

# PERTH INTEGRATED HEALTH CYCLING GROUP



PIH Northern Districts  
Unit 12, 8 Booth Place  
Balcatta (via Erindale Road)  
Tel: 9240 5266 Fax: 9240 1522

PIH Cycling Group  
[www.pihc.com.au/cycling](http://www.pihc.com.au/cycling)

Melville Aquatic Fitness Centre  
Marmion St, Booragoon  
Tel: 9364 8626

Ruyi Enterprises Pty Ltd  
ABN: 67 131 803 239

P.O Box 1574, Applecross, 6953  
ABN: 73 069 383 900  
ACN: 069 383 900

---

## Interval Training

### Introduction

The benefits of Interval Training have often been misunderstood and mostly avoided by most cyclists. Deemed almost as an exclusive training favouring Road Racing – this is far from the truth as any discerning cyclist with a desire to build stamina, endurance and mostly importantly heart rate tolerance and strength, can benefit from the fundamentals of Interval Training.

### The Myths of Interval Training

1. That is about riding harder and faster.
2. That you should train until you are physically exhausted or faint.
3. That you don't need to drink during this form of training.
4. That you have to chase everyone else whilst training.
5. That you only do it when you are training for triathlons, criteriums or sprints

### The Fundamentals of Interval Training

1. Indoor or Outdoor

Outdoor is preferable but on a day with challenging weather and road conditions, you so not need to sacrifice your Interval Training if you have a Wind Trainer. Spin bikes do not qualify and I don't care what personal trainers say as the geometry and physiological requirements will differ.

If you have a Wind Trainer and also have sufficient finances for a second bike this can be set up semi permanently within the confines of your home.



# PERTH INTEGRATED HEALTH CYCLING GROUP



PIH Northern Districts  
Unit 12, 8 Booth Place  
Balcatta (via Erindale Road)  
Tel: 9240 5266 Fax: 9240 1522

PIH Cycling Group  
[www.pihc.com.au/cycling](http://www.pihc.com.au/cycling)

Melville Aquatic Fitness Centre  
Marmion St, Booragoon  
Tel: 9364 8626

Ruyi Enterprises Pty Ltd  
ABN: 67 131 803 239

P.O Box 1574, Applecross, 6953  
ABN: 73 069 383 900  
ACN: 069 383 900

## 2. Choose a Suitable Circuit

Interval Training can have immediate variations in the demands on your muscles, lungs and endurance capacity simply by a choice of circuits to train in.

The circuit should be no longer than between 1 to 1.5 km as this provides sufficient distance to then conduct laps. Remember that the training is about Quality and not necessary Quantity and many cyclists cheat on themselves when they do interval training.

By choosing say two or three different circuits you provide the above variation and mixing it up will be a benefit to the differential conditioning of your body for different terrains.

Consider the following:

- a. Choose circuits with different elevations
- b. Ensure that you conduct regular risk management review of your nominated course.
- c. Always ride the course once or twice before commencement to ensure that you have mentally accounted for any modifications or new hazards on the road.
- d. Try and find a circuit then allows you as little Stops and crossing of streets. Therefor it is better to find a good clockwise or anticlockwise circuit if the safety indicators permit.
- e. Identify the direction of the sun at various times of the day for these circuits so that you minimise visibility issues.

## 3. Visibility



# PERTH INTEGRATED HEALTH CYCLING GROUP



PIH Northern Districts  
Unit 12, 8 Booth Place  
Balcatta (via Erindale Road)  
Tel: 9240 5266 Fax: 9240 1522

PIH Cycling Group  
[www.pihc.com.au/cycling](http://www.pihc.com.au/cycling)

Melville Aquatic Fitness Centre  
Marmion St, Booragoon  
Tel: 9364 8626

Ruyi Enterprises Pty Ltd  
ABN: 67 131 803 239

P.O Box 1574, Applecross, 6953  
ABN: 73 069 383 900  
ACN: 069 383 900

In line with choosing a suitable circuit having as much a Visible footprint on the road is crucial for your survival. Make sure you always have your FRONT and REAR lights on at all times even during the day as this will bring to attention your presence on the road with other road users.

## 4. Time of Day

Once again this can affect the volume of traffic on the road. It is also good to train if time permits at different times of the day as this provides variation to your conditioning with the different temperature, wind speed and direction on the same circuits.

## 5. Train but don't Race

People often mistake the faster pace of Interval Training as an opportunity to Race their friends and other riders. This is WRONG as Interval Training is about your own needs and building upon them. The moment that you decide to 'race' someone else when you have a specific training schedule planned – you have thrown the whole aspect of Intervals with Heart Rate and Methods out of the window. Remember only Race on Race Days which is when you put your skills and training to the test.

## 6. Efforts vs Recovery

The term Effort means the phase when you put in the power / energy to achieve the build in the Interval. This is also described as 'ON' phase. The Recovery phase is OFTEN also misunderstood as cyclists continue to ride on Effort during this phase and wonder why they cannot last the circuits they plan.

In Recovery – one coasts and spins easy and at a much lesser intensity and strength than at Effort. Recovery as it is simple term implies is where you catch your breath and also allow your heart to recover.



# PERTH INTEGRATED HEALTH CYCLING GROUP



PIH Northern Districts  
Unit 12, 8 Booth Place  
Balcatta (via Erindale Road)  
Tel: 9240 5266 Fax: 9240 1522

PIH Cycling Group  
[www.pihc.com.au/cycling](http://www.pihc.com.au/cycling)

Ruyi Enterprises Pty Ltd  
ABN: 67 131 803 239

Melville Aquatic Fitness Centre  
Marmion St, Booragoon  
Tel: 9364 8626

P.O Box 1574, Applecross, 6953  
ABN: 73 069 383 900  
ACN: 069 383 900

Remember that if your Effort is MORE than your Recovery you are no longer doing Interval Training.

Good examples include:

Circuit 1: Effort 1 minute, Recovery 2 minutes.

Circuit 2: Effort 2 minutes, Recovery 3 minutes

Circuit 3: Effort 1 minute, Recovery 2 minutes

## 7. Variables of Interval Training

You can use one of the following variables to build on:

- a. Effort vs Recovery over TIME
- b. Effort vs Recovery over DISTANCE
- c. Effort vs Recovery over SPEED
- d. Effort vs Recovery over TERRAIN
- e. Effort vs Recovery over Heart Rate Threshold
- f. Percentage Effort (Strength) vs Recovery

No doubt some of the variable above come into play as a duality but if you are on the same circuit then one of them can be neutralised by the test / retest reliability.

## 8. Heart Rate Threshold

Those who are aware and have a proper clinical reading of their Resting HR and also their HR Zones will BEST benefit from Interval Training.



# PERTH INTEGRATED HEALTH CYCLING GROUP



PIH Northern Districts  
Unit 12, 8 Booth Place  
Balcatta (via Erindale Road)  
Tel: 9240 5266 Fax: 9240 1522

PIH Cycling Group  
[www.pihc.com.au/cycling](http://www.pihc.com.au/cycling)

Melville Aquatic Fitness Centre  
Marmion St, Booragoon  
Tel: 9364 8626

Ruyi Enterprises Pty Ltd  
ABN: 67 131 803 239

P.O Box 1574, Applecross, 6953  
ABN: 73 069 383 900  
ACN: 069 383 900

By training via your HR Threshold you are working on a more sophisticated level where you can train within your HR Zones and with discipline and patience actually use your Heart Rate zones to know when to Attack and when to Ease in a Race.

It is this physiological advantage that I am tapping into and those who have signed up for the PIHCG Specialized Training Program are the main beneficiaries of this program.

Remember to achieve success in Interval Training with HR Thresholds you must train between 70% to 90% of your HR Max but NEVER beyond 90%.

## 9. Essential Equipment

### a. Proper GPS Enabled Bike Computer that provides:

- (1) Heart Rate and HR Zones
- (2) Cadence
- (3) Speed
- (4) Distance
- (5) Preferable Course Maps or capability to upload Course Maps
- (6) Elevation / Gradients
- (7) Temperature

### b. Gearing

With most circuits for Interval Training designed over a flatter or gradually undulating terrain the gearing most favoured for greater strength and endurance is a Cassette with one of the following variations: 11/23, 11/25, 12/23, 12/25.

If the circuit for your Interval Training involves hills of gradients exceeding 5 to 6 degrees or more than the logical choice for longevity on the bike should be with cassette variations such as: 11/27, 11/28, 12/27, 12/28.



# PERTH INTEGRATED HEALTH CYCLING GROUP



PIH Northern Districts  
Unit 12, 8 Booth Place  
Balcatta (via Erindale Road)  
Tel: 9240 5266 Fax: 9240 1522

PIH Cycling Group  
[www.pihc.com.au/cycling](http://www.pihc.com.au/cycling)

Melville Aquatic Fitness Centre  
Marmion St, Booragoon  
Tel: 9364 8626

Ruyi Enterprises Pty Ltd  
ABN: 67 131 803 239

P.O Box 1574, Applecross, 6953  
ABN: 73 069 383 900  
ACN: 069 383 900

The choice of Compact vs Standard Crank is debatable and I am not going to enter into a detailed discussion here.

- c. Two water bottles
- d. Tyre Pressures must be checked and preferably near to recommended specifications if you are doing a lot of fast corners and braking.
- e. Tyre conditions always essential.

## 10. Repeats / Circuits

NEVER and I mean NEVER exceed more than 12 repeats or circuits in one sitting of an Interval Training. You can work the variables but to do more than 12 for amateur cyclists would be to court potential future health and cardiac conditions.

### Examples of Typical Interval Training Programs.

#### 1. Effort vs Recovery over Time

- a. Circuit 1: Effort 1 minute, Recovery 1 minute
- b. Circuit 2: Effort 2 minute, Recovery 2 minute
- c. Circuit 3: Effort 2 minutes, Recovery 3 minutes
- d. Circuit 4: Effort 2 minutes, Recovery 2 minutes
- e. Circuit 5 Effort 1 minute, Recovery 1 minute.

#### 2. Effort vs Recovery over Distance

- a. Circuit 1: Effort 200 metres, Recovery 200 metres
- b. Circuit 2: Effort 200 metres, Recovery 300 metres
- c. Circuit 3: Effort 100 metres, Recovery 100 metres
- d. Circuit 4: Effort 100 metres, Recovery 200 metres





# PERTH INTEGRATED HEALTH CYCLING GROUP



PIH Northern Districts  
Unit 12, 8 Booth Place  
Balcatta (via Erindale Road)  
Tel: 9240 5266 Fax: 9240 1522

PIH Cycling Group  
[www.pihc.com.au/cycling](http://www.pihc.com.au/cycling)

Melville Aquatic Fitness Centre  
Marmion St, Booragoon  
Tel: 9364 8626

Ruyi Enterprises Pty Ltd  
ABN: 67 131 803 239

P.O Box 1574, Applecross, 6953  
ABN: 73 069 383 900  
ACN: 069 383 900

### 3. Effort vs Recovery over Speed & Distance (Fixed)

Circuit 1: Effort 30 km/h over 200 metres vs Recovery 20 km/h over 200 metres  
Circuit 2: Effort 32 km/h over 200 metres vs Recovery 20 km/h over 200 metres  
Circuit 3: Effort 28 km/h over 200 metres vs Recovery 20 km/h over 200 metres

### 4. Effort vs Recovery over HR Threshold & Time (Fixed)

Circuit 1: Effort 70 HRM over 1 minute vs Recovery 50 HRM over 1 minute  
Circuit 2: Effort 80 HRM over 1 minute vs Recovery 60 HRM over 1 minute  
Circuit 3: Effort 90 HRM over 1 minute vs Recovery 60 HRM over 1 minute  
Circuit 4: Effort 70 HRM over 1 minute vs Recovery 50 HRM over 1 minute

You get the idea for the various variables.

## Intellectual Property

I have taken time and trouble to create this form of training and it is imperative that as a recipient of this training that you DO NOT share this with others as it is designed specifically only for those who train with me.

To pass this program around would be a breach of my trust and confidence in you as we pride ourselves at PIHCG to produce world class training programs for the benefit of our riders.

It is often said that cyclists are keen to pass on information to others but in the wrong hands and with improper coaching and training this can be very dangerous.



# PERTH INTEGRATED HEALTH CYCLING GROUP



PIH Northern Districts  
Unit 12, 8 Booth Place  
Balcatta (via Erindale Road)  
Tel: 9240 5266 Fax: 9240 1522

PIH Cycling Group  
[www.pihc.com.au/cycling](http://www.pihc.com.au/cycling)

Melville Aquatic Fitness Centre  
Marmion St, Booragoon  
Tel: 9364 8626

Ruyi Enterprises Pty Ltd  
ABN: 67 131 803 239

P.O Box 1574, Applecross, 6953  
ABN: 73 069 383 900  
ACN: 069 383 900

I have therefore placed this document on my list of Intellectual Property documents and as per all PIHCG programs are protected by the Commonwealth Government's Department of Training Innovation Award.

Therefore you are permitted to download and study and take a copy of this document but you are not permitted to SHARE, ON SEND, FORWARD, FAX or PRINT this for the benefit or transmission of a third party without my written consent.

## The Final Word

If you think you need further assistance and proper coaching – why not consider my Summer Training Program which is attended by many Triathletes and Cyclists alike.

Go to the following link for more information:

<https://www.registernow.com.au/secure/Register.aspx?E=10528>

Ian Wee  
Director Sportif PIHCG  
Cycling Coach / Aust Cycle Teacher  
Medical Classifier Cycling Australia

Nov 2013  
Revised Jan 2014

