

## 50 MILE <br> SPORTIVE EVENT <br> TRAINING

## ABOUT THE 50 MILE SPORTIVE EVENT

Riding a 50-mile sportive - and enjoying the experience requires dedicated training, mental toughness and an eye on your nutrition. During an event of this length, an amateur cyclist can expect to be on the road for anywhere between two-and-a-half and four hours. What's more, the route is unlikely to be pan flat - climbs, gravel and headwinds are all par for the course.

Training for a 50-mile sportive requires a combination of endurance and higher power work. This training plan uses a 'polarised' training model - 80\% low-intensity; 20\% highintensity training - a proven and effective method for distance events. Use your training to test your limits and build confidence - knowing you've done the hard work ahead of the event will give you a boost on the day. In the lead up to your sportive, use your training to test your nutrition strategy so you know how to fuel your body over the 50-mile course.

Training is the perfect time to test your limits. It allows you to understand how far you can push your body and gives you the confidence to know that going into the event you have done the hard work.

## ABOUT THIS TRAINING PLAN

This training plan is designed to give you the fitness and strength you need to ride a 50-mile sportive. It takes into account all the demands of a typical 50-mile event and will deliver you to the start line with the ability to achieve your goal, whether that's completing your first sportive, or aiming for a specific time.

- Strength • Threshold training • Endurance

The 'polarised' training model, incorporates a strength, a threshold and an endurance phase, designed to progress your fitness and training. Your training workload will progress by roughly $11 \%$ week on week throughout the plan, increasing in intensity and duration as you progress. The biggest training load comes in week 10 before a two-week taper, which will allow you to recover and maintain fitness ready for your event


## ABOUT THE AUTHORS

This plan is designed by Veloptima and InPursuitCoaching who together have more than 40 years of racing, coaching, scientific knowledge and experience. It brings together current tried and tested scientific principles, alongside cyclingspecific coaching and training principles to make sure that you develop the specific physical qualities that you will need to complete a 50-mile sportive in fine style.




## TRAINING TIPS AND ADVICE

## CONSISTENCY AND DECISION MAKING

- Be adaptable. Training and life are not always compatible - we get that. Swapping rest days and riding days can help to fit the plan around your life.
- Consistency is key. Skipping sessions, or taking a week off, will undoubtedly put pay to your progress. But if kids, work, DIY etc mean you can't complete an entire session don't stress out, just shorten it instead.
- Don't play catch up. If you do miss a session completely don't try and squeeze it in - you could risk fatigue and injury. The plan is designed to gradually increase your workload and the focus shifts week by week, so if you miss a session simply draw a line under it and carry on with the plan. If you miss more than three sessions in a row go back to the beginning of that week and start again.



## FATIGUE AND RECOVERY

As you move through this training plan you'll increase the workload on your body, which will undoubtedly make you tired and fatigued. Recognising the signs of fatigue is important so that you can allow your body to recover appropriately. Ways to spot fatigue:

## Measure your heart rate

Measuring and recording your resting heart rate two-to-three times per week, is a good way to monitor your general health. Increases of 10-20 beats per minute compared to usual could indicate illness or fatigue. Take a rest day and measure again the next day. If it's back to normal get back on the bike.

## Monitor the quality of your sleep

The pros love sleep and so should you - it helps rebuild proteins and replenish muscle glycogen. Get into a routine where you go to bed and wake up at the same time each day, and don't take your phone to bed - the blue light is thought to disrupt sleep.

## Listen to your body

If you're falling asleep at your desk and your muscles feel sore it's time to take a little break before going back to the plan.

## Add stretches to your warm up and cool down

Adding a stretching routine to your warm up and cool down will improve the quality of your workout and speed up your recovery.

## NUTRITION SUPPORT

Diet plays a huge role in your training. Eating well and timing your nutrition will ensure you are optimally fuelled for each session - allowing you to dig deeper and train harder. Dialling your nutrition will help recovery between sessions too.

A 50-mile sportive is a predominantly endurance-based challenge, which presents unique nutritional needs. Here, are five tips for optimising your nutrition throughout this plan:

1. Eat protein and carbohydrate within 30 minutes of finishing each training session. This is the optimal time to replenish the stores you've used during exercise and to kickstart the recovery and adaptation process.
2. Eat a balanced diet of carbohydrates (roughly 60\%), protein (roughly 25\%) and fats (roughly 15\%). Make sure this includes a good selection of vitamins and minerals derived from fruit and vegetables.
3. Stay hydrated all the time. Water is the main component of your body. Dehydration reduces performance and prevents recovery from exercise. Aim to drink approximately two litres of water per day plus 600-800 ml extra for every hour of exercise.
4. Avoid processed and manufactured foods. A diet of whole and natural foods will help you train and recover better.
5. Eat during sessions longer than 90 minutes. After 90 minutes you will have significantly depleted your muscle glycogen (fuel stores). Eating - real food or energy bars will help your body keep up the intensity and quality of your workout. Aim for a minimum of 1 to 1.5 g carbohydrate per kg of body weight per hour after the first hour. (E.g. if you weigh 80 kg you'll need to eat 80 g of carbs).


## TRAINING LOAD

The duration and intensity of a training session place a stress on your body. This stress is commonly called 'training load': A shorter, low intensity session has a low training load and a longer, higher intensity session has a high training load.

This graph shows how training load is distributed week by week over the duration of the 50-Mile Sportive Plan. Some weeks have a high load, where the body is under physiological stress - as the body adapts to this stress your fitness should improve. Other weeks have a lower load, giving your body a chance to recover fully. Periods of lower load also help maximise your adaptation from the previous, higher intensity training sessions.

As the weekly training load increases throughout the plan, so does the physiological stress and as the two increase, so should your cycling fitness.


## TESTING \& TRAINING ZONES

Before you start a training plan it's useful to test, or evaluate, your current level of cycling fitness. Having a baseline will help gauge how effective your training is and can highlight any weaknesses.

For amateur cyclists and those testing at home, the 20-minute functional threshold power (FTP) test, or 'threshold test', is one of the most common ways to test fitness. An FTP test requires you to ride as hard as you can for 20-minutes. Measured in watts, it's used to determine your training zones (power and heart rate) and to measure improvement. Over time, as you progress through the plan your FTP should increase.

| ZONE | DESCRIPTION | POWER <br> (\%FTP Power) | HEART RATE (\%FTP HR) | PRIMARY PHYSIOLOGICAL ADAPTIONS |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Active Recovery | <55 | <68 | Short term maintenance of physiological abilities |
| 2 | Endurance | 56-75 | 69-83 | Increased fat utilization |
| 3 | Tempo | 76-90 | 84-94 | Increased muscle glycogen storage and oxidative capacity |
| 4 | Lactate Threshold | 91-105 | 95-105 | Increased Oxidative capacity |
| 5 | VO2max | 106-120 | >106 | Increased maximal cardiac output, increased oxidative capacity, fatigue resistance of fast twitch muscle fibres, increased power. |
| 6 | Anaerobic Capacity | 121-150 | N/A | Increased muscle buffering capacity, increased strength and power. |

BLOCK 1

STRENGTH

## BLACK = Alternative session

## WEEK 1

|  | MON | TUE | WED | THU | F R I | SAT | SUN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wattbike Summary | 44 mins max aerobic intervals |  | 1 hour 10 mins low cadence intervals | 30 mins base miles |  | 1 hour steady state | 30 mins recovery ride |
| Wattbike Instructions | Warm up for 10 mins in zone 2, <br> ride for 1 min zone 5, <br> 3 mins zone $1 \times 6$, <br> 10 mins zone 2 cool down | Rest Day | 10 mins zone 1 warm up, <br> 4 mins zone 4 low cadence (<85rpm), <br> 6 mins zone $2 \times 5$, <br> 10 mins zone 1 cool down | 30 mins steady zone 2 ride | Rest Day | 1 hour zone 2 effort | 30 mins easy zone 1 active recovery effort |
| Outdoor <br> Summary |  |  |  |  |  |  |  |
| Outdoor Instructions |  | Rest Day |  |  | Rest Day | 1 hour 30 mins zone 2 steady flat ride | 1 hour easy zone 1 active recovery ride |

WEEK 2

|  | MON | TUE | WED | THU | FRI | SAT | SUN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wattbike Summary |  | $\begin{aligned} & 52 \text { mins } \\ & \text { max aerobic } \\ & \text { intervals } \end{aligned}$ | 1 hour low cadence threshold intervals | 1 hour base miles |  | 1 hour steady state with 1 medium interval | 30 mins recovery ride |
| Wattbike Instructions | Rest Day | Warm up for 10 mins in zone 2, ride for 1 min zone 5, <br> 3 mins zone $1 \times 8$, <br> 10 mins zone 2 cool down | 10 mins zone 2 warm up, <br> 5 mins zone 4 low cadence (<85rpm), <br> 5 mins zone $2 \times 5$, <br> 10 mins zone 2 cool down | 1 hour steady zone 2 ride | Rest Day | 1 hour zone 2 effort with $1 \times 5$ mins low cadence (<85rpm) zone 4 effort | 30 mins easy zone 1 active recovery effort |
| Outdoor <br> Summary |  |  |  |  |  | 1 hour 30 mins base miles with 1 climb | 50 mins recovery ride |
| Outdoor Instructions | Rest Day |  |  |  | Rest Day | 1 hour 30 mins zone 2 steady flat ride with $1 \times 5$ mins low cadence (<85rpm) zone 4 effort | 50 mins zone 1 active recovery ride |

WEEK 3

|  | MON | TUE | WED | THU | FRI | SAT | SUN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wattbike Summary |  | 1 hour max aerobic intervals | 1 hour low cadence threshold intervals | 1 hour base miles |  | 1 hour steady state with medium intervals | $\begin{aligned} & 45 \mathrm{mins} \\ & \text { steady state } \end{aligned}$ |
| Wattbike Instructions | Rest Day | Warm up for 10 mins in zone 2, <br> ride for 1 min zone 5, <br> 3 mins zone $1 \times 10$, <br> 10 mins zone 2 cool down | 10 mins zone 2 warm up, <br> 6 mins zone 4 low cadence (<85rpm), <br> 4 mins zone $2 \times 5$, <br> 10 mins zone 2 cool down | 1 hour steady zone 2 ride | Rest Day | 1 hours zone 2 effort with $2 \times 5$ min low cadence (<85rpm) zone 4 efforts | $\begin{aligned} & 45 \text { mins } \\ & \text { zone } 2 \text { effort } \end{aligned}$ |
| Outdoor <br> Summary |  |  |  |  |  | 1 hour 30 mins base miles with 2 climbs | 1 hour base miles |
| Outdoor Instructions | Rest Day |  |  |  | Rest Day | 1 hour 30 mins zone 2 steady flat ride with $2 \times 5$ min low cadence (<85rpm) zone 4 efforts | 1 hour zone 2 steady ride |

RECOVERY

## WEEK

WEEK 4

|  | MON | TUE | WED | THU | FRI | SAT | SUN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wattbike Summary |  | 1 hour recovery ride | 1 hour recovery ride |  | 1 hour zone 1/2 ride | 1 hour 30 mins zone 2 ride |  |
| Wattbike Instructions | Rest Day | 1 hour zone 1 active recovery session, make sure you stay in zone 1 for the whole of this session | 1 hour zone 1 active recovery session, make sure you stay in zone 1 for the whole of this session | Rest Day | 20 mins zone 1 , <br> 20 mins zone 2 , <br> 20 mins zone 1, <br> all high cadence (>95rpm) | 1 hour 30 mins zone 2 effort | Rest Day |
| Outdoor <br> Summary |  |  |  |  |  | 2 hours base miles |  |
| Outdoor Instructions | Rest Day |  |  | Rest Day |  | 2 hour zone 2 steady base miles ride | Rest Day |

BLOCK 2

## FOCUS:

THRESHOLD TRAINING

WEEK 5

|  | MON | TUE | WED | THU | FRI | SAT | SUN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wattbike Summary |  | 1 hour 30 mins over/under threshold intervals | 1 hour ramping intervals |  | 30 mins base miles | 1 hour steady state | 45 mins steady state |
| Wattbike Instructions | Rest Day | 10 mins zone 2 warm up, <br> 4 mins zone 4, <br> 6 mins zone $3 \times 7$, <br> 10 mins zone 2 cool down | 10 mins zone 2 warm up, <br> 4 mins zone 3 , <br> 2 mins zone 4, <br> 7 mins zone 1 recovery x3, <br> 5 mins zone 2 cool down | Rest Day | 30 mins zone 2 steady ride | 1 hour zone 2 effort | 45 mins zone 2 effort |
| Outdoor <br> Summary |  |  |  |  |  | 2 hours base miles | 1 hour base miles |
| Outdoor Instructions | Rest Day |  |  | Rest Day |  | 2 hours zone 2 <br> flat base miles ride | 1 hour zone 2 flat base miles ride |

WEEK 6

|  | MON | TUE | WED | THU | FRI | SAT | SUN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wattbike Summary |  | 1 hour 30 mins over/under threshold intervals | 1 hour ramping intervals |  | 1 hour 30 mins steady state with one long interval | $\begin{aligned} & 45 \mathrm{mins} \\ & \text { steady state } \end{aligned}$ | $\begin{aligned} & 45 \mathrm{mins} \\ & \text { steady state } \end{aligned}$ |
| Wattbike Instructions | Rest Day | 10 mins zone 2 warm up, <br> 5 mins zone 4, <br> 5 mins zone $3 \times 7$, <br> 10 mins zone 2 cool down | 10 mins zone 2 warm up, <br> 5 mins zone 3 , <br> 3 mins zone 4, <br> 5 mins zone 1 recovery x3, <br> 5 mins zone 2 cool down | Rest Day | 1 hour 30 mins zone 2 effort with $1 \times 10$ mins zone 3 effort | $\begin{aligned} & 45 \text { mins } \\ & \text { zone } 2 \text { effort } \end{aligned}$ | $\begin{aligned} & 45 \text { mins } \\ & \text { zone } 2 \text { effort } \end{aligned}$ |
| Outdoor <br> Summary |  |  |  |  | 2 hours 30 mins base miles ride with 1 climb | 1 hour base miles | 1 hour base miles |
| Outdoor Instructions | Rest Day |  |  | Rest Day | 2 hours 30 mins zone 2 base miles ride with $1 \times 10$ mins zone 3 climb | 1 hour <br> zone 2 average base miles ride, try to keep in zone 2 as much as possible but push on a little on any climbs | 1 hour zone 2 average base miles ride, try to keep in zone 2 as much as possible but push on a little on the climbs |



BLOCK3

FOCUS:
ENDURANCE/FAT UTILISATION

## WEEK 8

|  | MON | TUE | WED | THU | FRI | S AT | SUN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wattbike Summary |  | 45 mins threshold effort | 1 hour 30 mins high cadence intervals | 1 hour steady state | 1 hour tempo session | 45 mins high cadence tempo ride | 1 hour 30 mins steady state with one long interval |
| Wattbike Instructions | Rest Day | 10 mins zone 2 warm up, 30 min zone 4 threshold effort, 5 mins zone 2 cool down | 10 mins zone 2 warm up, <br> 1 mins zone 5 high cadence (>95rpm), <br> 4 mins zone $2 \times 5$, <br> 20 mins zone 2 then repeat, <br> 10 mins zone 2 cool down | 1 hours zone 2 effort | 10 mins zone 1 warm up, <br> 40 mins zone 3 , <br> 10 mins zone 1 cool down | 10 mins zone 1 warm up, <br> 30 mins zone 3 high cadence (>95rpm), <br> 5 mins zone 1 cool down | 1 hour 30 mins zone 2 effort with 1 x 10 mins zone 4 effort |
| Outdoor <br> Summary |  |  |  | 1 hour 30 mins base miles | 1 hour 30 mins tempo ride | 50 mins high cadence tempo ride | 2 hour 30 mins base miles ride with 1 climb |
| Outdoor Instructions | Rest Day |  |  | 1 hour 30 mins zone 2 base miles ride | 10 mins zone 1 warm up, <br> 1 hour 10 mins zone 3, <br> 10 mins zone 1 cool down | 10 mins zone 1 steady warm up, <br> 30 mins zone 3 high cadence (>95rpm), <br> 10 mins zone 1 cool down | 2 hours 30 mins zone 2 ride with 1x 10 mins zone 4 climbs/effort |

WEEK 9

|  | MON | TUE | WED | THU | FRI | S AT | SUN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wattbike Summary |  | 45 mins threshold effort | 1 hour 30 mins high cadence intervals | 1 hour steady state | $\begin{aligned} & 45 \mathrm{~min} \\ & \text { tempo session } \end{aligned}$ | 1 hour tempo session | 2 hours steady state with long intervals |
| Wattbike Instructions | Rest Day | 10 mins zone 2 warm up, <br> 30 mins zone 4 threshold effort, <br> 5 mins zone 2 cool down | 10 mins zone 2 warm up, <br> 90 secs zone 5 high cadence (>95rpm), <br> 3 mins 30 secs zone $2 \times 5$, <br> 20 mins zone 2 then repeat, <br> 10 mins zone 2 cool down | 1 hour zone 2 effort | $\begin{gathered} 45 \text { mins } \\ \text { zone } 3 \text { ride } \end{gathered}$ | 10 mins zone 1 warm up, <br> 40 mins zone 3 , <br> 10 mins zone 1 cool down | 2 hours zone 2 effort with $2 \times 10$ mins zone 4 efforts |
| Outdoor <br> Summary |  |  |  | 2 hours base miles | 1 hour tempo fat burning ride | 1 hour tempo ride | 3 hours base miles ride with 2 climbs |
| Outdoor Instructions | Rest Day |  |  | 2 hours zone 2 base miles ride | 1 hour zone 3 ride | 10 mins zone 1 steady warm up, <br> 40 mins zone 3 , <br> 10 mins zone 1 cool down | 3 hours zone 2 ride with $2 x$ 10 mins zone 4 climbs/efforts |


|  | MON | TUE | WED | THU | FRI | S AT | SUN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wattbike Summary |  | 45 mins threshold effort | 1 hour 30 mins high cadence intervals | 2 hours steady state | 45 mins tempo ride | 1 hour tempo session | 2 hours steady state with long intervals |
| Wattbike Instructions | Rest Day | 10 mins zone 2 warm up, <br> 30 mins zone 4 threshold effort, <br> 5 mins zone 2 cool down | 10 mins zone 2 warm up, <br> 90 secs zone 5 high cadence (>95rpm), <br> 3 mins 30 secs zone $2 \times 5$, <br> 20 mins zone 2 then repeat, <br> 10 mins zone 2 cool down | 2 hour zone 2 effort | 45 mins zone 3 effort | 10 mins zone 1 steady warm up, <br> 40 mins zone 3 , <br> 10 mins zone 1 cool down | 2 hour zone 2 effort with $2 \times 10$ min zone 4 efforts |
| Outdoor <br> Summary |  |  |  | 3 hours base miles | 1 hour tempo ride | 1 hour tempo ride | 3 hours base miles ride with 2 climbs |
| Outdoor Instructions | Rest Day |  |  | 3 hour zone 2 base miles ride | 1 hour zone 3 ride | 10 mins zone 1 steady warm up, <br> 40 mins zone 3 , <br> 10 mins zone 1 cool down | 3 hours zone <br> 2 ride with $2 x$ <br> 10 min zone 4 climbs/efforts |

RECOVERY

## WEEK

WEEK 11

|  | MON | tue | WED | THU | FRI | SAT | sun |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wattbike Summary |  | 30 mins recovery ride | 1 hour recovery ride | 30 mins recovery ride |  | 1 hour 30 mins steady state with long intervals | 2 hours <br> steady state with long intervals |
| Wattbike Instructions | Rest Day | 30 mins zone 1 active recovery session | 1 hour zone 1 active recovery session | $\begin{aligned} & 30 \text { mins } \\ & \text { zone } 1 \text { active } \\ & \text { recovery session } \end{aligned}$ | Rest Day | 1 hour 30 mins $2 \times$ zone 320 mins efforts at high $\qquad$ | 2 hours zone 2 effort with 3x zone 320 mins efforts at high adence (>95rpm) |
| Outdoor |  |  |  |  |  | 2 hours 30 mins base miles with 2 high cadence climbs | 3 hours 30 mins base miles with 3 high cadence climbs |
| Outdoor Instructions | Rest Day |  |  |  | Rest Day | 2 hours 30 min zone 2 steady ride with $2 x$ zone 330 min efforts/climbs at high cadence (>95rpm) | 3 hours 30 mins zone 2 steady ride with $3 x$ zone 330 at high cadence (>95rpm) |

## TAPER

## WEEK

WEEK 12

|  | MON | TUE | WED | THU | FRI | S A T | SUN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wattbike Summary |  | 1 hour 10 mins short high cadence intervals | 30 mins recovery session | 1 hour steady state with intervals |  | 1 hour 40 mins max aerobic intervals into threshold effort | 1 hour activation session |
| Wattbike Instructions | Rest Day | 16 mins zone 1 warm up, <br> 20 secs zone 5 high cadence (100+), <br> 40 secs zone 1 recovery x8, 10 mins zone 1 recovery then repeat to complete a total of 3 times, <br> 10 mins zone 1 cool down | 30 mins zone 1 effort | 1 hour zone 1 effort with $2 \times 10$ min zone 4 climbs and $2 x$ zone 5 5 min high cadence (100rpm+) efforts | Rest Day | ```10 mins zone 1 warm up 5mins zone 5 high cadence 5mins zone 1 recovery, x2 20 mins zone 4 threshold effort then repeat to complete a total of 3 times 5 min zone 1 cool down``` | Activation Session- 20 mins zone 1 warm up, <br> 10 mins zone 4 high cadence (95+) 5 mins zone 1, <br> 10 secs 90\% maximal sprint, <br> 50 secs zone 1 recovery x6, <br> 9 mins zone 4, <br> 10 mins zone 1 cool down |
| Outdoor <br> Summary |  |  | 40 mins recovery ride | 1 hour 20 mins easy ride with climbs |  |  |  |
| Outdoor Instructions | Rest Day |  | 40 mins zone 1 steady ride | 1 hour 20 mins zone 1 ride with $2 \times 10$ mins zone 4 climbs and $2 x$ zone 55 mins high cadence (100rpm+) efforts separated by at least 10 mins | Rest Day |  |  |

