



Runner  
Training Manual



Welcome to Canada Get Fit – we're so glad you could join us! Enclosed you will find your program for the 2014 Season. We have put together both an advanced and standard program. Designed to address the needs of you as a runner.

Highlights of the program include:

- Tuesday and Thursday evening quality runs
  - 6:15 pm early start
  - 7:00 pm start
  - St. Ignatius of Loyola High School
- Strength training option
- Yoga options
- Pub nights, draw prizes, challenges

### **Saturday Morning Meeting Location**

Most Saturday runs are scheduled to start at 7:30 am. Our location will alternate between Wellspring 2545 6th line and Coronation Park. Long weekends and benchmark runs will be located in new locations. Locations will be announced on Saturday mornings and in weekly emails.

### **Saturday Morning Routes**

Our routes will be mapped using MapMyRun and a link sent to you via email by Thursday evening before the Saturday long run. If you have a smart phone, MapMyRun has an App that you can download. Once you receive the route link you can use your smart phone to view the route and track your location along the route all while you run on Saturday morning.

### **Tuesday and Thursday Evening Runs**

These are group leader led runs starting at 6:15 pm and typically are 45 – 60 minutes long. Most weekday runs will start from St. Ignatius of Loyola High School 1550 Nottinghill Gate in Oakville; however, meeting locations may vary to introduce new routes and terrain.

### **Monday and Wednesday Evening Cross Fit**

Canada Get Fit has secured two weekday private sessions at Primal Athletics for our members only at significant cost savings. Classes start at 7:15 pm, are 45 minutes in length and designed for runners. Space is limited.

Looking forward to a great season of running,

Shirley Speakman  
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Director, Canada Get Fit

# Hey Runners!

When we started Canada Get Fit, there was a real need in the running community to teach people that the seemingly insurmountable challenge of running a half or full marathon was actually within the reach of virtually anyone. Our program simply shows people, no matter their level of fitness, how to train safely and effectively. Our methods now are tested, refined, and rock solid, and our goals are crystal clear: safety, fun, and achievement. And above all, we strive to create an environment where authentic human connections flourish.

Most of our members start small. Steadily and carefully, we work with them to build their mileage, fitness, and confidence until their target marathon/half marathon takes place. Members follow the training schedules independently during the week, and on the weekends, we get together for group long runs.

Over the years, we've learned what matters to our members: Fitness. Wellbeing. Friendships. The program supports all of that. But people also want a goal so they can dig deeply and challenge themselves. By training with Canada Get Fit, members create lasting bonds with each other, not to mention a new strength of character and connection with themselves that can never be taken away. In short, we like to think that we help people change their lives from the inside out.

Below we have summarized some of the wisdom we have accumulated over the years and provided web links to some up to date sources. You will of course have to review the electronic version of this runners' manual on the website to take advantage of the links.

# Hydration and Hot Weather Exercise

- Even though thirst is not apparent, the body is exuding more fluids than we think, especially in hot and humid weather.
- Dehydration, or inadequate fluid intake, can lead to diminished performance and premature exhaustion.
- The most serious effect of dehydration is impaired heat dissipation, which can elevate body core temperature to dangerously high levels.
- Hyponatremia (low blood sodium) can result from drinking too much water during prolonged exercise, though it is less common than dehydration.
- Hydration using water is important before, during and after runs longer than 30 minutes.
- For activities lasting longer than 50 minutes, beverages containing carbohydrates and electrolytes are recommended in addition to water.

## Resources

[The effects of exercising in hot and humid conditions](#)

[The adverse effects of dehydration](#)

[The symptoms and prevention of hyponatremia](#)

[The causes, symptoms and treatment of heat illnesses](#)

[Hydrating before, during and after a run](#)

[Hydrating with sports drinks](#)

[The effects of caffeine and alcohol on hydration](#)

[Tips for staying safe and healthy while running in hot weather](#)

# Training Techniques

- Endurance is defined as the ability to keep moving for long periods of time, preferably in a rhythmic and steady state.
- Regular aerobic exercise (performed during such activities as biking, jogging, and swimming) enhances cardiorespiratory endurance by improving the body's ability to take in and utilize oxygen.
- Aerobic activity must be performed from 3 to 5 days a week to build and maintain cardiorespiratory endurance.
- Aerobic threshold is the maximum level at which you're still working in your aerobic zone.
- To build cardiorespiratory endurance and aerobic threshold, Canada Get Fit's program includes weekly long runs which contain significant "chunks" carried out at goal race pace.
- Negative-split: to execute the first half of the event at a slower pace than the second half of the event.
- Athletes employ a negative split strategy with the aim to finish the entire event stronger and faster than it began.

## Resources

[Aerobic training and cardiorespiratory endurance](#)

[Aerobic threshold](#)

[Anaerobic training](#)

[Goal pace marathon long runs](#)

[How to measure improvements in cardiorespiratory endurance](#)

[Negative split strategies](#)

# Flexibility

- Flexibility is the fundamental capacity of a joint to move through a normal range of motion.
- Flexibility allows the body's skeletal connection to move through a full range of motion, which is in direct correlation to the elasticity and extensibility of the muscle and its connective tissues.
- A greater range in elasticity and extensibility equals a better performance.
- Flexibility is attained through the two general stretching techniques: static stretching and dynamic (ballistic) stretching.
- For runners, the biggest areas of concern for flexibility are the hamstring connections in the back of the leg and the lower back.
- The most important factor in lower back flexibility is the strength of the opposing abdominal (core) muscles.
- 30 minutes of static stretching performed twice per week will improve flexibility within five weeks.
- It is most important to stretch after each run while muscles are warmed up and relaxed.

## Resources

[Stretching for flexibility](#)

[Static vs. dynamic stretching](#)

[Dynamic stretching](#)

[Calf stretches](#)

[Hamstring stretches](#)

[Back stretches](#)

[Yoga for runners](#)

# Running Form

- Head should be looking ahead naturally, not down at the ground, and scanning the horizon.
- Keep your shoulders level, low and loose. They shouldn't be high and tight or dipping from side to side.
- Swing arms mostly forward and back, not across the body, between waist and lower-chest level. Keep hands in an unclenched fist, with fingers lightly touching your palms.
- To achieve the correct torso position, stretch up to full height with your back comfortably straight. The upright position promotes optimal lung capacity and stride length.
- Feet should land directly underneath the body. As each foot strikes the ground, your knee should be slightly flexed so that it can bend naturally on impact.

Resources

[Proper running form](#)

[Components of good running technique](#)



# Injury Prevention and Treatment

- The most important part of preventing injuries is common sense or gut instinct.
- Injuries often occur from over-training or training for the wrong reasons.
- It is very important to consult a professional at a running specific store on the apparel and shoes that meets their individual needs.
- Injuries should be addressed immediately. Early treatment and rehabilitation means a quicker and more thorough recovery.

Important factors in injury prevention:

- Proper nutrition and hydration before, during and after exercise.
- A regular stretching program performed while muscles are warm.
- Cross training and strength building activities that complement and balance the effects of endurance running.
- The regular use of foam rollers and sports massage.

Resources

[Preventing over rehabilitating injuries](#)

[Managing running related injuries](#)

[Safety considerations for hydration](#)

[Safety considerations for stretching](#)

[Safety considerations for proper form and training techniques](#)

[When runners should seek professional help](#)

[Alternative training during rehabilitation](#)

[Massage and foam roller for recovery and rehabilitation](#)

# Diet and Nutrition

- Endurance runners have unique nutritional requirements that directly affect performance and recovery.
- Nutritional needs of an athlete can be determined by training load (intensity x frequency x duration of workouts) and body mass.
- There is a significant relationship between muscle glycogen content and endurance capacity.
- Timing is critical to restore muscle glycogen and the best way to replenish stores is to eat or drink carbohydrates immediately after exercise.
- Long run and race nutrition is typically a combination of water, sports drinks and sports bars or gels.
- Antioxidants act as a preventative treatment and therapy for tissues left damaged and inflamed by hard exercise.

## Resources

[Diet and nutrition for runners](#)

[Macronutrients](#)

[Vitamins and Minerals](#)

[Eating before exercise](#)

[When and how to consume food and fluids while training](#)

[Post-run 30 minute window](#)

[Post-run nutrition](#)

[Energy gels, chews and bars for long runs and marathons](#)

[Advantages and risks of using ergogenic aids](#)

# Speed Training

- Speed training is most specifically used to increase a runner's performance.
- Speed training should not be undertaken by inexperienced or injured runners.
- Speed sessions can be performed once per week, on a day when there is plenty of rest time before and after.
- Each rep should leave you short of breath; if you're coughing or feeling sick you're overdoing it.
- Add variety to speed training by performing sessions in different environments, such as trail, track and hills.

## Resources

[Speed training for endurance running](#)

[Interval training technique](#)

[Fartlek training technique](#)

[Tempo training technique](#)

[Speed development](#)

[Track etiquette](#)

# Running Safety

- It is important to employ common sense and defensive behaviour when running on roads alongside vehicles.
- Do not run on unfamiliar roads without a GPS device or running partner.
- It's always a good idea to carry some change, at least enough for a bottle of water or a pay phone call.
- When running at night, always wear bright colours, reflective items or a light.
- Always carry ID with your full name and address. Ideally, it should include emergency contact details and additional medical information.
- Leave your ego behind! It's better to stop to ask for help when you need it than to run a record distance or time.

## Resources

[How to avoid getting hit by a car](#)

[Self defense for runners](#)

[Running in inclement weather](#)

[The importance of carrying ID while running](#)

# Cross Training

- Cross training is a major factor in preventing injuries.
- Cross-training can also be used to rehabilitate injuries, improve fitness, promote recovery, enhance motivation, and even stay fit through pregnancy.
- Cross training can be used to increase a runner's power, efficiency and endurance.
- Light cross training activities (active recovery) accelerate recovery beyond what happens during outright rest.
- The best cross training activities for endurance runners: swimming, bicycling, skating, cross-country skiing, and other endurance sports.

## Resources

[The benefit of cross training for runners](#)

[Incorporating cross training in a runner training program](#)

[The best cross training exercises for runners](#)

[Cross training during injury](#)

# Preparing for a Race

- A few minutes of mental training each day, in addition to your regular training, will prepare you for any running challenge, whether it's a race or tough workout.
- Nutritional adjustments need to be made up to one week before a week to increase muscle glycogen stores.
- In the lead up to a race, training is tapered down to a minimum to conserve energy.
- It is advised for runners to consume a minimum of 10-16 cups of water each day in the week before a race.
- Alcohol should be avoided up to two days before a race.
- Whether your race is local or away, create a race day checklist and prepare all of your necessary items the night before.
- Have your post-race strategy planned out ahead of time, from meals to celebrations.

## Resources

[Mental preparation for running and racing](#)

[Race nutrition countdown](#)

[Items needed on a pre-race checklist](#)

[Procedures involved before a race](#)

[Race day strategy](#)

[Post-race strategy](#)

# Physiology of Running

- Running is a primarily a cardiovascular performance.
- The total performance takes place in three stages: warm-up, core and cool-down.
- During warm-up the body seeks its physiological balance: respiration, heart rate, body temperature and metabolic rate all increase.
- During the core portion, the systems continue to equalize physiological components until they reach a highly efficient “steady state”.
- It takes at least five minutes for the body to return to a homeostatic state in the cool-down stage.
- The cool-down stage is when the necessity for adjustments in performance, nutrition, hydration are expressed.
- The physiological elements of running are in constant change and adjust with the duration and intensity of the training.

## Resources

Possible physiological effects to a runner's:

[Body](#)

[Sleep patterns](#)

[Nutrition and eating behaviours](#)

[Emotions and stress](#)

# Running in Cold Weather

- The trick to dressing for cold weather running is to dress in layers: A base layer, a shell and, in extremely cold weather, a thermal layer.
- Perspiration moves more easily through two thin layers than one thick layer.
- Breathable fabrics wick perspiration away from your skin and pass it on to the next layer.
- 50% of heat is lost through the head, so it's important to keep the head covered when temperatures drop to below freezing.
- Base layers are typically lightweight, moisture wicking items, like t-shirts and legging pants.
- A thermal layer is a medium weight item, like a fleece top or vest.
- A shell is a water and wind resistant item, such as a jacket or vest.
- Essential extra items may include gloves, a headband or hat or a neck warmer.
- More runners overdress than underdress. A quick rule: you should feel chilly during the first couple kilometres.

## Resources

[Effects of cold weather on running](#)

[Tips for cold weather running](#)

[Risks of running on icy and snowy surfaces](#)

[Staying healthy during cold weather training](#)



# Strength Training

- Runners can benefit greatly from a properly designed strength-training program.
- For runners, the primary benefits of strength training are: injury prevention, increased power, increase speed, increased stride length and running economy.
- Strength training provides a defense against overuse injuries in muscles, ligaments, tendons and joints.
- To increase the power of your stride, you must increase both general strength (size of your muscle fibres) and explosive strength (ability for muscles to generate a higher level of strength).
- In order to maximize your running speed, you must maximize both stride length and stride rate.
- One of the most reliable predictors of running performance is the velocity at which you can run at your VO<sub>2</sub> max level, or the maximum amount of oxygen that your body can process.
- Running economy is improved by maximizing stride length, maintaining stride rate, improving running form and running smoothly and effortlessly, all of which is made possible through strength training.

## Resources

[Muscular strength and endurance](#)

[Strength training for runners](#)

[Strength training do's and don't's](#)

[Balancing running and strength training](#)

# Heart Rate Monitor Training

- The key to effective aerobic training is to work out consistently within your individual training zone.
- Monitoring and adjusting exercise intensity is essential to the safety and efficiency of a runner.
- An athlete that trains at an intensity that is too low may show little improvement in cardiorespiratory fitness.
- An athlete who trains at an intensity that is too high may become injured, overly fatigued or decide that the exercise is too unpleasant to continue.
- Heart rate increases proportionately with the increase in workload and is a direct indicator of the stress placed on the cardiovascular system.
- Heart rates can easily be monitored by periodically taking the pulse during an exercise session and then adjusting the exercise intensity to the target heart rate.
- Electronic monitors are much more accurate and trustworthy than taking a pulse manually.

## Resources

[Introduction to heart rate training](#)

[How to use a heart rate monitor](#)

[How to choose a heart rate monitor](#)

# Secrets of Endurance Running

## Pre-race:

- Focus on a single goal. If it's a time target, focus on the importance of controlled pacing. If you just want to prove that you can finish an endurance race, you can be more relaxed.
- Hold back, even if your body wants to speed off, or you'll be paying for it in the second half of the race.
- Eat a familiar breakfast that you know works for you. Avoid fat or complex carbohydrates, as they take more time and energy to digest.
- Check that you've got your race number, post-race bag, your start-pen clothes, your emergency phone money and your energy food for the race.

## During the race:

- Stick to the hydration and eating formula you've used on your training long runs. Don't test out any new products or techniques
- Soak up all the support from the crowds. Most of them are strangers but they're still proud of you.

## Post-race:

- Eat some easily digestible carbohydrate, or have an energy drink if you can't face solids. Your body will kick-start its recovery if you can start re-fuelling in the first 30-60 minutes.
- Elevate your legs for at least an hour to flush the damage from the tissues.
- Never skimp on the celebrations. Whether this is your first or your fifty-first race, you did it!

## Resources

[Tapering before a race](#)

[Pre-race taper strategy](#)

[Race strategy from start to finish](#)

[Mid-race eating tips](#)

# Post-Race Rest and Recovery

- Recovery starts at the finish line of the race and can include a combination of nutrition, rest and active recovery activities.
- Post-race nutrition should start within the 30 minutes following the race to effectively start the recovery process.
- Self-administered massage, using hands or foam rollers, is an effective way to promote post-race muscle repair and relaxation.

## Resources

[Post race nutrition](#)

[Post-race Stretching](#)

[Self massage for runners](#)

[How can I recover better from my race](#)

# Glossary of Terms and Concepts

In our **Canada get Fit** training program there are a variety of workout specifications and terms that may require clarity. Below is a glossary of those terms. Once you have reviewed the program please let us know if you will need any further specifications.

## **RUN DRILLS**

After 10-20 min of easy jog warm up, all participants should take 5-8 minutes of run drills to improve body efficiency and ensure the body is full warmed up. Coaches can go over these drills with you.

1. A's (2-3 x 30m)
2. B's (2-3 x 30m)
3. C's (2-3 x 30m)
4. Cross overs (2 x 30m each direction)
5. Big Arm Swings (2-3 x 30m)
6. 2-3 x 30m up on toes and back on heels

## **RUN INTERVALS**

Intervals are short runs @ race pace (or slightly faster) with a small amount of recovery in between each interval. Intervals should only occur after the body has been warmed up properly (warm up jog + drills). To make the workout tougher, you increase the total stress load. This can be done by

1. Increasing the total number of intervals
2. Increasing the length of the intervals
3. Reducing the recovery between intervals
4. Any combination of 1-3.

Note: It is important that your goal is to cover the same distance on each interval (do not go so hard in the first 1-2 intervals that you cannot cover the same distance in your later intervals). The goal is consistency.

## **HILL REPEATS**

Hill repeats are a specific form of interval training. Once you are warmed up (10-15minutes + drills) you are then ready for hill repeats. Hills are the single best form of strength training you can utilize. Instead of finding the steepest hill you can find, look for a hill that takes 60-90 seconds to run up at a modest 3-5% grade (do not seek a hill that is too steep). At the beginning, novice people can power walk up and down the hill (to build strength). As fitness levels increase, jog up the hill easy and walk down. As the fitness level increases, runners should run up the hill faster and run down @ a modest pace (down hill running has a greater risk of causing injury).

## **CROSS TRAIN**

There are three types of Cross-Training Workouts.

- a) Endurance building cross training workouts are designed to simply increase total body fitness. Generally the longer you can go in these non-running cardio workouts (the better). Optimally cross-train workouts should be non-running to prevent overuse injuries. If an injury is beginning, these workouts will take the place of the actual run workout. Minimal time 30 minutes – maximal time 2hrs.
- b) Recovery cross-train workouts. These are lower intensity workouts that are designed to help you recover between run focused workouts. Minimal time 30 minutes maximal 75-90minutes.
- c) Run + extra cardio. In these workouts you first RUN the allotted distance, and then you add 15-60 minutes of modest intensity (non-running) cardio immediately after the run (to keep your metabolism going). Optimally this is mt / road biking but could be water running, or any other cardio sport.

## **CROSS TRAIN OPTIONS TO CHOOSE FROM**

1. Rowing
2. Cycling / spinning / wind training
3. Elliptical Machine
4. Swimming or water running
5. Kayaking or paddling
6. Muscle classes (body pump)

## 7. Aerobic or yoga classes

### **STRENGTH**

A well rounded strength program for endurance athletes should fit the following guidelines:

- Focus on injury prevention as the number one priority
- Balance muscles
- Intensity should be 15-20 repetitions per set with 1-2 sets
- Ideally 2-3 workouts per week (then tapering before big races).
- Never 2 days in a row and NEVER BEFORE RUNNING
- Ensuring you have a break-in-period at the beginning (3-4 workouts).

### **GENERIC STRENGTH PROGRAM**

Any athlete who has a specific injury and has been given exercises by their medical team should prioritize those exercises first (or add them into this non-exhaustive list). Because many people will have limited time for strength training, this program should be done in 30-40 minutes 2-3x per week (for time sake). Optimally this would be done with a short cardio warm-up (non-run) and if there is time left after the weight workout, add in extra cardio (even different cardio after the weight resistance training is completed).

A break in period of roughly 2 weeks should occur with modest weight, 10-12 reps and 1-2 sets of exercises. Once the initial pain has subsided, then 15-20 reps x 2 (in some cases 3 sets). Minimal required is 2x per week and optimally 3x per week (if time is available).

- Hamstring curls 2-3 sets of 15-20 (single legged each)
- Knee extensions (1 or 2 sets of 10-12) single legged each
- Walking (15-20m) lunges with 2 sets starting with no hand weights & building up
- Adduction 2 sets of 15
- Abduction 2 sets of 15
- Bench press 2 sets of 15
- Seated rowing 2 sets of 15
- Step ups onto a bench (2 sets of 20) starting with no hand weights & building up

- 50-60 Abdominal exercises (can be done in sets of 5-15)
- 40-60 back exercises (can be done in sets of 10-15)

## **BASIC CORE PROGRAM**

Most runners cannot do enough core exercise. Any time 5-10 minutes can be added at the end of a run or other cardio workout, or simply at home watching TV, it should be encouraged. Pilates, Yoga, Boot camp are all examples. A great runner's core/DVD video has been created by Caron Shepley and can be purchased online at <http://www.bluedogyoga.com/>

## **INTENSITY**

While many coaches spend tremendous amount of time on specific heart rates (which has value) there are many things that can influence your heart rate. Dehydration, fatigue, bad posture, too many winter clothes. Summer heat/humidity, etc. While charts like the one provided below have some value in terms of understanding efforts, you should use a few common sense strategies.

- **ALL WARMUPS SHOULD BE VERY LIGHT (EASY):** If you are breathing too hard in warm up you are negatively impacting the rest of your workout. Keep it **VERY LIGHT**.
- Recovery between intervals (and hill repeats) should be at the same easy warm up pace/intensity (**VERY LIGHT & EASY**).
- When you start trying to go harder in intervals, you should only go as hard as you are able to accomplish all 4-8 intervals with the same finishing time (distance). In other words, if you are not able to do the last 1-2 intervals with the same time/distance (as the first intervals) then you have gone too hard at the beginning. It will take you a bit of time to learn your body's pace, but the **GOAL** is consistency. If you can't repeat the effort on interval (hill repeat) 5-8, then you're going above your race threshold in the early intervals. If in doubt, go harder later in the workout.
- Try to negative split when possible. Negative split runs are ones where you cover more distance (or are faster) in the 2nd half of the workout. IF you are running for 10km (your goal is to cover the 2nd 5km faster than the first



5km). If you can't, then you have gone too hard in the first part of the workout.

- In general, unless specifically requested, most of the long Saturday runs should be slower than your race pace goal. At the beginning, we are trying to build endurance. If you go too close to race pace, too early in the training regime, you are not likely to sustain it for the entire run (thus reducing your endurance capacity) and your chances of injury are greater.
- In the FEW limited races or simulation workouts, you must work somewhat hard to very hard (depending on fitness) & try to get your body used to effort /duration.

### **INTENSITY CHART (GENERAL SENSE OF EFFORT)**

<b>HR % of Max</b>	<b>RPE Borg</b>	<b>Zones</b>	<b>General</b>
≤ 65%	6 – 9 VERY LIGHT	Zone 1	Recovery
70%	11 Fairly Light	Zone 2	Low
80%	13 -14 Somewhat Hard	Zone 3	Medium
90%	15 -17 Hard to very hard	Zone 4	Hard
91% ≥	18 -19 Very Very Hard	Zone 5	VERY HARD

### **RECOVERY WEEKS**

This week will see the general volume of running decreased most notably the long run. The goal is to allow your body to adapt to the workouts completed in the 2-3 weeks prior. Remember we DO NOT get any more fit from just working out; it is the combination of workouts and recovery that increase our work capacity. Recovery week is the time to enhance your training by recovering.

### **TIME TRIALS (30-50MIN)**

This is a simulated effort. The distances are shorter than race day but should be at faster efforts than generally have occurred in longer runs.

## **NON-RUNNING DAYS**

As a running program, obviously the focus is running. Because we know that too much running generally leads to overuse – soft tissue injury, we are suggesting the addition of extra fitness on the non run days. Nobody should run more than 4 days per week (advanced runners 4 days per week). Most people should run 3 days a week and add 2-3 non-running cardio extra workouts in. Athletes who consistently run (and recover) from their 3-4 running days, and add in 1-3 extra non-running workouts, are assured to achieve some PBs.

## **GET OUT OF JAIL FREE CARD**

Because all athletes will have a few days in a training program when they are over-tired or sick, we encourage people to have a GET OUT OF JAIL (WORKOUT) card that they can use without any guilt. Novice athletes get one pass ever 2 weeks. Intermediate athletes get one pass ever 3 weeks. Advanced athletes get one pass every month. Athletes get to completely skip the workout without any guilt. The ONLY workout that should not be allowed to be completely skipped (are the longer endurance weekend runs). If the athlete is not ready to participate in that workout, then it should be completed at another time in the next 4-7 days. All other workouts can be completely missed without any guilt or need to go back and make it up.

## **MONITOR AND KEEP TRACK OF YOUR OWN DATA**

All participants should keep a daily/week/monthly diary of their work and progression. This can include body weight, hours of sleep, 1-10 feeling of accomplishment from that workout, total minutes or kilometers accomplished in the week/month and PBs for specific intervals or distances. As well, the athlete should record when they last had a massage, chiropractic appointment or physiotherapy and when they replaced their running shoes.