repeat with the right arm

Forearm stretch B (forearm/wrist extensors) - extend the left arm and flex the wrist so that the fingers point down; grasp the left hand’s fingers with the right hand and pull backward gently; repeat with the right arm

Ambulatory Track and Field

Head to Floor (hamstrings and lower back) – stand with feet spread 6 inches apart; knees are slightly flexed; bend occurs at the thighs and the upper torso, and arms hang passively

Hips over Head (upper and lower back, neck and hamstrings) – lay on back with arms at a 90-degree angle to the body; hips are rolled over the head with the legs in a tucked position; once hips are over the head, straighten the legs

Spinal Twist (lower back and side of hip) – sit with the legs straight and the upper body nearly vertical; right foot is placed on the left side of the left knee; left elbow is placed on the outside of the right leg’s thigh; head turns to look over the right shoulder while the right hand palm braces the body on the floor; switch legs
**Toe Touch (hamstrings, lower back and lower hips)** – sit on the floor with the legs straight ahead; bend over from the hips and grab the ankles or toes; slowly pull the chest toward the legs, keeping the spine straight

**Trail Leg (groin, hips, quadriceps and lower back)** – lie on back with hips flat on the ground, the left leg straight ahead with its toe pointed up, and the right leg bent backwards at the knee; slowly and gently raise the knee into a stretched position; repeat with the left leg

**Knee Flex (buttocks)** – lie on back with the legs straight; flex the right leg and lift toward the chest with assistance from both hands, which are placed below the knee; repeat with the left leg

**Side Bend (back, abdominal, triceps)** – stand with the feet slightly more than shoulder width apart; right arm is bent at the elbow and the elbow is raised above the head; right hand reaches down toward the left shoulder and left hand grasps the right elbow; elbow is pulled behind the head while the torso leans to the left side; repeat with the left arm

**Chicken Wing (triceps and back)** – right arm is bent at the elbow and the elbow is raised above the head; right hand reaches down toward the left shoulder and left hand grasps the right elbow; elbow is pulled behind the head; repeat with left arm

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**STRENGTH AND CONDITIONING ACTIVITIES**

The periodization of strength and conditioning is implemented within the training year guidelines previously discussed: preparatory, competitive, and transition. Depending on the time of the training year will dictate the load, reps, sets, rest and recovery, and the number of and type of exercises. Each phase builds a base for the following phase, and together the phases are designed with the goal of positioning the athletes at peak performance for critical events.

It must be noted that before beginning any strength and conditioning program, athletes must gain the proper medical clearance. Additionally, athletes training in the weight room must use correct form and body position and proper breathing techniques (exhaling during muscle contraction, inhaling during muscle stretching).

In order to decide the appropriate workout load, athletes must first determine what is the maximum amount of weight they can lift for one repetition (called 1RM) for each exercise. A percentage of 1RM is used to achieve the desired training intensity and training effect in each phase.

**Early Preparatory**

This phase prepares athletes for the more rigorous training to come with the goal of keeping the athlete injury-free. It progressively adapts the muscles and muscle attachments to tolerate greater amounts of load. During this phase, is critical (more so for younger athletes) to develop pillar strength; i.e., strengthening the trunk. A good rule of thumb is start at the core of the body and then work out to the arms and legs.
Muscle groups exercised  
A session involves a high number of muscle groups w/ a high number of exercises (say 9 to 12) performed at a comfortable exertion level

<table>
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<tr>
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Length of Phase  
Strength and conditioning professionals suggest that novice athletes engage in 8 to 10 weeks of this preparatory training, mature athletes in 3 to 5 weeks

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Frequency  
3 x week

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Training Load  
60-70 percent of 1RM

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Number of exercises  
8

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Total Session Time  
30 to 60 minutes

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Repetitions  
10 to 20

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Sets  
3 to 4

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Rest between sets  
60 seconds

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Speed of Movement when performing exercises  
All lifts are performed at a medium pace with a count of 2 seconds up and 2 seconds down

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(adapted from Bompa, 1993)

Muscle groups to be exercised and applicable exercises:

Wheelchair Track and Field


Ambulatory Track and Field


Late Preparatory and Early Competitive

This phase develops maximum strength and size. Emphasis shifts from exercising all muscle groups to exercising major muscle groups involved in the athlete’s given sport. However, strength in stabilizing muscles – muscles that serve to stabilize the major muscle movements – is maintained during this phase.
Muscle groups exercised | Major muscle groups are emphasized, with less emphasis placed on stabilizing muscles
---|---
Length of Phase | 6 to 12 weeks
Frequency | 3 x week
Training Load | 50 to 60 percent of 1RM
Number of exercises | 7 to 9
Total Session Time | 60 to 90 minutes
Repetitions | 4 to 6 for major muscles; 12 to 20 for stabilizers
Sets | 4 for major muscles; 3 for stabilizers
Rest between sets | 2 to 4 minutes for major muscles; 60 seconds for stabilizers
Speed of movement when performing exercises | All lifts are performed at a medium pace with a count of 2 seconds up and 2 seconds down

(adapted from Bompa, 1993)

Major muscle groups to be exercised and applicable exercises:

Wheelchair Track

Back Pull ups, Prone Row, Back Extensions Chest Bench Press, Dumbbell Fly Forearms Wrist curls Triceps Dips, Lying Triceps Extension

Wheelchair Field

Back Pull ups, Prone Row, Back Extensions Chest Bench Press, Dumbbell Fly Forearms Wrist curls Triceps Dips, Lying Triceps Extension Biceps Biceps/Hammer Curl

Ambulatory Track


Ambulatory Field

Biceps Biceps/Hammer Curl Chest Bench Press, Dumbbell Fly Legs Front Squat, Leg Curl, Leg Extension, Calf Raise Triceps Dips, Lying Triceps Extension Forearms Wrist curls

Stabilizer muscle groups to be exercised and applicable exercises

Wheelchair Track and Field

Abdominal Crunches, Trunk Twists Shoulder/Neck Shoulder Press, Shoulder Shrug, Upright Row Rotator Cuff Internal/External Rotation, Empty Can
Ambulatory Track and Field

Abdominal Crunches, Trunk Twists Shoulder/Neck Shoulder Press, Shoulder Shrug, Upright Row Rotator Cuff Internal/External Rotation, Empty Can

Early to Late Competitive

This phase facilitates the maintenance of high strength levels, thereby enhancing performance and reducing the likelihood of injury. The emphasis on muscle groups once again shifts, now focusing on those muscles, called prime movers, that play a primary role in propulsion of the body, chair, or implement. As in the prior phase, strength in the stabilizing muscles is maintained.

<table>
<thead>
<tr>
<th>Muscle groups exercised</th>
<th>Prime mover muscle groups are emphasized, with less emphasis placed on stabilizing muscles</th>
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</thead>
<tbody>
<tr>
<td>Length of Phase</td>
<td>2 to 6 weeks</td>
</tr>
<tr>
<td>Frequency</td>
<td>3 x week</td>
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<tr>
<td>Training Load</td>
<td>80 to 100 percent of 1RM</td>
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<tr>
<td>Sets</td>
<td>6 for prime mover muscles; 3 for stabilizers</td>
</tr>
<tr>
<td>Rest between sets</td>
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<td>when performing exercises</td>
<td>stabilizer lifts are performed at a medium pace with a count of 2 seconds up and 2 seconds down</td>
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</table>

(adapted from Bompa, 1993)

Prime mover muscle groups to be exercised and applicable exercises:

Wheelchair Track

Chest Flat Bench Press, Flat Dumbbell Bench Press, Incline/Decline Bench Press, Dumbbell Fly Forearms Wrist curls, Radial Deviation, Ulna Deviation Triceps Lying Triceps Extension, Triceps Pushdown

Wheelchair Field


Ambulatory Track

Legs Front Squat, Leg Curl, Leg Extension, Calf Raise Back Pull ups, Prone Row, Back Extensions
Ambulatory Field


Stabilizer muscle groups to be exercised and applicable exercises:

Wheelchair Track and Field

Abdominal Crunches, Trunk Twists Shoulder/Neck Overhead Press, Shoulder Shrug Rotator Cuff Internal/External Rotation, Empty Can

Ambulatory Track and Field

Abdominal Crunches, Trunk Twists Shoulder/Neck Shoulder Press, Shoulder Shrug, Upright Row Rotator Cuff Internal/External Rotation, Empty Can

Transition

In addition to the active recovery phase in the transition period, it is acceptable to begin Early Preparatory training in which the exercises selected focus primarily on stabilizing muscles, rather than prime movers.

Strength and Conditioning outside of the weight room

Strength and conditioning is performed outside of the weight room through activities that develop sport-specific strength and fitness.

Power training

Power is the product of strength and speed and is developed through a variety of drills in which athletes attempt to move their body or implements as quickly and forcefully as possible. Power training is emphasized in general and specific preparatory phases.

Drills for ambulatory track and field athletes

Hopping – A series of jumps on and off the same leg. Emphasis is on leg thrust, knee lift and aggressive arm action. Example of a hopping workout is 2 to 8 x 10 meters to 30 meters.

Bounding – A series of jumps by each leg performed alternately and executed with good running posture. Emphasis is on leg thrust, knee lift and aggressive arm action. Bounding can be performed to achieve three different goals: maximum height, maximum length or at a desired cadence. Example of a bounding workout is 2 to 6 x 20 meters to 80 meters.

High Knees – Performed with a forward lean to simulate sprinting action. Example is 2 to 8 x 10 meters to 30 meters. Recovery is time necessary to walk back to starting point.

Uphill running – Uphill running improves stride frequency and running-specific muscles. Example of an uphill workout is 6 x 100 meters with 5 to 8 minutes recovery.
Field specific:

**Box jumps:** a) athletes hop off a 12 to 24-inch high box and perform a rebound jump when they contact the ground; b) athletes hop off a 12 to 24-inch high box and perform a triple jump step and a jump for distance.

**Javelin:** Stretch reflex throw – Athletes stand with right leg forward (if right handed) and the javelin (standard weight) in the right arm, which is bent at the elbow. The right leg and throwing arm are moved back to delivery position until a stretch is felt in the chest and shoulder muscles. Upon feeling the stretch, the throw is performed.

**Discus:** Barbell twists – A 30 to 40-pound barbell is placed on the shoulders. The shoulders are twisted to the left, then to the right. The motion to the left is started before the motion to the right is completed and vice versa.

**Shot put:** Variable weight shot program: puts are performed with shots at both lighter weights (to enhance speed) and heavier weight shots (to enhance power).

Drills for wheelchair track athletes

**Up-hill standing starts** – Performed on an uphill with a slight ascent from a standing start. Athletes should perform 10 hard strokes from a standing start, coast to a stop and begin another 10 strokes. Recovery is the amount of time it takes to descend and turn around. Example of an uphill workout is 3 sets of 5 x 10 strokes.

**Towing** - Coach sits behind athlete in an everyday chair, firmly grasping the bottom bar of the racing chair’s frame. From a standing start, athlete tows coach for 10 meters. At 10-meter mark, coach releases racing chair. Athlete pushes hard 30 additional meters. (It’s important for the coach to lift slightly up on the racing chair at the start. This ensures that the athlete will not flip backwards. To avoid inhibiting start mechanics, assisting the athlete’s start with two or three pushes on the everyday chair may also be necessary.)

Drills for wheelchair field athletes

**Javelin:** Stretch reflex throw – If right handed, athletes begin with the javelin (standard weight) in the right arm, which is bent at the elbow. The throwing arm is moved back to delivery position until a stretch is felt in the chest and shoulder muscles. Upon feeling the stretch, the throw is performed.

**Discus:** Barbell twists – A 30 to 40-pound barbell is placed on the shoulders. The shoulders are twisted to the left, then to the right. The motion to the left is started before the motion to the right is completed and vice versa.

**Shot put:** Variable weight shot program: puts are performed with shots at both lighter weights (to enhance speed) and heavier weight shots (to enhance power).

**Towing** - Coach sits behind athlete in an everyday chair, firmly grasping the bottom bar of the everyday wheelchair’s frame. From a standing start, athlete tows coach for 5 meters. At 5-meter mark, coach releases racing chair. Athlete pushes a hard 10 additional meters. (It’s important for the coach to lift slightly up on wheelchair at the start. This ensures that the athlete will not flip backwards.)

**Grass drills** – Sprints can be performed from a standing start at variable distances. Grass training can be performed up hills as well with the athlete beginning from a standing start and then performing a varied number of pushes.
Endurance Training

Endurance is the amount of time an athlete can perform at a given intensity and can take the form of aerobic endurance or anaerobic endurance. Aerobic endurance is emphasized in the general preparatory phase, while anaerobic endurance is emphasized in general preparatory and sport-specific preparatory phases.

Drills for ambulatory track athletes

Fartlek (Aerobic) – Slow to fast running done informally. Athletes set a medium pace and perform faster efforts for varying lengths when desired. Running on a golf course using the distance between holes for faster efforts and varied lengths for recovery is an example.

Steady-continuous (Aerobic) – Continuous running performed at a steady pace – 60 minutes for endurance athletes and 12 to 30 minutes for sprinters

Tempo (Aerobic/Anaerobic) – Formal method of fartlek. Race distances are broken into segments. For each segment, a pace is prescribed. For example, in the 400 meters: 100 meters at 95 percent; 100 meters at 80 percent; 150 meters at 85 percent; 50 meters at 100 percent.

Interval (Anaerobic) – Distance of effort, number of repetitions and time given for recovery are used as variables. Examples of intervals are 4 to 6 x 300 meters with 3 to 4 minutes recovery; 3 to 5 x 200 meters with 2 to 3 minutes recovery; 8 to 12 x 100 meters with 2 to 3 minutes recovery;

Repetition (Anaerobic) – A longer effort than in interval training with an active recovery performed by walking. Example would be 3 x 800 meters with 4 to 5 minutes recovery.

Drills for wheelchair track athletes

Steady-continuous (Aerobic) – Continuous pushing at a steady pace and low intensity. Training duration ranges from 30 to 90 minutes.

Repetition (Anaerobic) – Workouts of moderate to high intensity are performed at or slightly faster than race pace. Distances pushed range from 50 to 75 percent of the athlete’s competitive event distance. Athletes are given a full recovery between repetitions. Example of a repetition workout for a 400-meter athlete is 6 to 8 x 200 with 5 minutes recovery.

Variably paced (Aerobic) – Workouts with varying intensity and duration. Example of a variably paced workout for a middle distance racer in chronological order is 1) 10minute warm-up of steady-continuous pushing; 2) 5 minutes of medium-paced, continuous pushing 3) 5 minutes of steady-continuous pushing; 4) maximum accelerations of 100 meters to 400 meters, interspersed with continuous pushing.

Interval (Anaerobic) – Repeated performance of varying distances with only partial recovery allowed. Example of an interval workout is 6 to 8 x 400 meters with 3 to 5 minutes recovery.

Ambulatory and Wheelchair Field

The only reason endurance training is necessary is for weight management

Speed Training

Speed training is performed to increase the athlete’s maximum speed and agility. Speed training is emphasized in specific preparatory and competition phases.
Drills for ambulatory track athletes

Downhill running – A hill with a very slight descent and 200 meters to 300 meters is used.

Accelerated sprints – An accelerated sprint from jogging to sprinting. Example is 4 to 8 x 30 meters to 60 meters flying starts, with a 20 meter run-up.

Under-distance – Running is performed near or slightly above race pace at distances 50 to 75 percent of competitive event distance.

Standing-starts – All-out sprints for short distances from a standing start. Example of a standing-start drill is 4 to 8 x 20 meters to 40 meters.

Tailwind running – Sprints of 30 meters to 60 meters are performed with tailwind assistance.

Drills for wheelchair track athletes

Downhill pushing – The descent of the hill can vary from slight to moderately steep with a distance from 100 meters to 300 meters. Goal is to make effective contact with the hand ring as long as possible.

Tailwind pushing – Short, all-out efforts ranging from 30 seconds to 2 minutes are performed with tailwind assistance. Recovery is either the time it takes to turnaround and push back to starting point at a slow pace or 5 minutes to 7 minutes. Tailwind pushing can also be performed on the track by doing 110-meter rolling all-out sprints on the tailwind straightaway.

Drills for ambulatory field athletes

Standing-starts – All-out sprints for short distances from a standing start. Example of a standing-start workout is 4 to 8 x 10 meters.

Squat jump sprints – Athletes perform a squat jump, followed by an all-out sprint. Example of a standing-start workout is 4 to 8 x 10 meters.

Underweight training – Lighter-weight implements or balls (some discus throwers use plastic highway cones) are thrown, with emphasis on proper technique.

Javelin sprints – Javelin athletes should perform longer distance sprints of 60 to 100 meters x 5 sets.

Drills for wheelchair field athletes

Underweight training – Lighter-weight implements or balls (some discus throwers use plastic highway cones) are thrown, with emphasis on proper technique.

Standing-starts – All-out sprints for short distances from a standing start. Example of a standing-start workout is 4 to 8 x 10 meters.

Cone drill – Cones are set up at a distance of 10 meters with an equal amount of distance separating each. Athletes must sprint around the cones in a serpentine manner.

Standing-starts in grass - All-out sprints for short distances from a standing start performed in the grass.
Sample Training Schedule

Below are examples of weekly cycles for preparatory, which is broken into general and specific, and competitive training periods. The transition period is excluded because training during this period is generally not structured. Note that these are merely examples to be used as templates from which a more individualized training program can be created.

Ambulatory Sprinters

General Preparatory

Monday

Warm-up
½ to 1-mile jog
4 x 80 meters accelerations
Stretching

Workout
4 x 20 high knees with 4 minutes recovery
2 to 4 60-meter uphill sprints with 5 minutes recovery

Cool down
10 minutes easy jog
Stretching

Tuesday

Warm-up
10 minutes easy jog or stationary cycling
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy jog or stationary cycling
Stretching

Wednesday

Warm-up
½ to 1-mile jog
4 x 80 meters accelerations
Stretching

Workout
4 x 20 meters high knees with 3 minutes recovery
4 x 30 meters bounding with 3 minutes recovery
3 x 100 meters with full recovery
4 x 20-meter starts with full recovery
Cool down
10 minutes easy jog
Stretching

Thursday

Warm-up
10 minutes easy jog or stationary cycling
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy jog or stationary cycling

Stretching

Friday

Warm-up
½ to 1-mile jog
4 x 80 meters accelerations
Stretching

Workout
3 x 30 high knees with 3 minutes recovery
4 x 20 meters with 4 minutes recovery
Ladders – 300 meters, 150 meters, 100 meters sprints with full recovery

Cool down
10 minutes easy jog
Stretching

Saturday

Off or:

Warm-up
½ to 1-mile jog
4 x 80 meters accelerations
Stretching

Workout
2 to 3 miles Fartlek

Cool down
10 minutes easy jog
Stretching

Sunday
Off
Ambulatory Sprinters

Specific Preparatory

Monday

Warm-up
10 minutes easy jog or stationary cycling
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy jog or stationary cycling
Stretching

Tuesday

Warm-up
½ to 1-mile jog
4 x 80 meters accelerations
Stretching

Workout
4 x 30 meters high knees with 3 minutes recovery
4 x 50 meters tailwind sprints with full recovery
3 x 20 meters starts with 4 minutes recovery
Ladder under distance – 80, 60, 50 meters with full recovery

Cool down
10 minutes easy jog
Stretching

Wednesday

Warm-up
10 minutes easy jog or stationary cycling
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy jog or stationary cycling
Stretching

Thursday

Warm-up
½ to 1-mile jog 4 x 80 meters accelerations
Stretching
**Workout**
4 x 50 meters bounding with 4 minutes recovery
4 to 6 x 200 meters or 100 meters at ¾ speed with 3 minutes recovery
4 x 20 meters accelerations with 3 minutes recovery

**Cool down**
10 minutes easy jog
Stretching

**Friday**

**Warm-up**
10 minutes easy jog or stationary cycling
Stretching

**Workout**
Strength training (see strength training workouts above)

**Cool down**
10 minutes easy jog or stationary cycling
Stretching

**Saturday**

**Warm-up**
½ to 1-mile jog 4 x 80 meters
accelerations
Stretching

**Workout**
Timed 2 x 110 meters, or 2 x 220 meters, or 2 x 440 meters with full recovery

**Cool down**
10 minutes easy jog
Stretching

**Sunday**
Off

**Ambulatory Sprinters**

**Competitive**

**Monday**

**Warm-up**
10 minutes easy jog or stationary cycling
Stretching

**Workout**
Strength training (see strength training workouts above)
**Cool down**
10 minutes easy jog or stationary cycling
Stretching

**Tuesday**

**Warm-up**
½ to 1-mile jog
4 x 80 meters accelerations
Stretching

**Workout**
3 x 30 meters downhill sprints with recovering being the time it takes to ascend hill at easy pace
Ladders – 250, 175, 100 at near race pace with full recovery
3 x 15 meters starts with full recovery

**Cool down**
10 minutes easy jog
Stretching

**Wednesday**

**Warm-up**
10 minutes easy jog or stationary cycling
Stretching

**Workout**
Strength training (see strength training workouts above)

**Cool down**
10 minutes easy jog or stationary cycling
Stretching

**Thursday**

**Warm-up**
½ to 1-mile jog 4 x 80 meters accelerations
Stretching

**Workout**
5 x 20 meters uphill sprints
2 x 200 meters or 100 meters

**Cool down**
10 minutes easy jog
Stretching

**Friday**

**Warm-up**
1 to 2-mile jog

**Workout**
4 x 80 meters accelerations
Cool down
10 minutes easy jog
Stretch

Saturday
Competition

Sunday
Off

Ambulatory Endurance

General Preparatory

Monday

Warm-up
10 minutes easy jog
Stretching

Workout
5 miles of continuous hill running

Cool down
10 minutes easy jog
Stretching

Tuesday

Warm-up
10 minutes easy jog or stationary cycling
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy jog or stationary cycling
Stretching

Wednesday

Warm-up
10 minutes easy jog
Stretching

Workout
4 to 6 miles Fartlek

Cool down
10 minutes easy jog
Stretching
Thursday

Warm-up
10 minutes easy jog or stationary cycling
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy jog or stationary cycling
Stretching

Friday

Warm-up
10 minutes easy jog
Stretching

Workout
5 miles continuous hill running

Cool down
10 minutes easy jog
Stretching

Saturday

Warm-up
10 minutes easy jog
Stretching

Workout
45 minutes continuous

Cool down
10 minutes easy jog
Stretching

Sunday
Off

Ambulatory Endurance

Specific Preparatory

Monday

Warm-up
10 minutes easy jog
Stretching

Workout
30 minutes Fartlek
Cool down
10 minutes easy jog
Stretching

Tuesday

Warm-up
10 minutes easy jog or stationary cycling
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy jog or stationary cycling
Stretching

Wednesday

Warm-up
10 minutes easy jog
Stretching

Workout
5 x 400 meters with 5 minutes recovery
2 x 300 meters with 4 minutes recovery

Cool down
10 minutes easy jog
Stretching

Thursday

Warm-up
10 minutes easy jog or stationary cycling
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy jog or stationary cycling
Stretching

Friday

Warm-up
10 minutes easy jog
Stretching

Workout
5 miles continuous
Cool down
10 minutes easy jog
Stretching

Saturday

Warm-up
10 minutes easy jog
Stretching

Workout
3 x 800 meters with 6 to 10 minutes recovery
4 x 110 meters tailwind accelerations with full recovery

Cool down
10 minutes easy jog
Stretching

Sunday
Off

Ambulatory Endurance

Competitive

Monday

Warm-up
10 minutes easy jog
Stretching

Workout
2 x 800 meters with full recovery
4 x 110-meter tailwind accelerations with 4-5 minutes recovery

Cool down
10 minutes easy jog
Stretching

Tuesday

Warm-up
10 minutes easy jog or stationary cycling
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy jog or stationary cycling
Stretching
Wednesday

Warm-up
10 minutes easy jog
Stretching

Workout
30 minutes Fartlek

Cool down
10 minutes easy jog
Stretching

Thursday

Warm-up
10 minutes easy jog
Stretching

Workout
30 to 45 minutes continuous

Cool down
10 minutes easy jog
Stretching

Friday

Warm-up
10 minutes easy jog
Stretching

Workout
20 minutes easy jog

Cool down
10 minutes easy jog
Stretching

Saturday
Competition

Sunday
Off

Wheelchair Sprinters

General Preparatory

Monday

Warm-up
10 minutes easy hand cranking or pushing
Stretching
Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy hand cranking or pushing
Stretching

Tuesday

Warm-up
1-mile easy jog
Stretching

Workout
4 x 100-meter pick-up to top-end speed from rolling start with full recovery
4 x 100-meter pick-up with tailwind to top-end speed from rolling start with full recovery

Cool down
1-mile easy jog
Stretching

Wednesday

Warm-up
10 minutes easy hand cranking or pushing
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy hand cranking or pushing
Stretching

Thursday

Warm-up
1-mile easy jog
Stretching

Workout
30 minutes steady

Cool down
1-mile easy jog
Stretching

Friday

Warm-up
10 minutes easy hand cranking or pushing
Stretching
Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy hand cranking or pushing
Stretching

Saturday

Warm-up
1-mile easy jog
Stretching

Workout
30 minutes continuous wheelchair basketball, tennis, football, etc.

Cool down
1-mile easy jog
Stretching

Sunday
Off

Wheelchair Sprinters

Specific Preparatory

Monday

Warm-up (Road)
1 to 2 miles steady
Stretching

Workout
2 x 200-meter all-out climb with 1 to 2 minutes recovery
2 x 100-meter all-out climb with 2 to 3 minutes recovery
2 x 400-meter descents with recovery being the time it takes to climb up the hill at an easy pace

Cool down
1 to 2 miles easy
Stretching

Tuesday

Warm-up
10 minutes easy hand cranking or pushing
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy hand cranking or pushing
Stretching
Wednesday

Warm-up
1-mile easy jog
Stretching

Workout
4 x 100-meter pick-up to top-end speed from rolling start with full recovery
4 x 100-meter pick-up with tailwind to top-end speed from rolling start with full recovery
2 x 300-meter all out sprints from a rolling start

Cool down
1-mile easy jog
Stretching

Thursday

Warm-up
10 minutes easy hand cranking or pushing
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy hand cranking or pushing
Stretching

Friday

Warm-up (Road)
1-mile easy jog
Stretching

Workout
40 minutes continuous

Cool down
1-mile easy jog
Stretching

Saturday

Warm-up (Track)
1-mile easy jog
Stretching

Workout
4 x 100-meter pick-up to top-end speed from rolling start with 1 minute recovery
5 x 120-meter pick-up with tailwind to top-end speed from standing start with 2 minutes recovery
2 x 300-meter all out sprints from a rolling start
Cool down
1-mile easy jog
Stretching

Sunday
Off

Wheelchair Sprinters

Competitive

Monday

Warm-up (Track)
1 to 2 miles steady
Stretching

Workout
3 x 50-meter standing start with 2 minutes recovery
3 x 50-meter standing start tow drills
2 x 110-meter tailwind top-end sprints with full recovery

Cool down
1 to 2 miles easy
Stretching

Tuesday

Warm-up
10 minutes easy hand cranking or pushing
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy hand cranking or pushing
Stretching

Wednesday

Warm-up (Track)
1-mile easy jog
Stretching

Workout
3 x 20-meter standing starts with full recovery
2 x 100-meters at 90 percent with full recovery
2 x 300-meter sprints at 90 percent from a rolling start

Cool down
1-mile easy jog
Stretching
Thursday

Warm-up
10 minutes easy hand cranking or pushing
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy hand cranking or pushing
Stretching

Friday

Warm-up (Track)
1-mile easy jog
Stretching

Workout
2 x 20-meter standing starts with starting commands and full recovery
2 x 100-meter corners at 90 percent with full recovery
2 x 150-meter rolling sprint at 90 percent with full recovery
1 x 110-meter rolling tailwind top-end sprint with full recovery

Cool down
1-mile easy jog
Stretching

Saturday

Competition or:

Warm-up (Track)
1-mile easy jog
Stretching

Workout
1 x 20-meter standing starts with commands and full recovery
1 x 100-meter corners at 90 percent with full recovery
1 x 150-meter rolling sprint at 90 percent with full recovery
1 x 110-meter tailwind top-end sprint with full recovery

Cool down
1-mile easy jog
Stretching

Sunday
Off
Wheelchair Endurance

General Preparatory

Monday

Warm-up
10 minutes easy hand cranking or pushing
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy hand cranking or pushing
Stretching

Tuesday

Warm-up (Road)
1-mile easy jog
Stretching

Workout
4-6 x 30-second tailwind all-out sprints with full recovery
4-6 x 30-second headwind all-out sprints with full recovery

Cool down
1-mile easy jog
Stretching

Wednesday

Warm-up
10 minutes easy hand cranking or pushing
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy hand cranking or pushing
Stretching

Thursday

Warm-up (Road)
1-mile easy jog
Stretching

Workout
4-6 x 45-second sprints up a gradual hill with 60 to 90 seconds recovery 30 minutes of continuous pushing
**Cool down**
1-mile easy jog
Stretching

**Friday**

**Warm-up**
10 minutes easy hand cranking or pushing
Stretching

**Workout**
Strength training (see strength training workouts above)

**Cool down**
10 minutes easy hand cranking or pushing
Stretching

**Saturday Warm-up (Track)**
1-mile easy jog
Stretching

**Workout**
2 x 150-meter rolling sprints at 90 percent with full recovery 4-6 x 400-meter rolling sprints with a 1:3 ratio for recovery

**Cool down**
1-mile easy jog
Stretching

**Sunday**
Off

**Wheelchair Endurance**

**Specific Preparatory**

**Monday**

**Warm-up (Road)**
1-mile easy jog
Stretching

**Workout**
4 x 200-meter all-out climbs with 2 to 4 minutes recovery
4 x 400-meter tailwind all-out sprints with 5 minutes recovery

**Cool down**
1-mile easy jog
Stretching
Tuesday

Warm-up
10 minutes easy hand cranking or pushing
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy hand cranking or pushing
Stretching

Wednesday

Warm-up (Track)
1-mile easy jog
Stretching

Workout
4 x 150-meter rolling top-end sprints at 90 percent with full recovery
4 x 300-meter rolling all-out sprints with a full recovery

Cool down
1-mile easy jog
Stretching

Thursday

Warm-up
10 minutes easy hand cranking or pushing
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy hand cranking or pushing
Stretching

Friday

Warm-up (Road)
1-mile easy jog
Stretching

Workout
45 minutes continuous pushing

Cool down
1-mile easy jog
Stretching
Saturday

Warm-up (Track)
1-mile easy jog
Stretching

Workout
8 x 100-meter sprints with 30 seconds recovery
3 x 120-meter sprints from a standing start with 3 minutes recovery
2 x 600 meters from a rolling start with 4 minutes recovery

Cool down
1-mile easy jog
Stretching

Sunday
Off

Wheelchair Endurance

Competitive

Monday

Warm-up (Track)
1-mile easy jog
Stretching

Workout
3 x 50-meter standing starts with starting commands and with full recovery
3 x 50-meter tow drill with a full recovery
2-4 x 100-meters top-end sprints with 2 minutes recovery

Cool down
1-mile easy jog
Stretching

Tuesday

Warm-up (Track)
1-mile easy jog
Stretching

Workout
6 x rolling sprints of 200, 180, 150, 130, 120 and 100 meters with recovery equaling the time it takes to return to the last starting spot
2 x 115-meter rolling top-end sprints with a full recovery

Cool down
1-mile easy jog
Stretching
Wednesday

**Warm-up (Road)**
1-mile easy jog
Stretching

**Workout**
40 to 50 minutes continuous push

**Cool down**
1-mile easy jog
Stretching

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Thursday

**Warm-up (Track)**
1-mile easy jog
Stretching

**Workout**
6 x rolling sprints of 200, 180, 150, 130, 120 and 100 meters with recovery equaling the time it takes to return to the last starting spot
4 x 300 meters with 3 minutes recovery

**Cool down**
1-mile easy jog
Stretching

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Friday

**Warm-up (Track)**
1-mile easy jog
Stretching

**Workout**
2 x 20-meter standing starts with starting commands and with full recovery
2 x 100-meters 90 percent sprints from a standing start with full recovery
2 x 150-meter rolling sprints at 90 percent with full recovery
1 x 110-meter rolling top-end sprint

**Cool down**
1-mile easy jog
Stretching

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Saturday

**Warm-up (Track)**
1-mile easy jog
Stretching

**Workout**
1 x 20-meter standing starts with starting commands and with full recovery
1 x 100-meter standing start with starting commands and with full recovery
1 x 150-meter rolling sprint at 90 percent
1-2 x 110-meter tailwind top-end sprints with full recovery
Sunday
Off

Ambulatory Field

General Preparatory

Monday

Warm-up
10 minutes easy jog or stationary cycle
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy jog or stationary cycle
Stretching

Tuesday

Warm-up
1-mile easy jog
Stretching

Workout
20 throws with weighted shots (shot put), stretch reflex throws (javelin), or 20 rotations barbell twists (discus)
3 x 30 meters high knees with 2 minutes recovery
3 x 30 meters bounding with 2 minutes recovery

Cool down
1-mile easy jog
Stretching

Wednesday

Warm-up
10 minutes easy jog or stationary cycle
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy jog or stationary cycle
Stretching
Thursday

**Warm-up**
1-mile easy jog
Stretching

**Workout**
Box Jumps: 20 x rebound jump with full recovery; 20 x triple jump with full recovery
3 x 30 meters high knees
15 minutes of throws with football, softball, or baseball

**Cool down**
1-mile easy jog
Stretching

Friday

**Warm-up**
10 minutes easy jog or stationary cycle
Stretching

**Workout**
Strength training (see strength training workouts above)

**Cool down**
10 minutes easy jog or stationary cycle
Stretching

Saturday
Off

Sunday
Off

Ambulatory Field

Specific Preparatory

Monday

Warm-up
10 minutes easy jog or stationary cycle
Stretching

**Workout**
Strength training (see strength training workouts above)

**Cool down**
10 minutes easy jog or stationary cycle
Stretching
Tuesday

Warm-up
1-mile easy jog
Stretching

Workout
20 to 30 throws with competition implement
4 x 8-10 meters sprints (shot put and discus)
4 x 80-100 meters sprints (javelin) with full recovery

Cool down
1-mile easy jog
Stretching

Wednesday

Warm-up
10 minutes easy jog or stationary cycle
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy jog or stationary cycle
Stretching

Thursday

Warm-up
1-mile easy jog
Stretching

Workout
20 throws with competition implement Box Jumps: 20 x rebound jump with full recovery;
20 x triple jump with full recovery

Cool down
1-mile easy jog
Stretching

Friday

Warm-up
10 minutes easy jog or stationary cycle
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy jog or stationary cycle
Stretching
Saturday

**Warm-up**
1-mile easy jog
Stretching

**Workout**
30 throws with underweight implement
4 x 8-10 meters sprints (shot put and discus)
4 x 80-100 meters sprints (javelin) with full recovery

**Cool down**
1-mile easy jog
Stretching

**Sunday**
Off

**Ambulatory Field**

**Competitive**

**Monday**

**Warm-up**
1-mile easy jog
Stretching

**Workout**
20 throws with competition implement
5 x 8-10 meters jump squat sprints with full recovery

**Cool down**
1-mile easy jog
Stretching

**Tuesday**

**Warm-up**
10 minutes easy jog or stationary cycle
Stretching

**Workout**
Strength training (see strength training workouts above)

**Cool down**
10 minutes easy jog or stationary cycle
Stretching

**Wednesday**

**Warm-up**
1-mile easy jog
Stretching
**Workout**
20 throws with competition implement
2 x 8-10 meters sprints (shot put and discus)
2 x 80-100 meters sprints (javelin) with full recovery
Box Jumps: 8-10 x rebound jump with full recovery
8-10 x triple jump with full recovery

**Cool down**
1-mile easy jog
Stretching

**Thursday**

**Warm-up**
10 minutes easy jog or stationary cycle
Stretching

**Workout**
Strength training (see strength training workouts above)

**Cool down**
10 minutes easy jog or stationary cycle
Stretching

**Friday**

**Warm-up**
1-mile easy jog
Stretching

**Workout**
20 throws with competition implement

**Cool down**
1-mile easy jog
Stretching

**Saturday**
Competition

**Sunday**
Off

**Wheelchair Field**

**General Preparatory**

**Monday**

**Warm-up**
10 minutes easy hand cranking or pushing
Stretching

**Workout**
Strength training (see strength training workouts above)
Cool down
10 minutes easy hand cranking or pushing
Stretching

Tuesday

Warm-up
1-mile easy jog
Stretching

Workout
5-10 throws with competition implement 5-10 throws with weighted shots (shot put), stretch reflex throws (javelin), or 10 rotations barbell twists (discus)

Cool down
1-mile easy jog
Stretching

Wednesday

Warm-up
10 minutes easy hand cranking or pushing
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy hand cranking or pushing
Stretching

Thursday

Warm-up
1-mile easy jog
Stretching

Workout
20 minutes of throws with football, softball, or baseball
4 x 20 meters standing start sprints in the grass with 2 minutes recovery
4 x uphill grass climbs – 8 strokes from a standing start with 2 minutes recovery

Cool down
1-mile easy jog
Stretching

Friday

Warm-up
10 minutes easy hand cranking or pushing
Stretching

Workout
Strength training (see strength training workouts above)
Cool down
10 minutes easy hand cranking or pushing
Stretching

Saturday
Off

Sunday
Off

Ambulatory Field

Specific Preparatory

Monday

Warm-up
10 minutes easy hand cranking or pushing
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy hand cranking or pushing
Stretching

Tuesday

Warm-up
1-mile easy jog
Stretching

Workout
20 to 30 throws with competition implement
4 x 8-10 meters sprints with 2 minutes recovery

Cool down
1-mile easy jog
Stretching

Wednesday

Warm-up
10 minutes easy hand cranking or pushing
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy hand cranking or pushing
Stretching
Thursday

**Warm-up**
1-mile easy jog
Stretching

**Workout**
20 throws with competition implement
4 x 10 meters of cone drill with 3-5 minutes recovery

**Cool down**
1-mile easy jog
Stretching

Friday

**Warm-up**
10 minutes easy hand cranking or pushing
Stretching

**Workout**
Strength training (see strength training workouts above)

**Cool down**
10 minutes easy hand cranking or pushing
Stretching

Saturday

**Warm-up**
1-mile easy jog
Stretching

**Workout**
30 throws with underweight implement
4 x 20 meters standing start sprints in the grass with 2 minutes recovery

**Cool down**
1-mile easy jog
Stretching

Sunday
Off

Ambulatory Field

Competitive

Monday

**Warm-up**
1-mile easy jog
Stretching
Workout
20 throws with competition implement
3 x 8-10 meters sprints with full recovery

Cool down
1-mile easy jog
Stretching

Tuesday

Warm-up
10 minutes easy hand cranking or pushing
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy hand cranking or pushing
Stretching

Wednesday

Warm-up
1-mile easy jog
Stretching

Workout
20 throws with competition implement
4 x 10 meters of cone drill with 3-5 minutes recovery

Cool down
1-mile easy jog
Stretching

Thursday

Warm-up
10 minutes easy hand cranking or pushing
Stretching

Workout
Strength training (see strength training workouts above)

Cool down
10 minutes easy hand cranking or pushing
Stretching

Friday

Warm-up
1-mile easy jog
Stretching
**Workout**  
20 throws with competition implement

**Cool down**  
1-mile easy jog  
Stretching

**Saturday**  
Competition

**Sunday**  
Off

**CROSS TRAINING ACTIVITIES**

Cross training is used to give athletes a mental and physical break from sport-specific activities. Examples of cross-training activities are basketball, tennis, football, hiking, swimming, and cycling. These are just a few, and the coach can be creative in finding acceptable activities. It can be anything that allows athletes the chance to recover from more intense workouts while simultaneously ensuring that their fitness levels don’t drop. Cross training is used extensively in the transition period and decreases as the season progresses. Once the athletes are near the peak competition period, cross training stops and all training is sport-specific.
References


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