

Toronto Triathlon Club Ironman Competitive Training Program

By Head Coach Nigel Gray



WHO IS THIS FOR?

This program is designed for an experienced athlete who has done a few Ironman races and is starting this program you should be able to very comfortably complete the first week of training. Athletes signed up to race an Ironman distance event in '09 that wish to race it competitively would start their general and base training well before the 16 week plan laid out here. Finishing week 1 of this program easily and comfortably 16 weeks out of their key race is a basic minimum requirement.

THE PROGRAM

The goal of this program is to build up your muscular endurance so that you can improve on previous performances for Ironman distance triathlons. The program will include endurance work as well as adding some intensity training. You will have a continuous swim, a technique endurance swim, an open water swim, a long ride, an endurance ride, an endurance-tempo ride, a tempo ride, a threshold ride, a long run, an endurance run, a tempo run and brick (bike/run) workouts.

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

PERCEIVED EXERTION	HR ZONE	DESCRIPTION
VERY EASY	Z1	Recovery workout, warm up and warm down, very light effort, breathing is very light.
EASY	Z2	Recovery/Endurance workout, comfortable training pace for long days, base endurance, breathing again is very light.
STEADY	Z3	Endurance workout, this 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 will first notice a deeper breathing pattern.
MODERATELY HARD (Mod)	Z4	Tempo workout, takes greater focus to maintain the effort, breathing becomes deeper and more frequent and conversation starts to become difficult.
HARD	Z5	Threshold workout, this is the level that you will start to accumulate lactate and you 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	VO2 max workout, these workouts are very taxing and conversation will not be possible, the effort level will feel extremely challenging with a significant burning sensation in the muscles and very laboured breathing.

For intermediate or advanced HIM athlete, a large proportion of training will be spent at steady to moderately hard effort level (Z3/4) while also introducing some training sessions at a hard effort level (Z5 threshold workouts).

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. Be sure to work on proper technique during your drills.

The warm up for each swim will be as follows:

WU: **100m (10) swim easy**
 6x50m (10) 25drill/25swim
 100m (10) kick
 6x50 (10) sw building to moderate
WD: **200m easy drills/swim of choice**
Total: **1000m**

MAIN SET (MS)

You will be doing 3 types of swims in your program.

- Continuous swims (C)
- Technical endurance swims (TE)
- Recovery(R) swims

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 a bit 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 1 is the **continuous(C) swim**. The goal of this workout is to gradually build the distance you are able to swim continuously while keeping efficiency and good form. 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 for the second half of the main set the same pace will start to feel like a steady (Z3) effort. The **recovery swim** (day 1 and 3 of recovery weeks) 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 3000m continuous swim would break down as 800m WU (see above), 2000m continuous swim for MS and 200 m for WD (see above).

Day 3 is your **technique endurance (TE)** swim. This workout is based on repetitive swims with a short rest after each and should be swum harder (more steady to moderately hard to hard effort) 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 (so hard sets should be faster than moderately hard sets not just harder!).

Day 6 is your **open water swim** (preceding the long brick). 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. 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 straight you are after every 6-10 strokes. Focus on comfort and efficiency. Try to hold a steady effort building to a moderate effort for the MS of these OWS (after a 5 minute gradual WU)

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

Swim Workouts

Warm Up: 100m (10 sec rest) swim easy
6x50m (10 sec rest) 25 drill / 25 swim
100m (10 sec rest) kick
6x50 (10 sec rest) swim building to moderate

Warm Down: 200m easy drills/swim of choice

Main Sets:

All Recovery swims for Day 3:

WU and WD as above (total 1000m)

Main Set:

- 200m swim easy (20 sec rest)
- 100m drill, 200 swim steady (10 sec rest)

Repeat this sequence as needed to complete distance on the schedule. *Focus on technique.*

Build weeks #1-4

WU and WD as above (total 1000m)

Main Set:

- 300m (30 sec rest)
100 fast, 100 steady, 100 moderate
- 2x100 (10 sec rest) moderate
- 50 easy (10 sec rest)

Repeat this sequence as needed to complete distance on the schedule.

Build weeks #5-7

WU and WD as above (total 1000m)

Main Set:

- 200m (20 sec rest) Steady
- 3x100m (10 sec rest) descend from moderate to hard

Repeat this sequence as needed to complete distance on the schedule.

Build weeks #8-10, race prep week

WU and WD as above (total 1000m)

Main Set:

- 6x100m (25, 20, 15, 10, 5 sec rest) mod, hold pace for each one
- 100m kick

Repeat this sequence 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: 10-15 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 moderate (Z2 to Z4)

Endurance rides: steady effort with mix of Z2 and Z3

Endurance tempo: moderate ride, mix of Z3 and 4

Tempo rides: moderately hard effort level with a significant amount of time spent in Z4

Threshold rides: Hard interval work (Z4/5) with rest (Z1) period in between

Refer to Perceived exertion chart for descriptions of effort felt for each zone.

Your program will use 5 types of cycling workouts

- **Long rides:** This is the cycling part of the brick workout (day 6). The goal of this ride is to gradually build the time (and distance) for which you are able to sustain a strong and consistent effort from start to finish. You should ride a distance exceeding race goal (180 km or more) on your longest build weeks. The **main set** for your long rides should be done at an **easy (Z2) to steady pace (Z3), with moderately hard (Z4) efforts on the hills**. Experienced athlete will aim to sustain a steady endurance effort in Z3 for a large portion of the main set with some harder sections in the hills (Z4) but should avoid spending time above Z4 (so no Z5 or higher!). This pace will feel from easy at the beginning but will definitely require some focus in order to maintain for the duration. Try to select terrain that would be similar to the one you will find in your goal race when possible. Hills will provide a natural increase in intensity to your ride. Make sure to use your gears well while riding and try to maintain a cadence of 85-95 rpm. Your cadence will drop on some steep hills, but make sure you use your easiest gears to minimize the change required in your cadence while still riding at the correct intensity level (Z4 in the hills).
- **Endurance rides:** 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 (Z2/Z3)** effort if you are feeling good. The terrain you will choose will vary for different stages of your training and the terrain you will race on for your goal race. When choosing a hilly terrain try to choose a route with

rolling hills or one or two long gradual hills and you should still strive to stay no higher than Z3 for most of the ride.

- **Endurance-tempo ride:** A ride with comfortable intensity that is sustainable for relatively long period. The **main set is done at a mix of Z3/Z4** HR and effort level.
- **Tempo rides:** These are scheduled as part of your Brick workout on day 4. The purpose of these rides is to improve muscular endurance (a combination of force and endurance). These rides feel fast, require some work to maintain and are similar to race pace efforts for a HIM. The **main set effort level for this ride should be High Z3 to low Z4** with some greater efforts (Z5) in the hills if you are feeling good. Some days you will be given set times to do Z4 “intervals” (eg 2x30 min Z4). The rest of the main set for these will be mostly Z3.
- **Threshold rides:** These are done in intervals of work and recovery and scheduled as part of your Brick workout on day 4. The purpose of these rides is to improve your threshold power. They are strenuous workouts and require significant recovery. They are often easiest done on the indoor trainer but can also be done outdoors if you can find a relatively flat, safe and quiet section of road and where you can finish the given interval period uninterrupted (by traffic etc). The WU is 15-20 minutes starting with easy pace (Z1/2) building to steady pace (Z3). It is important to be well warmed up before starting these intervals! The **main set consists of work intervals in Z4/Z5** with rest period between the intervals as noted. Eg. 3x10 min (2) should be done as WU (see above) then 10 min Z4/Z5, 2 min easy spinning Z1, 10 min Z4/Z5, 2 min easy spinning Z1, 10 min Z4/Z5 followed by WD (Z1/Z2) for the balance of total ride time.

The Workouts: 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-Z2)** 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/Z2)** jogging while slowly building to steady pace and focusing on high cadence (85-90 cycles). You can add some running drills here if you wish.

WD: You should warm down with **easy pace (Z1/Z2)** for 5-10 minutes nearing the end of your run once again paying special attention to your cadence

Refer to Perceived Exertion Chart for descriptions of effort felt for each zone.

- **Long run:** The goal of this run is to gradually build the time/distance for which you are able to sustain a strong and consistent effort from start to finish. The long runs should be done at a relatively 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. The 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, Z4). 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).

- **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 a combination of 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). 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 a few long gradual hills.
- **Steady Tempo run:** The goal of this run is to improve endurance and focus by keeping a quality pace for a prolonged time. **These runs are moderately hard (Z3/Z4).** The WU: is 20 min building to Z3 effort followed by main set done as a Z4 effort (time in brackets on schedule) followed by Z1/2 easy WD for remainder of total time eg. Tempo run 60 min (25 min Z4) would be done as: 20 min WU Z1 to Z3, 25 min in Z4 for main set and 15 min Z1/2 for WD

The Workouts: 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 Z1 to 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:** The goal of this workout is to develop your ability to run well off the bike (even after a hard bike session such as your tempo or threshold sessions). The focus here is a tempo effort for 15 min after having ridden hard. The key is to run comfortably for the first 5 minutes with a quick, short stride. Your legs may feel heavy to start but experienced athletes will quickly get into their normal full stride. Once “warmed up” you should run 15 min at a Z3/Z4 or Z4 HR and effort level if you feel good. Follow by 10 min easy (Z1/Z2) warm down.
- **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 at **steady (Z2/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 an IM it should have 750-1000 calories. 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. Make sure you practice your race morning breakfast in training!

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 likelihood 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 nutritional strategy many times before your key race, both in training and in races***, to insure you have the best possible plan for your "A" race.