BCA

TRAIN SMART, ACHIEVE MORE

Training Guide

Breakaway Coaching and Analytics

- Periodisation
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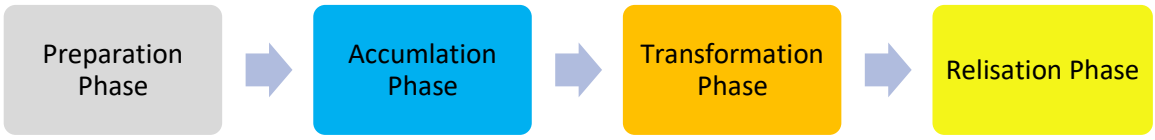
Introduction

Thank you for using a BCA training programme. By doing so you are contributing to the BCA vision – to help as many athletes as possible find new levels of performance they did not know they possessed.

In this training guide you are provided with information on how your training plan has been designed and the periodisation method used. There are also useful terminology tables to help you understand Training Peaks. You can also visit the BCA help centre for more information, there is a link the help centre in your training plan.

Periodisation

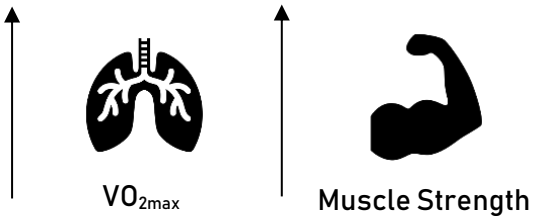
Every BCA training plan has been broken down into phases, these phases include the Preparation Phase, Accumulation Phase, Transformation Phase, and the Realisation Phase. Training becomes more event specific across time to prevent peaking to early or over training. The Strength Training plan is also periodised for peak performance, please see Strength Training guide for details.



Humans are design to work towards a goal. Therefore, outlining (in as much detail as possible) what you want to achieve through the plan will increase the probability of this happing. You can use the excel spreadsheet call 'Targets Sheets' available in the link to the training guides to set your goals.

Phase 1: Preparation:

The Preparation phase aims to set a foundation for your body. Depending on your length of plan the preparation phase can last up to 12 weeks. During this phase of training the plan will work on the opposite off what is required to do well in your event, this will prevent you from peaking to early. Adaptions include:

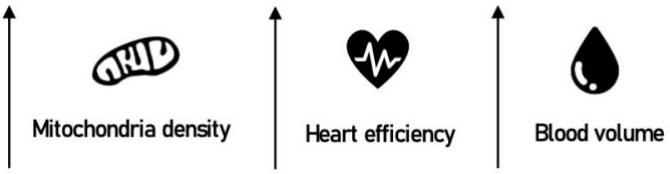


If you are training for a short time trial, interval training during this phase works on tempo or 'sweet-spot' style work. However, if you are training for a longer event such as a marathon, interval training works on developing your VO_{2max}.

Training may feel quite attenable and not to stressful, but this is the aim. Given the preparation phase is very early in the training plan it is important not to feel over worked. This will decrease the accumulative fatigue throughout the plan. Furthermore, the aim should be to start the Accumulation Phase feeling strong/fresh.

Phase 2: Accumulation

The Accumulation phase focuses on building a base endurance. Therefore, a large percentage of training focuses on aerobic workouts (with oxygen). As a result, some of the adaptations that occur during this phase include.



The purpose is to make sure the body is fit enough to complete the event specific training (Transformation Phase). This means improvements may increase at a lower rate but should mean the body is fresh for very high intensity work.

The Training Intensity Distribution (TID) during phase 2 follows two methods, pyramidal and polarized training. If the event you are training for is very long, for example a marathon, IRONMAN, or a Gran Fondo, the TID during the Accumulation Phase focuses on Pyramidal training (split of 80% - 15% - 5% (low intensity – moderate intensity – high intensity). However, if your event is shorter such as a sprint triathlon or a 25-mile (40k) time trial the training focuses on polarized training which follows a split of 80% - 5% - 15% or 80% - 0% - 20%.

In addition, on occasion featured in these plans are block training (BT) weeks. BT is when training focuses on improving specific aspects to an athlete's attributes within certain micro cycles. Science has shown completing blocks of high intensity training during the accumulation phase improves performance more than not including block training.

Recommendations: Don't be tempted to increase the intensity of workouts/intervals. Have the wisdom to show patience throughout the plan. If you find long low intensity rides boring, ride with groups/friends. Practice holding the wheel and how to stay safe in a group.

Phase 3: Transformation

The Transformation Phase focuses on event specific workouts. Therefore, this often means training intensity increases to match or supersede event demands. The phase is shorter as event specific training causes a lot more cumulative fatigue (chronic fatigue that builds up over time – both physiologically and psychologically). Moreover, adaptations made are considerately harder to maintain due to fatigue, resulting in a shorter phase. Adaptations that occur during the phase include.

However, event specific training changes for different events. For example, if your event is a Gran Fondo that is expected to take 4-5 hours, consider training would most likely consist of a 5-6 endurance ride. Each training plan has broken down the demands the event to make sure training takes you to the next level.

Often the TID changes to focus on moderate to high intensity workouts. In some cases, training may even be split 50%-0%-50%. During phase 2 all high intensity workouts match with a very low intensity training session – the hard workouts are harder and easier workouts are easier.

Don't try to lose weight during the Transformation Phase, since energy demands are very high. The quality of the workout must take priority, so fuelling with the right amount nutrients is critical.

Phase 4: Realisation Phase

The Realisation Phase focuses on tapering for the main event. Tapering determines whether an individual is going to be under-trained, over-trained or just right. For optimum results total training volume should decrease between 41-60%, however, shorter taper periods (less than 1 week) can be more. Adaptions include:

The purpose is to allow the athlete to realise their new fitness through recovery, while maintaining the important adaptions that have been made. Similarly, to the Transformation phase, different events have different tapering lengths. Generally speaking, the shorter an event the shorter the taper. For example, a marathon taper may be 2-3 weeks while a short time trial may be 4 days.

Training accommodates for both a Saturday and Sunday event. The Monday of event week has an attached screen shot providing you with the alternate week plan. The default plan sets the event to Sunday, but the alternate plan is for Saturday. If your event is on another day and you need help rearranging the workouts, please let BCA know.

Even if you feel a little under-trained due to illness etc. that does not mean you should skip the realisation phase. For longer event feeling a little under-trained is better than feeling over-trained. However, the opposite applies for short events.

Terminology

As sports science and training peaks terminology can be difficult to understand below is a group of tables with the term and definition. You can refer to this throughout the programme.

Table 1: TrainingPeaks Terms

Name/Term	Definition
FTP (Function Threshold Power)	The amount of power that can be sustained for 1hr. Calculated by 20 min peak power x 0.95.
TSS (Training Stress Score)	A calculation based of duration and intensity. Example, TSS of 100 for 1 hour = 100% of FTP for 1 hour.
IF (Intensity Factor)	The intensity of a workout as a percentage of FTP. Example, 0.85 = 85% of FTP.
NP (Normalized Power)	Considers terrain or intervals completed in a ride. Considered a more accurate measure to average power.
VI (Variability Index)	Calculated through NP/average power. Indicates how steady a workout was. < 1.05 = steady state.
AD (Pw: Hr) Aerobic Decoupling	How much power or heart rate changes from beginning to end of a workout, Example, < 5% = good.
kJ (Kilojoules)	A measure of work completed. Example, 200 watts for 1 hour = 720 kJ
EF (Efficiency Factor)	The ratio of normalized power or pace to heart rate. Example, 243 watts/156 bpm = 1.56 (average)
w/kg	Watts / Body Weight Average watts divided by body weight (kg). Example, 284w / 78kg = 3.64 (average).
VAM (Velocity Ascended)	A measure of how fast you can climb. Velocity ascended in meters / hour.

Table 2: Sport Science Terms

Name/Term	Definition
VO_{2max}	V (rate) of maximal (Max) oxygen consumption (O_2). The maximum rate the heart, lungs and muscles can use oxygen efficiently.
LT (Latic Threshold)	The point at which blood lactate levels begin to rise. However, this is not an exponential rise.
LTP (Lactate Turn Point)	When blood lactate levels increase exponentially – often close to VO2 Max
GET (Gas Exchange Threshold)	Determined by a rise in VCO2 (carbon dioxide) – similar to LT.
VT (Ventilation Threshold)	When breathing rate increases disproportionately to oxygen consumption.

MHR (Max Heart Rate)	MHR Max Heart Rate The maximum your heart rate can climb often calculated by the following: 220-age (220 – 22 years = 198).

Table 3: Nutrition and Strength & Conditioning Terms

Name/Term	Definition
TDEE (Total Daily Energy Expenditure)	The amount of energy expended through physical activity.
PALs (Physical Activity Levels)	Determines how much energy a workout would require.
BMR (Basel Metabolic Rate)	The number of calories burnt in a resting state (also the min amount to live).
SOC (Speed of Contraction)	The speed at which a movement is completed when lifting.
1RM (1 Rep Max)	The maximal amount of weight that can be lifted in 1 rep.
RPE (Rate of Perceived Exertion)	How hard or easy a workout felt (1 = easy, 10 = max effort).

Using a Heart Rate Monitor

If you are using a heart rate monitor, you will notice that for zone 6 training (Anaerobic Capacity) it says max effort. This is because it is very unlikely your heart rate will reach this zone within the time of the interval. Therefore, it would be best for you to complete Anaerobic Endurance workouts (zone 6 intervals) based of Rate of Perceived Exertion (RPE)

In the case of Anaerobic Capacity workouts your RPE should be 9/10 (10 begin on the absolute limit). You will also see within bike workouts PDFs that provide you with extra information include the RPE for that workout. It is important to keep in mind your heart rate reacts slowly to the training demands, meaning it may take a few seconds before it declines after an interval for example. So, don't worry if your heart rate is not always in the right zone.

No	Zone	RPE (0-10)	Description:
1	Recovery	3	After a workout like this you may feel better after, than before the workout.
2	Endurance	4-5	Your all pace should be able to maintain a conversation.
3	Tempo	6-7	Breathing should still be under control but may feel slight burning.
4	Threshold	7-8	Similar to above, but heavier breathing and body hurting sooner.
5	VO_{2max}	8-9	You may describe this effort as being at or close to your limit.
6	Anaerobic	9-10	Breathing will be very heavy and body hurting a lot.

Alternatives

There are always going to be some bumps along the way to your main event. However, this does not mean training needs to suffer, so what should you do if you're in a difficult situation?

Work/Family

A work/training life balance can be hard, which is why all mid-week workouts are shorter (excluding the ELITE plans). However, on days when work and family life is causing more fatigue than usual you have three options: Option 1: shortening the planed intervals and rest period. This way you may only need to work out for 20-30 minutes instead of 45-60 minutes. Option 2: Skip the workout (but try not to miss two days in a row – unless it is a recovery week), conversely swap the workout for a recovery ride (30-45 minutes in duration @ 50-65%). Option 3: Even if you only have 30 minutes available you can still complete a session. Try 30 seconds all out max with 30 seconds rest, repeated 5-10 times.

Illness

Athletes on average get ill twice as much the average person, so the likelihood of training begin impacted by the common cold is high. However, accommodating training is simple, once you have recovered from an illness start training from however many days you missed. For example, if you were ill for 14 days, re-start training from 14 days ago. Although, the first ride back from illness should always be short and low intensity (with 60 mins if cycling @ zone 1 or within 20 minutes if running @ zone 1).

Fatigue

Fatigue is not necessarily a bad thing, but too much is. If your heart rate has been over resting by 7 bpm for 3 days take 1-3 rest days. On the other hand, if you notice your heart rate drops suddenly below your resting heart rate (i.e this should happen slowly over time) then this can also be a sign of fatigue (a rapid drop is not necessarily a good thing). Conversely, starting the recovery week would also be an appropriate alternative. Furthermore, do not neglect subjective measures as it has been shown RPE is closely matched to non-subjective measures. Listen to your body and be honest with yourself.

Alternate Week

All plans are designed for the event to be on the Sunday of the last week. However, if your event is a Saturday see the screenshot attached within the last week of the calendar. This provides you with the details of the alternate week and all you have to do is drag and drop a couple workouts

Training Advice

There are many variables that can affect training (fatigue, work/life schedule etc.), even more so over a longer period of time. However, there are many ways that will help control these variables and adapted training accordingly.

Adapting the Plan

One of the disadvantages to a pre-built plan is its harder to include smaller races in your calendar. However, if (or when) you have small races on the calendar the best time to complete them is during the transformation phase. For example, a short midweek duathlon in the evening would be a good replacement for an interval session.

Conversely, during the Transformation phase, Saturday will often be a tempo endurance workout (1 – 3 hours). Replacing this workout with a B priory race would be good practice. However, as racing can causes more fatigue (both physiological and psychological) the follow days training can be shorted by up to 50% (or if it was a particularly tough race/ event a rest day would be ok).

Reducing Illness

Often the winner of a race is the person who gets ill the least, so naturally it is an important subject. There are a couple of things you can do to avoid illnesses including, increasing Vitamin C intake. Particularly during winter, it may be best to supplement with a Vitamin C tablet to strengthen your immune system. The second option may be an unpopular one but highly effective - avoid alcohol. Alcohol damages dendritic cells which are associated with the immune system. Therefore, avoiding alcohol will prevent declines in your body's ability to fight of colds.

Winter/Bad Weather Training

A lot of people will not live-in climates suitable for training all year round, and ride indoors during the wet and cold months. There are a couple of session that can make the turbo training a bit more interesting without missing too much of the planned workout in the programme:

Tempo Endurance Ride w/ VO2 max Efforts

SESSION:
12 x 6 mins @ Z3 w/ 2:30 mins @ 105-110%

Aerobic Endurance Ride w/ Tempo Intervals

SESSION:
5 x 8 mins @ Z2 w/ 5 mins @ 90-100%

More

Hopefully you found this useful and gave you further insight as to how your plan works and how to get the most out of it. Please feel free keeping BCA updated with your progress, it is great to hear from you. If you have any questions, please do not hesitate to ask.