



Queen City Wheels

May 1, 2001

Volume 3, Number 3

From Our New President....

By Bob Rich

I hope that everyone was able to take advantage of the warm start to April. QCW training rides began the first week of April. We worked on sprint training; hill training and long rides during this period. Please refer to the May schedule for training rides.

The Cleves time trials will begin in May and will run through September. I have included an article on heart rate training aimed at improving your time trial performance. I strongly suggest you participate in the Cleves time trials as a way to improve your cycling performance.



QCW Pelo Line

For up to the minute information on Rides, Races and Club Events call :
682-9292

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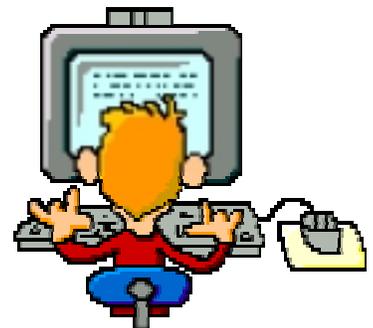
Newsletter Editor:
Toby Costello

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From The Editor

We had 10 members that sent a resume to Chip Elison for the 01 Wright Brothers Race Squad. The team is comprised of the following:

David Buckner, Toby Costello, Tom Cross, David Hart, Matt Harpold, Scott Nichois, David Nissen, Jon South, Eugene Spiegel and Rick Strasser. In the next issue of the newsletter I will give you an update on how the team is performing and what races they will be attending.



As a side note I would like everyone to support our club sponsor Wright Brothers. They have done a great job remodeling the store and expanding their line into others sports such as running and hiking.

Hope everyone has a great season and stays upright. Not like last year when my handlebars broke off and I did a Pete Rose head slide across the pavement and my run-in with a dog which left a nice scar in my left calf.

| | | | |
|------------------------|---|----------------------|---|
| From Our New President | 1 | Levels of Training | 4 |
| From the Editor | 1 | Rides We Heard of... | 5 |
| Levels of Training | 2 | Classified Adds | 6 |
| Levels of Training | 3 | | |

LEVELS OF TRAINING

By Bob Rich

LEVELS OF TRAINING

The following is a description of suggested levels of racing and training intensities based on average heart rate achieved during a ten miles time trial. It should be noted that if the effort is done on a turbo trainer, your average heart rate may vary than if done on the road.

Level 1

HEART RATE: Level 1 efforts are typically done at a heart rate that is less than 88% of the average heart rate you achieved in a ten mile time trial. Thus, if your average heart rate in a ten mile time trial is 190 bpm, your level 1 heart rate would be not more than 167 bpm.

Sensation: The sensation of effort is very low and could be maintained for many hours.

Purpose: Level 1 provides base training for newcomers to cycling and for recovery depending on level of conditioning.

Level 2

HEART RATE: Long Low Level 2 efforts require a heart rate range of 88% to 91% of the average heart rate achieved for a ten mile time trial. This would be a level for a 100 mile time trial effort.

SENSATION: Intensity of effort is at a relatively comfortable pace but requires a marked increase in concentration over level 1. Breathing increases but conversation is still possible.

Purpose: Rides at this intensity impose a significant load on the cardiovascular system and demand a number of important physiological changes. These include improvement of oxygen supply to the muscles via an increase in the heart's capacity to pump blood, a rise in the total volume of blood, a rise in the total volume of blood, increases in the number of small blood vessels within the working muscles. This allows for higher work loads without the onset of fatiguing processes. A further effect is the ability to use fat as a major energy source.

Frequency: Level 2 efforts are fundamental to improved cycling performance and should figure prominently in any riders training program. During base training, at least three rides per week should be done at this level.

(Continued on page 3)



(Continued from page 2)

High Level 2

- Heart Rate:** For most riders this level requires a heart rate range of 91% to 94% of the average heart rate you achieved in a ten mile time trial. This is the level of effort for a 50 mile time trial or 2 hours of sustained effort.
- Sensation:** Similar to long level 2, except that a little more concentration is needed and breathing rate will be even deeper. Conversation is still possible but frequent pauses are necessary to regain the breathing pattern.
- Purpose:** Riding at this level of effort puts much greater strain on the body's physiological functions.
- Limiting Factors:** This level of effort brings the body's capacity for sustained effort close to maximum. There is a very strong stimulus on the heart, lungs and muscles to increase their efficiency while still using fat as a major source of fuel. Rides up to 90 minutes can be tolerated on a regular basis if adequate recovery is given.
- Frequency:** Up to two sessions per week, 60-90 minutes during preparation and early season periods.

LEVEL 3

- Heart Rate:** The basic concept of level 3 efforts is that they are done at a critical level of effort beyond which you are unable to sustain the pace without rapidly fatiguing. This would be the level of effort for a 1 hour time trial requiring a heart rate of about 97% of the average heart rate you achieved in a ten mile time trial.
- Sensation:** Level 3 efforts require intense concentration and are psychologically very demanding. Breathing rate is rapid and powerful but should remain regular and under control. You should be able to increase the effort slightly but not be able to sustain this effort for more than 10 minutes.
- Purpose:** Riding at level 3 places a very high load on the body's ability to supply oxygen to the working muscles. It also stresses the physiological mechanisms which control the fatigue causing processes that occur within the muscles at high work rates. Regular efforts at this intensity should dramatically improve your power output at the critical threshold point.
- Limiting Factors:** The major limiting factor of level 3 efforts is the discomfort associated with the failure of the body to keep the fatigue causing processes under control. Depletion of the carbohydrate stores considerably affects this type of effort so it is important to ensure you are fully recovered from any previous hard efforts.
- Frequency:** Level 3 training is best performed as a continuous steady effort of between 20 min. and 40 min. following a warm-up of at least 15 min. During the competitive period, ten mile time trials are a very useful form of level 3 training. Races also contain a good deal of level 3 training. Level 3 is widely considered to be the most effective way of increasing the critical threshold power output. It is an important part of a training program, and 1-2 sessions per week should be done as either training or racing.

LEVEL 4

- Heart Rate:** Level 4 efforts are such an intensity that they are not sustainable for more than a few minutes and produce heart rates up to maximum.

(Continued on page 4)

(Continued from page 3)

Sensation: This level of effort requires you to work at an intensity above your critical threshold. The harder the effort above this critical threshold, the less able the body is at controlling the fatigue causing processes and exhaustion sets in more quickly.

Purpose: There are times during a race when it is necessary to exceed the critical threshold power output so it is necessary to improve the body's resistance to such short-term fatigue. Level 4 efforts place a heavy load on most muscle fibers, as well as the heart and lungs, and increase the power output that can be sustained before the onset of fatigue.

Limiting factors: The major limitations to continued performance is the inability of the body to remove the fatigue causing products at the rate they are being produced, Heart rate, oxygen carrying capacity and muscle fiber utilization will all be at or very near to maximum. In addition, carbohydrate is used up at a very high rate (it is virtually the only source of fuel at this intensity of effort).

Frequency: Because level 4 efforts are so short lived they should be used sparingly in races, while for training purposes interval training is normally used. This provides repeated high intensity efforts followed by a period of much lower or no effort to allow all or partial recovery. Sessions should be used in pre-season as close to the start of the actual racing season.

Level 4 is the most demanding form of training and should not be undertaken unless you are fit.

Group Riding: Training at levels 1 and 2 can be done alone but would be more pleasant in a group situation where additional skills can be simultaneously acquired. The problem to avoid is losing control of the purpose of your training session by being compelled to ride harder than intended.

Level 3 training is always best done alone so that it is more controllable. Some sessions of level 4 training could be done in a group with riders good enough to make it hard and fast.

Suggested Heart Rates The suggested heart rates shown below are based on average heart rate ranges taken from 10 mile time trials.

To summarize, Level 1 is a recovery ride heart rate and should be used as the higher end for that level of riding. Long (low) Level 2 is the heart rate range in which a 100 mile time trial could be ridden. Short (high) level 2 is the heart rate range in which a 50 mile time trial could be ridden. Lower level 3 is the heart rate at which a 25 mile time trial could be ridden. The top end of level 3 is that effort for which a 10 mile time trial is ridden.

Rate Ranges

10 ml (16km) average heart rate

| Level 1 Heart Rate | Long (Low) Level 2 Heart Rate | Short (High) Level 2 Heart Rate | Level 3 Heart Rate | Level 4 Heart Rate |
|-----------------------|-------------------------------------|---------------------------------------|-----------------------|-----------------------|
| 140 Below 122 | 122-127 | 127-131 | 135-140 | Above 140 |
| 142 Below 124 | 124-129 | 129-133 | 137-142 | Above 142 |

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| | | | | |
|---------------|---------|---------|---------|-----------|
| 144 Below 126 | 126-131 | 131-134 | 139-144 | Above 144 |
| 146 Below 127 | 127-132 | 132-136 | 141-146 | Above 146 |
| 148 Below 129 | 128-134 | 134-138 | 143-148 | Above 148 |
| 150 Below 131 | 131-136 | 136-140 | 145-150 | Above 150 |
| 152 Below 132 | 132-137 | 137-141 | 147-152 | Above 152 |
| 154 Below 134 | 134-139 | 139-143 | 148-154 | Above 154 |
| 156 Below 136 | 136-141 | 141-145 | 150-156 | Above 156 |
| 158 Below 137 | 137-143 | 143-147 | 152-158 | Above 158 |
| 160 Below 139 | 139-144 | 144-148 | 154-160 | Above 160 |
| 162 Below 141 | 141-146 | 146-150 | 156-162 | Above 162 |
| 164 Below 144 | 144-149 | 149-154 | 159-164 | Above 164 |
| 166 Below 146 | 146-151 | 151-156 | 161-166 | Above 166 |
| 168 Below 147 | 147-153 | 153-157 | 163-168 | Above 168 |
| 170 Below 149 | 149-155 | 155-159 | 165-170 | Above 170 |
| 172 Below 150 | 150-156 | 156-161 | 167-172 | Above 172 |
| 174 Below 152 | 152-158 | 158-163 | 168-174 | Above 174 |
| 176 Below 154 | 154-160 | 160-164 | 170-176 | Above 176 |
| 178 Below 155 | 155-161 | 161-166 | 172-178 | Above 178 |
| 180 Below 157 | 157-163 | 163-168 | 174-180 | Above 180 |
| 182 Below 159 | 159-165 | 165-170 | 176-182 | Above 182 |
| 184 Below 162 | 162-167 | 167-173 | 179-184 | Above 184 |
| 186 Below 164 | 164-170 | 170-175 | 181-186 | Above 186 |
| 188 Below 165 | 165-172 | 172-177 | 183-188 | Above 188 |
| 190 Below 167 | 167-173 | 173-178 | 185-190 | Above 190 |
| 192 Below 169 | 169-175 | 175-180 | 187-192 | Above 192 |
| 194 Below 170 | 170-177 | 177-182 | 189-194 | Above 194 |
| 196 Below 172 | 172-179 | 179-184 | 190-196 | Above 196 |
| 198 Below 174 | 174-180 | 180-186 | 192-198 | Above 198 |
| 200 Below 176 | 176-182 | 182-188 | 194-200 | Above 200 |

Rides we've heard of...

Weekend rides will on occasion start at a different location depending on weather conditions. Please check the pelo line 682-9292. If anyone is interested in being a ride leader please email Bob Rich at bob.terry@fuse.net or leave your information on the pelo line.

| Day | Time | Location | Type of Ride | Length |
|-----------------|-------------|-----------------|---------------------------|--------------------|
| Saturday | 0900 | Loveland | Just Ride | 2-3 hours |
| Sunday | 0900 | Loveland | Just Ride | 2-3 hours |
| Tuesday | 1830 | Loveland | Just Ride | 1.5-2 hours |
| Tuesday | 1830 | Cleves | QCW Time Trial | 10.2 miles |
| Tuesday | 1830 | Loveland | Just Ride | 1.5-2 hours |

Helmets required, NONE of these rides are sponsored or supported by any particular group or organization, ride at your own risk and obey the rules of the road. Have Fun!

Report other recurring rides to Central Ride Control or call 682-9292 or email chipe@iglou.com.

Queen City Wheels
185 Albright Drive
Loveland, Ohio 45140

May 1, 2001

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