

Training for the Terra Australis

This is a big event, and one that you need to treat with respect, but at the same time, don't put yourself under too much pressure and worry that you're not going to be fit enough. There are a couple of simple rules:

- 1) You can only do what you can do, so don't worry if you haven't done more than that (sounds obvious, but I thought I'd spell it out clearly and simply for you).
- 2) It's amazing how much time you'll find to train for the Terra Australis if you sit down and have a bit of a think about it. You'll be able to squeeze an extra hour in here and there and this will make all the difference. You can always set your alarm clock an hour earlier in the morning, incorporate training into your commute or train instead of watching telly. Have a good think about it.

At the end of the day, you need to be wise. Be clever enough to train efficiently and use every bit of time you've got available, but be realistic enough to accept your limitations, so that you don't end up getting stressed and worried about not adhering to an impossible plan.



So, the first thing to do once you've finished reading this article is to set yourself a realistic (yet challenging) plan based on the information I will have conveyed. Then stick to it like glue and as long as you don't get to the start line thinking 'I should've worked harder' or 'I should've done more', you'll be as well prepared as you're ever going to be for this fantastic event.

If you can hit the start line as fit and prepared as your time constraints allow, I'll help you further by giving you some sound nutritional advice over the coming weeks too. And I'll let you into a little secret – a poorly conditioned athlete can cover up a multitude of sins with perfect race nutrition, so there's always an emergency option. Despite tipping you off like this, I strongly recommend that you don't try this approach unless you find yourself in the unfortunate position of having no choice in the matter. If you read this article in good time, you have a choice, so make the right one. I assume we all want to 'perform' in the Terra Australis as opposed to simply 'surviving' it? I know I do...

The point of this article is to educate you, so that you've got a better understanding of how your body responds to exercise and improves. It would be easy for me to set you a standard training plan, but that's a bit of a cop out really. One size doesn't fit all, so it's important that you use the principles I'm about to convey and then you can apply them to your own individual circumstances.

So firstly there's **Training Theory**:

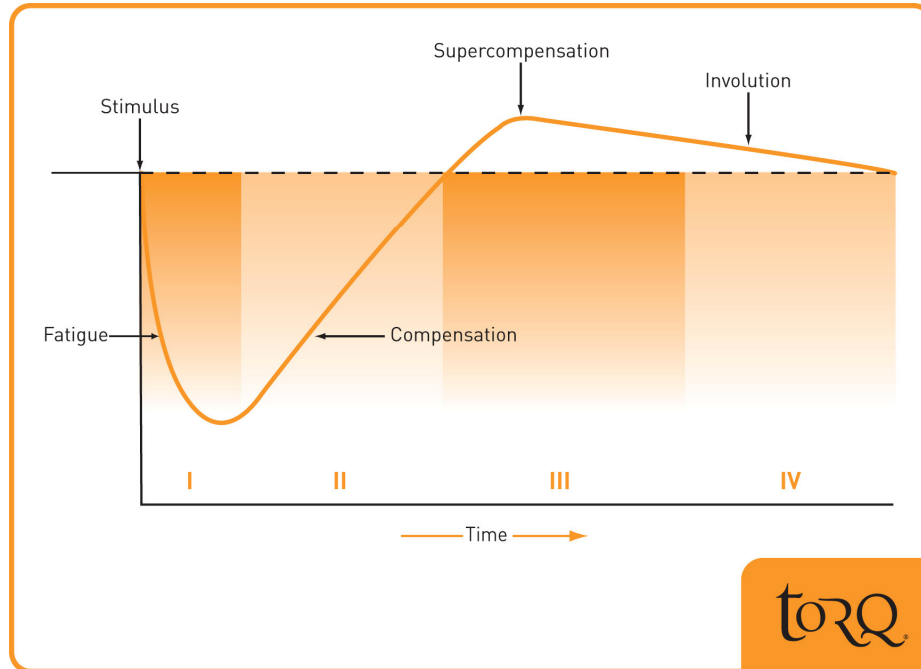


Figure 1. Training Theory. *Diagram adapted from Bompa 'Periodization: Theory and Methodology of Training. Human Kinetics (1999).*

This diagram by Yakovlev in 1967 explains the training process beautifully. If you consider the vertical axis to be your 'energy level' and the horizontal axis to be 'time', **Phase I** shows the fatigue induced by a training session. **Phase II** demonstrates the body recovering and **Phase III** indicates an over-energised state, where the body has actually over-recovered (stronger than it was before the training session). **Phase IV** shows a regression of form as the over-energising wears off.

Each phase is of importance, but it's **Phase III** that we're obviously interested in – the getting stronger bit. How does this happen? Clearly and simply, this is how all biological systems respond to a stimulus. We are not machines, so we don't perform the same amount of consistent work, day in day out and get parts changed when they wear out or break. We are adaptive organisms, which means that when we're put through hardship, we become weaker for a short time (Phase I). The shock of the stimulus causes our bodies to throw every resource they have at the situation (including important components of our diet) to facilitate repair and re-energising (Phase II). It's little wonder then that we get Supercompensation (Phase III) when you consider how over-resourced we become.

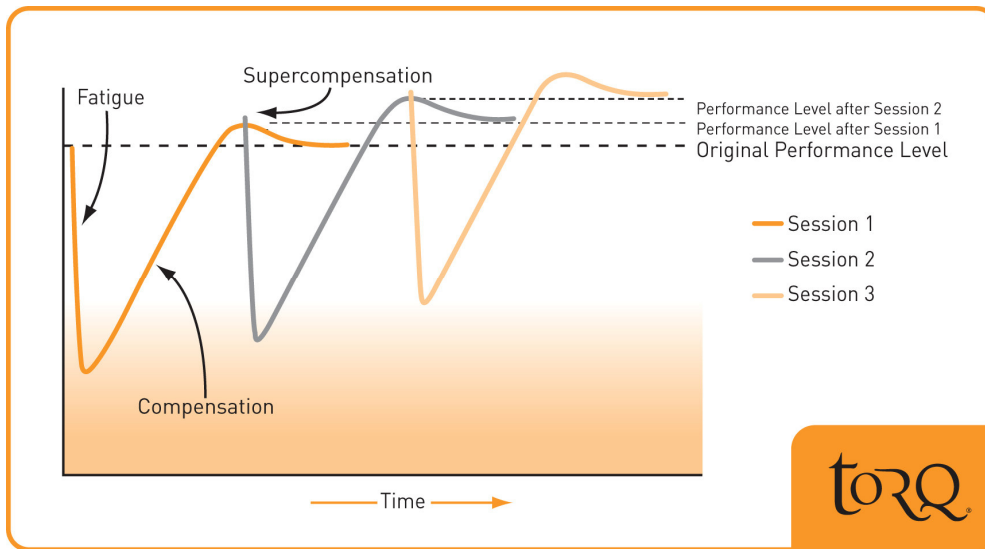


Figure 2. Adaptation Strategy 'A'.

The diagram above shows what happens when you throw a few well-timed training sessions together.

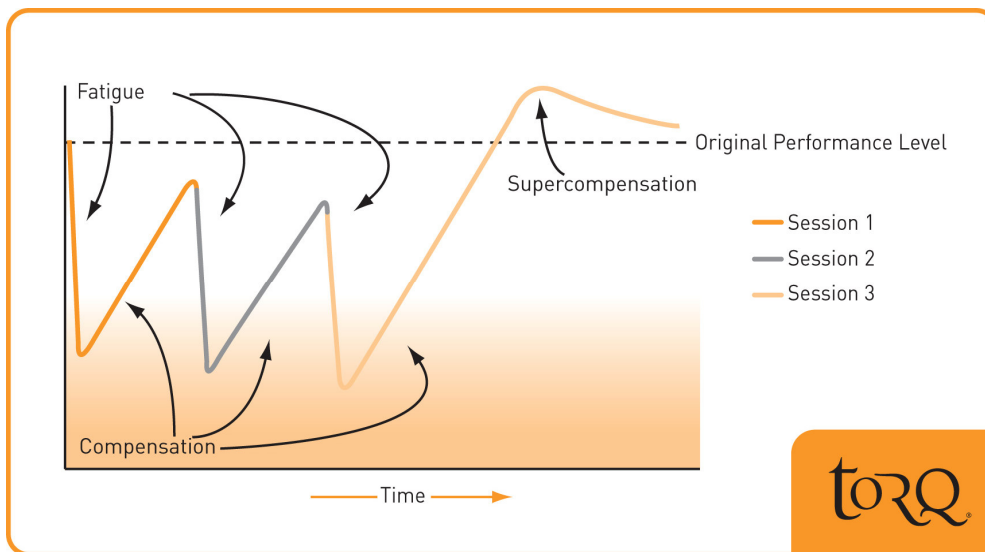


Figure 3. Adaptation Strategy 'B'.

Or you could string a number of training sessions together, deliberately allowing inadequate recovery, thus producing a deep trough of fatigue and a subsequent peak in form for a big event. Do you see any parallels here? So, when you're setting your plan, make sure that you give yourself two or three weeks of real commitment leading up to the event itself and then taper off your training so that you hit the event highly energised and in fantastic form.

Ok, so it's fine me spouting a load of theory, but what does this mean to you? The question that's always asked, is how long a time frame is it from the point of receiving a training stimulus and supercompensation? I'm sure this is a question you'd love to know the answer to and quite frankly, so would I. I can give you some rough ideas, but essentially, what you need to do is take this theory on board and apply it to your own situation. What's important is that when you train, you should do so meaningfully (create a strong stimulus for adaptation).

You also need to respect the recovery process, because this is where all the 'building' work takes place and is how you ultimately get stronger.

There are numerous factors affecting recovery, so this is why I can't pin down a time frame for you. Nutrition, sleep, life stress and illness are the four obvious ones. These are highly individual factors, which is why everyone recovers and adapts at different rates. Suffice to say though, if you have perfect nutrition, get plenty of sleep, chill out more and avoid infection, you'll be able to take a higher training load and ultimately get fitter than you would if you pay no attention to your diet, stay up late boozing, deal badly with stress and kiss sick people!

In the next article we'll be looking at fuelling and recovery during this training phase in detail, but until then, let's stick to the training aspect.

You've got to make every training session you do count and you'd be forgiven for getting confused over the meaning of this. Does it mean that you just hammer yourself on every ride you do to force adaptation? The answer is 'sort of'. Top end anaerobic power comes from hammering yourself for relatively short periods of time. It's all about producing lots of painful lactic acid and buying into the 'no pain no gain' principle. This kind of training produces strength and speed, so prepares you for hard climbs and brief intense periods. It also more importantly provides a component of your overall power, which will be required on a continual basis during higher intensity steadier rides.



Overloading and stimulating adaptation in the aerobic system is much more subtle though. If you work too hard and cause too much pain, you're not working aerobically, or at least you're not working aerobically for long enough to cause significant adaptation. Therefore, to improve your aerobic conditioning, you have to ride at relatively low intensities for long periods of time. It is the time spent in the 'aerobic zone' that causes adaptation. The aerobic system is incredibly efficient and gives you 'easy power', so it's of huge value. One molecule of carbohydrate will go over 15 times further through aerobic metabolism than anaerobic on the basis that it's combusted with fat and oxygen.

What's the most important component of fitness for an event like the Terra Australis? Both aerobic and anaerobic conditioning are essential for a top performance, but due to the lengthy nature of the event, aerobic conditioning has to take precedence. Power developed aerobically uses less carbohydrate, which is ultimately going to be your limiting factor. When your carbohydrate runs out you 'bonk' – and that's you out of the race (you don't want to bonk, because it'll make you cry for so many reasons). So an efficient aerobic system will give you economical power, but if you don't have an anaerobic system, you're not going to have a significant outlet for your race nutrition – if you've got some extra carbs to burn, you may as well burn them and get some speed out of it.



Confused? Hopefully not too much. Below is a beginners example training week, which puts these theories into practice. You might look at this and think it's easy, but worry not, I'll go on to explain how the better riders can adapt this week. If you contact us at TORQ in the UK on enquiries@torq.ltd.uk, we have a 'Training Zones' table that we can send you that will help you to figure out how these different sessions should feel. Just e-mail us and we'll zap one over to you.

Monday: *Easy recovery ride (Zone 1)* to spin the legs after a hard weekend in the saddle. Today would be a good time to do some stretching, core stability work and perhaps some upper body weights if you're itching to do some exercise.

Tuesday: *Interval session (Zone 6)*. Either go out on your bike and do an informal interval session like riding a loop and focussing on certain sections and raising the intensity of your riding so that it hurts! A hilly loop takes care of this for you, because you can just work hard on the hills and take it easy on the descents and flats. If you can't get out on your bike, but have access to a gym bike or turbo, do something more formal. Perhaps 4 X 2mins with a minute recovery between each, then spin gently for 5 minutes and do 4 X 1 minute with a minute recovery. Spin gently again for another 5 minutes and then do 4 X 30sec with a minute recovery.



Wednesday: *Hard/Short aerobic session (Zone 3)*. Ride at 75-85% of your max HR. Generally your max HR is 220 minus your age. Start with 1 hour and build up from there. As the training zones table suggests, this is a solid focussed, but sustainable effort. You could do this either indoors or outdoors, but mentally it's pretty tough on an exercise bike or turbo. Remember to keep this constant and don't freewheel unless you really have to. Don't over-power up the climbs and keep the intensity up on the descents.

Thursday: *Easy recovery ride (Zone 1)* to spin the legs, just like Monday. Once again, today would be a good time to do some stretching, core stability work and perhaps some upper body weights if you're itching to do some exercise.

Friday: *Interval Session (Zone 5)*. Similar to Tuesday, but this time make the efforts longer and more sustained. Make each interval at least 5 minutes long and if you're going to do a formal indoor session, do something like 5 minutes at Zone 5 (maximum sustainable pace for 5 minutes) followed by 2 minutes easy and then repeat. Start with 4 of these and do more as you get fitter.

Saturday/Sunday: *Aerobic session (Zone 2)*: Ride at 65-75% of your Max HR. You could do this session either on the Saturday or Sunday depending on how tired you are during the week, or you could train both days at Zone 2. Start with 2 hours and work upwards from here. Remember to stay in zone and don't sprint the climbs or freewheel. This may feel easy to begin with, but that's the whole point. If you push yourself too hard, you won't be training aerobically.

Your first couple of weeks must be challenging, but not over the top and you should aim to build volume and intensity onto your initial weeks so that you're systematically making each week harder. This is where drawing up a plan for yourself will help hugely. Take an hour out of your day to plan what you're going to do. If the above plan looks too easy, alter it by adding time to the Z2 and Z3 sessions and increasing the number of intervals you're doing. Below is where I plan on getting to in the weeks leading up to the event. Remember, just because this is what I anticipate doing, don't think that this would be the ideal goal for you, because you could be over-cooking, or under-cooking it depending on your fitness level:

Monday: *Easy recovery ride (Zone 1)* to spin the legs after a hard weekend in the saddle. Stretching, core stability work and perhaps some upper body weights.

Tuesday: *Interval session (Zone 6).* 8 X 2mins with a minute recovery between each, then spin gently for 5 minutes and do 8 X 1 minute with a minute recovery. Spin gently again for another 5 minutes and then do 8 X 30sec with a minute recovery.

Wednesday: *Hard/Short aerobic session (Zone 3).* 2.5 hours.

Thursday: *Easy recovery ride (Zone 1)* to spin the legs after a hard weekend in the saddle. Stretching, core stability work and perhaps some upper body weights.

Friday: *Interval Session (Zone 5).* 6 X 10 mins with 5 mins recovery between each interval.

Saturday: *Aerobic session (Zone 2):* 4 hours.

Sunday: *Aerobic session (Zone 2):* 4 hours

Bear in mind that at any point in the training cycle, if I feel that I'm not recovering properly, I will drop a day's training and take an extra recovery day. The training theory diagrams I mentioned earlier will always be at the forefront of my mind and it's vital that allow flexibility within my plan. This may sound like a contradiction when I said earlier on that you should 'stick to your plan like glue', but common sense must prevail. You're not failing by dropping a session, you're being wise. If you can't be bothered to train, that's a different matter.

One last thing, before I close this article. We don't have long before this event starts, so we can't 'periodize' our training (the name applied to advanced training methods involving high and low load weeks), but you should structure your plan so that you factor in a recovery week to encourage adaptation and prevent over training.

Also, to peak for the event, the text books say that you should build a big trough of fatigue about 10 days prior to the event and then just ease up and take it easy.

Here's a rough guide to how your weeks should look in the approach to Terra Australis:

WB 2nd Feb: *Getting into it*
WB 9th Feb: *High Load (move it on from previous week)*
WB 16th Feb: *High Load (move it on from previous week)*
WB 23rd Feb: *Recovery week – drop the volume and intensity and focus on your final build.*
WB 2nd March: *Very High Load*
WB 9th March: *Very High Load (move it on from previous week)*
WB 16th March: *Very High Load, leading into 10-day taper (move it on from previous week).*
WB 23rd March: *Taper (easy week)*
WB 30th March: ***Terra Australis Event Week***

In the next article we'll be looking at your nutrition. If you get this essential component right, you'll be able to train harder and recover quicker.