



**THE VO<sub>2</sub> PROJECT**

# **YOUR TRAINING GUIDE**

# INTRODUCTION

Welcome to the VO2 project! This subsidiary booklet is to provide you with an overview of what was discussed during your initial consultation and guide you towards achieving your goals. If you have any questions regarding the content of this booklet, please feel free to contact us:

Skype @thevo2project

Email: [info@thevo2project.com](mailto:info@thevo2project.com)

# PERIODISATION

## **Anatomical adaptation**

After the off-season, this block of training has no performance goals, and is simply providing the baseline fitness platform from which future training can be commenced from. The outcome of this phase should be to prepare the body for exercise, increase lean body mass and decrease fat mass.

## **Endurance**

The aim of the endurance phase is to lay the foundations for each of the energy systems, with the predominant aim of increasing the capacity to perform work rather than out rightly improving performance. Efforts made should be interspersed with full recovery, so as to maintain maximal power outputs with little accumulation of fatigue. Whilst sprint and threshold sessions are maintained, endurance rides become longer throughout the block.

## **Strength**

The strength phase involves slightly longer high power intervals while maintaining full recovery periods, both within sprint and threshold sessions. This is still a 'general phase' of training so we are hoping to see improvements across the whole power-duration spectrum, without worrying too much about race performance. All the time we are increasing the low-intensity endurance load.

## **Speed**

The aim of the speed phase to maximise all areas of the tool box. Focus is on short hard intervals, with short recovery periods, but the aim is to improve the performance of each bout. Whilst intensity builds, duration of longer endurance steadily declines.

## **Speed Endurance**

Speed endurance is the final preparatory phase before the competitive season begins. It is only now that all the components of the tool box which have been systematically built throughout the winter can be drawn together to develop race fitness. This training block is primarily about short hard intervals, with short active recoveries between, and very specific to the type of efforts required in races. Repeatability of high power outputs and fatigue resistance is key here.

## The Race Season

The race season is about maximising performance and minimizing fatigue, converting fitness into form. Races are used to highlight areas to work on during training but most gains should be made throughout the winter.



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Athlete:  
Date: 01/10/2017  
Age:  
Height (cm):  
Mass (kg):

Professional coaching and nutrition



TRAINING



NUTRITION

(Pro/Elite)



S&C



THE LAB

(Elite)



AEROFIT

(Pro/Elite)



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[www.thevo2project.co.uk](http://www.thevo2project.co.uk)

# TYPES OF TRAINING

Training sessions can be grouped into 3 basic categories: sprint, threshold and endurance which provide different stimuli to promote different adaptations. Each session predominantly challenges different energy systems and yield different adaptations.

## **Sprint sessions**

Sprint sessions generally involve maximal 'all out' style bouts with varying lengths of active recovery. Early training blocks involve very short 10-20 second sprints with long recoveries. As we get towards the race season, the work:rest ratio decreases and the reps increase! These sessions are where races are won and lost!

## **Threshold sessions**

The most effective way to raise your critical power is to train at and around it. These are typically performed in zones 4 and above, and are most effectively done in the form of intervals. By definition, you cannot spend 20 minutes much above your critical power. However, we can get around this by doing interval training. For example: performing sets of 30 seconds above CP, 30 seconds below, for 40 minutes is a hard but manageable session and means we have spent 20minutes above CP and 20 minutes just below – this could not be done in 1 off sustained efforts!

## **Endurance sessions**

These are your long steady rides predominantly in zones 2. Adding volume is the main progression, steadily increasing the duration of each ride. Always remember – keep your hard rides hard, and your easy rides easy!

## Timing of training

Sessions should be timed to maximise output by alternating the taxed energy systems throughout the week. The highest intensity sessions should be performed first, since they require the athlete to be fresh and not fatigued to get the most of the training. This should be followed by threshold sessions, and finally endurance training. By performing training bouts in this order, the impact that each session has on the others is minimized so as maximal adaptation can be achieved for each energy system. For example, if a long endurance ride is followed by a sprint session then sprint power is likely to be reduced due to fatigue. However, performing the sprint session prior to a longer ride has little impact on your ability to complete low intensity endurance training.



22-09-17





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Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
<b>28-Aug</b> 20s x 6 ALL out. 6 min recovery between each. PM: Gym max strength.	<b>29-Aug</b> 2 x 20mins sweetspot - zone 3. 20 mins recovery. Long steady ride zone 2. 150km fasted.	<b>30-Aug</b> Rest	<b>31-Aug</b> Rest day - 1 hour easy	<b>01-Sep</b> 20s x 6 ALL out. 6 min recovery between each	<b>02-Sep</b> 2 x 20mins sweetspot - zone 3. 20 mins recovery.	<b>03-Sep</b> Long steady ride zone 2. 150km fasted. PM: Gym max strength.
<b>04-Sep</b> 20s x 6 ALL out. 6 min recovery between each. PM: Gym max strength.	<b>05-Sep</b> 2 x 20mins sweetspot - zone 3. 20 mins recovery. Long steady ride zone 2. 150km fasted.	<b>06-Sep</b> Rest	<b>07-Sep</b> Rest day - 1 hour easy	<b>08-Sep</b> 20s x 6 ALL out. 6 min recovery between each	<b>09-Sep</b> 2 x 20mins sweetspot - zone 3. 20 mins recovery.	<b>10-Sep</b> Long steady ride zone 2. 150km fasted. PM: Gym max strength.
<b>11-Sep</b> 20s x 6 ALL out. 6 min recovery between each. PM: Gym max strength.	<b>12-Sep</b> 2 x 20mins sweetspot - zone 3. 20 mins recovery. Long steady ride zone 2. 150km fasted.	<b>13-Sep</b> Rest	<b>14-Sep</b> Rest day - 1 hour easy	<b>15-Sep</b> 20s x 6 ALL out. 6 min recovery between each	<b>16-Sep</b> 2 x 20mins sweetspot - zone 3. 20 mins recovery.	<b>17-Sep</b> Long steady ride zone 2. 150km fasted. PM: Gym max strength.
<b>18-Sep</b> Rest week: 1 hour easy	<b>19-Sep</b> 1 hour easy	<b>20-Sep</b> Test: 3,7,12 min TT	<b>21-Sep</b> Rest	<b>22-Sep</b> Easy	<b>23-Sep</b> 2 hours easy	<b>24-Sep</b> 2 hours easy
<b>25-Sep</b> 20s x 6 ALL out. 6 min recovery between each. PM: Gym max strength.	<b>26-Sep</b> 2 x 20mins sweetspot - zone 3. 20 mins recovery. Long steady ride zone 2. 150km fasted.	<b>27-Sep</b> Rest	<b>28-Sep</b> Rest day - 1 hour easy	<b>29-Sep</b> 20s x 6 ALL out. 6 min recovery between each	<b>30-Sep</b> 2 x 20mins sweetspot - zone 3. 20 mins recovery.	<b>01-Oct</b> Long steady ride zone 2. 150km fasted. PM: Gym max strength.
<b>02-Oct</b> 20s x 6 ALL out. 6 min recovery between each. PM: Gym max strength.	<b>03-Oct</b> 2 x 20mins sweetspot - zone 3. 20 mins recovery. Long steady ride zone 2. 150km fasted.	<b>04-Oct</b> Rest	<b>05-Oct</b> Rest day - 1 hour easy	<b>06-Oct</b> 20s x 6 ALL out. 6 min recovery between each	<b>07-Oct</b> 2 x 20mins sweetspot - zone 3. 20 mins recovery.	<b>08-Oct</b> Long steady ride zone 2. 150km fasted. PM: Gym max strength.

SEPTEMBER

OCT

# RESISTANCE TRAINING

Any winter training programme should be paired with a resistance training regime. This may offer some injury protection, but should also be considered a necessary stimulus to improve performance and integrated into the cycle training. There is good evidence to support the role of resistance training to improve cycling performance. There are 4 phases to this:

## **Anatomical adaptation**

This involves lifting light weights with good technique to prepare the muscles for the next phase of training. There are no performance goals, and efforts should be allocated to improve technique rather than lifting heavier weights.

## **Maximal strength phase**

Muscular power and endurance are the goals of cycle training, both of which are directly depend on maximal strength. This is achieved through lifting heavy weights (90% 1RM) for 4 -6 repetitions, and 3 -5 sets interspersed with large recovery periods. This block runs alongside the endurance and strength phase on the bike.

## **Strength Endurance phase**

This is about converting the maximal strength into the type of power needed for cycling. This is achieved through lifting 70% 1RM for 12-15 reps, and 3 – 5 sets, allowing limited recovery between each. This is run alongside the speed and speed endurance training phase on the bike.

## **Power**

Pre-season, gym work is replaced by high force plyometric work, typically in the form of circuit exercises. These stimulate huge muscular gains and focus on priming the muscle for explosive performance. These sessions are particularly damaging to muscle fibres and should not be performed near races, or in close succession to each other. These sessions should start to be utilised during the speed endurance training block.

## **Maintenance**

Throughout the competitive season, it is important to not lose the muscular gains made throughout the winter, also strength training may dampen performance. For this reason, the competitive season should focus on limiting strength losses rather than building or necessarily

maintaining them, as form is real goal. Well considered strength sessions should be integrated into the training plan, and placed at least 5-7 days away from competition.

**Key Exercises:**

Squat

Deadlift

Single leg squat

Calf raises

Leg press

<b>Phase</b>	% 1RM	Reps	Sets	Recovery between sets
Anatomical adaptation	50	10	3	~5 minutes
Max strength	90	6	4	10 minutes
Strength Endurance	70	12	5	<2 minutes
Power			Plyometric Circuits	
Maintenance	70	12	3	~5 minutes

## **Contact us**

Feel free to email us with any questions @

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