Toronto Triathlon Club Ironman Training Program 2007/04

By Head Coach Nigel Gray

WHO IS THIS FOR?

This program is designed for a novice Ironman athlete who has done some shorter triathlons or has individual sport background and is looking to tackle a longer challenge. In order to be ready to start this program you should be able to comfortably complete the first week of training. If training levels in the first week of the program are not realistic for you at this point, we suggest you start with the shorter programs (Half Ironman or Olympic distance for example) and progress to the Ironman distance when you get comfortable with those distances in all 3 sports. Athletes signed up to race an Ironman in '07 that feel they cannot comfortably complete the first week of this program should aim to start their training earlier in order to be comfortable with week 1 training volume once they are 16 weeks away from race day.

THE PROGRAM

The goal of this program is to build up your endurance so that you can complete an Ironman distance triathlon. The program will include a continuous swim, a technique endurance swim, an open water swim, a long ride, an endurance ride, a long run, an endurance run and a Brick (bike/run) workout.

EFFORT LEVEL

Below is a perceived exertion (PE) chart to be used as a guide to judge the appropriate intensities in your workouts. The heart rate (HR) zones are based on lactate test results, a more accurate way to measure the intensity of your training. For those interested in getting lactate testing done to determine precise heart rate training zones, please contact Nigel at nigel@nrgpt.com. The tests are performed at NRG Performance Training and a discounted cost of 100$+GST/test has been arranged for TTC members.

PERCEIVED EXERTION CHART

Percieved Exertion	HR ZONE	DESCRIPTION
EASY	Z1	Warm up and warm down, active recovery, very light effort, breathing is very light.
	Z2	Comfortable training pace for long days, base endurance, breathing again is very light.
STEADY	Z3	Effort can be maintained for an extended period of time but takes some focus. Close to Ironman race pace, extensive endurance zone, this is where you'll first notice a deeper breathing pattern.
MODERATELY HARD (Mod)	Z4	Tempo effort, takes greater focus to maintain the effort, breathing becomes deeper and more frequent and conversation starts to become difficult.
HARD	Z5	This is the level that you will start to accumulate lactate and will feel more fatigue in the arms or legs, this pace makes conversation very difficult and is mentally taxing, deep and frequent breathing pattern.
VERY HARD	Z6	This level is very taxing and conversation will not be possible, the effort level will feel extremely challenging with a significant burning sensation in the arms or legs from lactate accumulation.

For the beginner IM athlete the majority of your training should be spent at an **easy** to **steady** effort level, hills will naturally provide some intensity and these efforts should be keep to a **moderately hard** intensity and only for short portions of your training. This will help minimize the risk of injury and overtraining.

THE WORKOUTS

SWIMMING

A set of workouts for the entire program is included and detailed below.

WARM UP (WU) and WARM DOWN (WD)

For **all** swim workouts the **warm-up and warm down** are done while swimming at an **EASY pace (Z1-2)** and geared towards getting you ready for a bigger effort during the main set. This is also a good time to work on improving your technique. During the WU and WD you should rest as long as you need to feel ready to swim the next set comfortably. Be sure to work on proper technique during your drills.
The warm up for each swim will be as follows:

WU: 100m swim easy
6x50m 25drill/25swim
100m kick
WD: 100m drills/swim of choice

MAIN SET (MS)

You will be doing 3 types of swims in your program. A continuous swim (C), a technical endurance swim (TE) and a recovery(R) swim. The main sets of each workout will be based on a continuous effort (C & R) or repetitive intervals with a short rest after each (TE & R). The key to swimming intervals properly is to only swim as hard as you can maintain good technique. If you feel like you are fighting the water then you are swimming too hard and wasting energy, slow down and focus on proper form. During the **MS** of your technical endurance swim, the rest period between each set is noted in (seconds). For example, 2x50 (15) would mean swimming 50m, resting for 15 seconds and swimming another 50m again.

- Day 2 is the **continuous (C) swim**. The goal of this workout is to gradually build the distance you are able to swim continuously. The main sets of your workouts will be gradually longer each week and they are to be swum at an **easy(Z2) to steady(Z3)** effort level without stopping. So at the start of your main set the effort should feel relatively easy and as you get near the end of the main set the *same pace* will start to feel like a steady (Z3) effort. The **recovery swim** is also a continuous swim but done at a very easy effort (Z1-2) with a focus on technique throughout the swim. The distance marked in your schedule includes the WU and WD described above. So for example, a 1600m continuous swim would break down as 500m WU (see above), 1000m continuous swim for MS and 100 m for WD (see above).
- Day 5 is your **technique endurance (TE) swim**. This workout is based on repetitive swims with a short rest after each and should be swum a little bit harder (more **steady to moderately hard** effort near the end) than your continuous swim. This workout is designed to increase the speed at which you can swim comfortably. Once again remember to only swim as hard as you can while maintaining good technique.
- Starting in build week #6 you should, if possible, start with an open **water swim** (day 6)**.** The goal here is to get used to swimming in open water as it is very different to swimming in the pool. Never swim alone, always swim with a buddy for safety and wear a brightly colored swim cap to ensure you are visible in the water. You should stay near

shore to increase your comfort level. If you are using a wetsuit then make sure you put it on properly, pulling it up as high as you can so that you get a little extra room in the shoulders to increase mobility. The keys with swimming in open water are being able to relax and swim straight. To practice swimming straight, pick a visible object (a large tree) and swim towards it, check how you straight you are after every 6 strokes. Focus on comfort and efficiency, not speed.

You should always strive to maintain good form. Never swim so hard that your technique falls apart!

Swim Workouts

WU: 100m swim easy
6x50m 25drill/25swim
100m kick
WD: 100m drills/swim of choice

Main Sets:

All Recovery swims for Day 5:
WU and WD as above (total 600m)
MS: {150 swim (20), 50 drill (10)} Do as many repeats of this sequence as needed to complete distance on the schedule. Focus on technique.

Build weeks #1-3
WU and WD as above (total 600m)
MS: {50 (10) easy, 100 (15) steady, 50 (10) easy, 100 (15) steady} Do as many repeats of this sequence as needed to complete distance on the schedule.

Build weeks #4-5
WU and WD as above (total 600m)
MS: {100 (20) steady, 100(10) easy, 100 (20) steady} x2
50 kick
300 (30) steady x2
50 kick
300 (30) steady x2
{100s (15) done as 50steady/50 moderately hard} repeat as needed to complete distance on the schedule

Build weeks #6-7
WU and WD as above (total 600m)
MS: {150 (20) steady, 100(15) easy, 150 (20) steady} x4
50 kick
400 (40) steady
50 kick
2x150 (20) moderately hard
{100s (15) done as 50 steady/50 moderately hard} repeat as needed to complete distance on the schedule

Build weeks #8-9, race prep weeks 1 & 2
WU and WD as above (total 600m)
MS: {150 (20) steady, 100(15) easy, 150 (20) steady} x4
50 kick
400 (30) steady
50 kick
4x50 moderately hard (10)
{100s (15) done as 50 steady/50 moderately hard} repeat as needed to complete distance on the schedule

CYCLING

WARM UP (WU) and WARM DOWN (WD)

For all cycling workouts the **warm-up and warm down** are done while riding at an **EASY pace (Z1-2)** the goal is to raise your heart rate and get your legs loosened up for the workout ahead.

WU: 15 minutes of **easy pace (Z1/2)** riding while slowly building to steady pace and focusing on good pedaling technique and high cadence (90-95 rpm). Make sure you warm up on flat terrain.

WD: You should warm down with easy pedaling (Z1-2) for 5-10 minutes nearing the end of your ride once again paying special attention to your technique and cadence

Main Set:

Long rides: easy to steady (Z2 to Z3)
Endurance rides: easy to steady with more time spent in Z3

Please refer to the Perceived exertion chart for descriptions of the effort felt for each zone.

Your program will use 2 types of cycling workouts:

- **Long ride**: This is the cycling part of the brick workout (day 6). The goal of this ride is to gradually build the time (and distance) you are able to complete as your program progresses. You should ultimately ride a distance close to your race goal (180 km) on your longest build week (build week #9)[1]. The **main set** for your long rides are meant to be done at an **easy (Z2)** to **steady pace (Z3),** with some **moderately hard (Z4)** efforts on the hills in the second half of your ride. This pace will feel easy near the beginning but will require some focus to maintain for the duration (but it shouldn't leave you gasping for breath!!). When choosing a route pick one based on how you are feeling that day and your level of experience. If you are feeling energetic and are a more experienced athlete then choose a hilly route especially if your goal race includes significant altitude gain. The hills will then provide a natural increase in intensity to your ride. More beginner level athletes should choose flatter loops in order to first focus on completing the set out time in the program. Make sure to use your gears while riding and try to maintain a cadence of 80-100. Your cadence will drop on some steep hills, but make sure you use your easiest gears.
- **Endurance ride**: These are scheduled on day 2&4. The goal of these rides is to give you a comfortable amount of time where you can easily keep a steady pace without pushing your limits in duration. It will build your aerobic and muscular endurance over the course of the program and allow you to become more comfortable and efficient on your bike as you spend more hours weekly in the saddle. The **main set** effort level for this ride should be **steady (Z3) effort** if you are feeling good. The terrain you will choose will vary for different stages of your training. When choosing a hilly terrain try to choose a route with rolling hills or one or two long gradual hills.

[1] You should aim to be riding 180 kms or so on your longest ride (build week#9). If, due to your pace, the scheduled amount of time is insufficient, you may have to ride longer in order to reach the goal distance.

RUNNING

WARM UP (WU) and WARM DOWN (WD)

For all running workouts the **warm-up and warm down** are done while running at an **EASY pace (Z1-2)** and geared towards getting you ready for a bigger effort during the main set. Make sure to start your runs on flat terrain.

WU: 10-15 minutes of **easy pace (Z1/2)** jogging while slowly building to steady pace and focusing on high cadence (85-90 cycles).

WD: You should warm down with easy **jogging (Z1-2)** for 5-10 minutes nearing the end of your run once again paying special attention to your cadence

Please refer to the Perceived exertion chart for descriptions of the effort felt for each zone.

- **Long run**: The goal of this run is to gradually build the distance you are able to complete comfortably as your program progresses. The long runs are meant to be done at an **easy (Z2) to steady pace (Z3)** with some **moderately hard (Z4)** efforts on the hills if you are feeling energetic and are a more experienced runner. This pace will require some focus to maintain for the duration but shouldn't leave you gasping for breath. Hills are what will provide some variable intensity to your program. For a beginner athlete or someone who is finding just completing the time set out in the program a challenge, choose a flatter route. For more experienced athletes feel free to choose a hilly route to add some challenge and intensity to this run (again the hills are to be run **moderately hard**, not hard!). When choosing hilly terrain try to choose a route with rolling hills or one or two longish gradual hills as opposed to many short steep hills. Strive to keep your foot turnover high (avg. 85-90 cycles (right foot strikes)/min).

  Individuals expecting to walk a significant portion of the marathon on race day may choose to do the long run (day 7) in this program as a run/walk workout. Aim to run 9 minutes and walk briskly for 1 minute and repeat. Make sure you look at your watch and time yourself so the walking portion of your training does not become increasingly longer as the volume of your run builds! If you elect to do the run/walk option on day 7, you should take the time found in the schedule and add 33%. For example a 2 hour run in your program (120 minutes) would become 120 minutes x 0.33 (or 33%)= 39.6 min. (app. 40 minutes). So 2 hours and 40 minutes of run/walk would be done to replace the 2 hour run.

- **Endurance run**: The goal of this run to give you a comfortable distance where you can easily keep a **steady pace** (Z3) without pushing your limits in duration. It will build your aerobic and muscular endurance over the course of the program and allow you to become more comfortable on various terrains. The pace for this run should be easy (Z2) to **steady (Z3)** but with more time spent at a steady effort level if you are feeling energetic. The terrain will you choose will vary depending on your preference. When choosing a hilly terrain try to choose a route with easy rolling hills or one or two long gradual hills.

BRICKS

Bricks are a very important part of triathlon training and they are sometimes overlooked. Bricks refer to training on two disciplines during the same workout, one after the other with minimal or no interruption in between, just as you would do in a race. Usually when people talk about bricks they refer to a bike/run workout, but bricks could also refer to a swim/bike workout.

The most commonly practiced Brick workouts are the bike/run bricks, mainly because the transition between bike and run is the tougher of the two during a triathlon. When you stop biking and start running your legs can feel "like bricks (hence the name!)". This feeling is more pronounced at the start of the run and your legs usually get better as time passes. Brick workouts help shorten the time your legs take to start feeling more normal thus allowing you to run better and faster.

Brick workouts will include a **WU period building from Z1to Z2/3 for 10-15 minutes in the first sport** of your brick (The bike for the Bike/run bricks and the swim for the Swim/bike/run bricks). Your transition from one sport to the next should be organized and done as quickly as possible this is practicing for race day, don't rush through your transition but make sure you have thought it out ahead of time to make it as smooth as possible. Near the end of your run you will include a **5 minute gradual WD from Z3 to Z1 effort** focusing on good technique and fast turnover of the legs.

- **Day 4 Brick** (starting on build week 6): The goal of this workout is to develop your ability to run well off the bike. The focus here is to just get used to running after having ridden. The key is to start off slow on the run, don't go flying out of transition. Your legs may feel heavy to start but will get better as you warm up on the run.
- **Day 6 Brick**: The main focus of this workout is the long ride, the swim and run are used as an opportunity to get used to doing all 3 sports in a row. The main focus is the same as the long ride description above, while the swim and the run should be done **easy (Z1/2)** to **steady (Z3)** effort levels.

NUTRITION

Nutrition plays a critical part in training and racing long distance endurance events therefore creating a sound nutrition plan is essential for a successful Ironman or long course racing. Your long training days are your practice times for dialing in your plan on race day. Because of a significant variability in requirements between individuals and environmental conditions the guidelines provided need to be starting points for your plan and should be practiced time and again in training until you can find a strategy that works well for you.

On race morning you should eat breakfast at least 3 hours before the start of your race to insure proper digestion. For Ironman (IM) it should have 750-1000 calories (the closer to 1000 the better but make sure you practice this in training and racing prior to your IM). This can be done with food or drink. High carbohydrate, low fat drinks like Boost or Ensure are good for getting in the calories if your stomach won't handle regular food on race morning. You should be staying hydrated as well but don't over do it. Sipping an electrolyte drink on race morning is a good idea.

During training it is best to measure your energy consumption by the grams of carbohydrate you are consuming. As a starting point we recommend between 60-80g of carbohydrates/hour (in a 6-8% solution or 60-80 g of carbs/liter of water). Anything less than that will be leaving you short of energy over the course of the day and anything more will just increase the likely hood of stomach issues. Practice over time will enable you to determine what level is optimal for you. The amount of liquid you need to stay properly hydrated is approximately 1 liter/hr but is the most variable component of your nutrition plan depending upon the individual and the conditions encountered (commonly ranging from 750 mls-1.2L/hour). Finally electrolytes supplementation ("salt pills") is also a critical part of endurance nutrition and although highly variable many athletes require in the neighborhood of 750 mg of sodium/hour of activity, especially in hot climate. Please note that if you have medical condition or take medication that requires you to carefully control of your sodium intake you should be speaking with your physician before using an electrolyte supplement. So remember, practice makes perfect and you should have used your Ironman nutritional strategy many times before race day, both in training and in races to insure you have the best possible plan for your Ironman event.