

Interval Aerobic Training

What is Interval Training?

Repeated efforts of high intensity with varying amounts of rest.

What are the variables in Aerobic Interval Training?

- The number of repetitions performed
- The distance to cover in each repetition
- The assigned work interval time
- The relief interval
- The relief : work ratio
- The total workout distance
- Workout frequency

Interval Training and Soccer

A soccer game lasts 90 minutes (with up to 30 minutes overtime), during which the average soccer player will cover 2000-9000 yards. The long duration of the game and the long distances covered require aerobic endurance. However the average distance covered in a continuous run is only 5 to 30 yards (usually 10). Typically the work to rest ratio between sprinting and walking in soccer is 1:3.2. The ability to perform repeated fast sprints over time requires a trait known as anaerobic capacity or high intensity anaerobic endurance. Anaerobic capacity is simply the ability to perform very high workloads repeatedly. Interval training is the most effective way of developing aerobic endurance and anaerobic capacity as required in soccer.

What are the benefits of Interval Training for soccer?

- Enables the athlete to improve the work load by interspersing heavy bouts of fast running with recovery periods of slower jogging or walking
- Increase workout duration
- Helps prevent injuries often associated with repetitive endurance exercise
- Helps to increase training intensity without overtraining or burn-out
- Leads to the adaptation response:
 - the body begins to build new capillaries, and is therefore better able to take in and deliver oxygen to the working muscles
 - muscles develop a higher tolerance to the build-up of lactate
 - the heart muscle is strengthened
- Helps improve the performance of the cardiovascular system

Interval Aerobic Training Program

The following is a 20-week Aerobic Interval Training Program that was designed by Lyle Sanderson, University of Saskatchewan Track and Field Head Coach, and Head Coach of the Saskatchewan National Training Center for Track and Field.

Aerobic Interval Training Program

Phase I		
Week	Short Sets: (30/30)	Long Sets: Run for 2 min walk for 45 sec
1	2 sets × 5 reps	3 sets × 2 reps
2	2 sets × 6 reps	1 set × 3reps; 2 sets × 2 reps
3	2 sets × 5 reps; 1 set × 4 reps	2 sets × 3 reps; 1 set × 2 reps
4	1 set × 6 reps; 2 sets × 5 reps	3 sets × 3 reps
5	3 sets × 6 reps	2 sets × 3 reps; 2 sets × 2 reps
Phase II		
Week	Short Sets: (30/30)	Long Sets: run for specified time walk for 45 seconds
1	2 sets × 6 reps	set 1 (1 rep × 2½ min); set 2 (2 reps × 2 min); set 3 (3 reps × 1 ½ min); set 4 (4 reps × 1 min)
2	2 sets × 6 reps	set 1 (3 reps × 2 min); set 2 (3 reps × 1 ½ min); set 3 (3 reps × 1 ½ min)
3	2 sets × 6 reps	set 1 (2 reps × 2 min); set 2 (3 reps × 1 ½ min); set 3 (2 reps × 2 min); set 4 (3 reps × 1 ½ min)
4	2 sets × 6 reps	set 1 (4 reps × 1 ½ min); set 2 (4 reps × 1 min); set 3 (4 reps × 1 min)
5	2 sets × 6 reps	set 1 (1 rep × 2½ min); set 2 (2 reps × 2 min); set 3 (3 reps × 1 ½ min); set 4 (4 reps × 1 min)
Phase III		
Week	Short sets	Long Sets: run for specified time walk for 45 seconds
1	2 sets × 6 reps (30/30)	set 1 (1 rep × 2 min); set 2 (5 reps × 1 min); set 3 (5 reps × 1 min); set 4 (1 reps × 2 min)
2	2 sets × 4 reps (45/45)	set 1 (4 reps × 1 min); set 2 (3 reps × 2 min); set 3 (4 reps × 1 min)
3	2 sets × 6 reps (30/30)	set 1 (1 rep × 2 min); set 2 (4 reps × 1 min); set 3 (4 reps × 1 min); set 4 (2 reps × 2 min)
4	2 sets × 4 reps (45/45)	set 1 (3 reps × 1 ½ min); set 2 (2 reps × 2 ½ min); set 3 (3 reps × 1 ½ min)
5	2 sets × 6 reps (30/30)	set 1 (1 rep × 2 ½ min); set 2 (6 reps × 45 sec); set 3 (6 reps × 45 sec); set 4 (1 reps × 2 ½ min)
Phase IV		
Week	Short sets	Long sets: Begin each run 25 (20) sec after starting the previous run. The 25 (20) sec include the time for the previous run
1	2 sets × 6 reps (30/30)	2 sets × 10 reps × 50 m on the 25 seconds
2	2 sets × 4 reps (45/45)	2 sets × 12 reps × 50 m on the 25 seconds
3	2 sets × 6 reps (30/30)	2 sets × 14 reps × 50 m on the 25 seconds
4	2 sets × 4 reps (45/45)	2 sets × 12 reps × 50 m on the 20 seconds
5	2 sets × 6 reps (30/30)	2 sets × 12 reps × 50 m on the 20 seconds

Short Set (30/30): Run for 30 seconds walk for 30 seconds

Recovery Heart Rate: 150-170 beats per minute (bpm) in the first 15 seconds of recovery. Set break Heart Rate: 120bpm