

# Mental strategies and tools for endurance cycling

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*“The race is won by the rider who can suffer the most” - Eddy Merckx*

There is very little doubt that performance in endurance events is driven as much by mental as by physical factors. The research conclusions seem irrefutable: all other things being equal, the athlete with the strongest mind-set will win.

In any endurance event, at some point in time and after a certain amount of sustained effort, your body will begin sending you messages to slow down. These messages originate in your muscles and your heart and are received and processed by your brain. You experience them initially as a feeling of hard physical effort. As you continue, the messages become more and more insistent to a point where you no longer have a choice: in spite of yourself, you are forced to slow down (and ultimately to stop). In all except the most exceptional circumstances, your brain makes you slow down well before you can do yourself any serious damage. There’s always a substantial margin of safety, and this is where potential improvement lies.

This is true for everyone. However, as always in sports, there’s a mix of nature and nurture in any one individual. We might not all start from the same point, but wherever we are, we can all improve.

⇒ ***With the right mental preparation and the right mental strategy in the moment, you can push back the moment when you are forced to slow down.***

This article digs very specifically into a number of mental strategies that, once learned, can improve your performance. They work by teaching your brain to reduce slightly its inbuilt margin of safety. Don’t worry, it’s almost impossible to take it down to zero!

## **(A LITTLE) THEORY**

Research tells us the key mental factors in endurance performance are:

- your **perception** of how hard it is, and
- your **motivation** to keep going.

If it feels too hard, and there’s no good reason to continue, why would you? Conversely, if the effort feels manageable, and you are motivated to keep going, why wouldn’t you?

**The purpose of mental preparation is thus to learn ways to reduce your perception of effort and/or to increase your motivation, thereby increasing your performance.**

The strategies that follow have all been shown to be effective. Try them out on your training rides, find the ones that work best for you and practice them until they become second nature.

## 1. STRATEGIES TO INCREASE YOUR MOTIVATION

### 1.1 GOALS

Having clear goals is crucial for motivation. Clear goals answer the question “*why am I doing this*” or “*what am I trying to achieve*”, and give you a reason to keep going when things get tough.

It is helpful to think of two different types of goal: outcome goals such as the time you take or the position you achieve – or indeed simply to finish – and process goals related to how you do it. Outcome goals are only partly under your control: achieving them depends also on factors out of your control such as the other competitors and the weather conditions, whereas process goals are (or should be) fully under your control.

Process goals not only help you achieve the desired outcome; they also allow you to salvage something from a disappointing day if you miss your outcome goals through no fault of your own.

Professional athletes will often have three levels of outcome goal: a “best case” scenario for when all goes according to plan, a “bad weather/bad luck” scenario for when something goes wrong (e.g. a puncture or a mechanical) and a “minimum acceptable” scenario for when multiple things go wrong.

Here are some examples you can adapt, using the Marmotte Alps as the example:

#### **Outcome goal examples, for an experienced cyclist**

- The best case goal might be something like: finish in the top 1000/top 12% and/or in less than 07:45.
- The bad luck goal might be to finish in the top 1250/top 15% and/or in less than 08:00.
- The minimum acceptable goal might be to finish in the top 2000/top 25% and/or in less than 08:30.

#### **Process goal examples, for an experienced cyclist**

- Climb the Glandon at 75% of FTP;
- Stop for 2' max at the summit feed station, jacket on, refill and go;
- Eat 60g of carbs and drink one bottle per hour;
- Keep the upper body relaxed on the climbs;
- Start the final climb to Alpe d'Huez at an easy pace, pick up the pace after La Garde...

#### **Outcome goal examples, for a first-timer**

- Best case: Finish the Marmotte before the cut-off (and obtain the official Finisher's medal)
- Bad luck: Finish the Marmotte but too late for the official Finisher's medal
- Minimum acceptable: Do the whole course except the final climb to Alpe d'Huez.

#### **Process goal examples, for a first-timer**

- Do all the climbs nice and easy, while being able to talk to other cyclists;
- Eat something every 20-30 minutes (an energy bar, a banana, etc.);
- Drink little and often, one bottle of isotonic mix per hour;
- Enjoy the experience!

Choose your own process goals by listing what you need to do well and then selecting the 3-5 points that you know from experience are weaknesses. If you always start too fast, set a goal to avoid this. If you sometimes forget to eat and drink at regular intervals, or you stop for too long at the feed stations, set goals to do things differently.

Late in the race, when things get tough and you are really suffering, small, short-term goals can help:

- Keep going until the next corner
- Do 50 more pedal strokes
- Stand up at the next patch of shade...

## **1.2 POSITIVE SELF-TALK**

Unless you have mastered the art of letting your mind go blank, you will inevitably have a constant stream of thoughts going through it. To perform at your best you need to take control, limit or eliminate the negative thoughts (“*this is too hard, this hurts, why am I doing this, why not stop...*”) and direct your attention to what will help you most in the moment.

### **1.2.1 MOTIVATIONAL SELF-TALK**

At times, and especially in the middle of the long climbs, you may find yourself flagging and in need of a motivational boost. During the Marmotte, it usually happens to me on the second half of the Galibier. If this happens, you might tell yourself, for example:

- “*When the going gets tough, the tough get going*” or
- “*This is what you have been training for*” or
- “*I’m so lucky to be here, let’s enjoy it!*” or
- “*Pain is temporary, a good time at the Marmotte is for ever!*”
- “*I can’t stop here, how will I get home?*”

More simply,

- “*Keep pushing, keep pushing*” or
- “*Come on, come on*”.

### **1.2.2 INSTRUCTIONAL SELF-TALK**

It can be helpful to focus on something specific in what you are – or should be – doing.

Coaches call this “instructional self-talk”. For example:

- On the climb to the Glandon, you might remind yourself to stick to your own pace and pedal smoothly and economically.
- When cornering during a high-speed descent, you might remind yourself to look round the corner to where you want to go and to press down hard on the outside foot.

Once you reach the foot of Alpe d’Huez you know there are only 13km left.

- Remind yourself to take the first 3km easy (the slope here is mostly at 10-11%), then to increase the pace after La Garde when the slope eases off slightly.
- From La Garde to Huez on you might be telling yourself “*Smooth power*” and “*Keep pushing*”,
- and from Huez on “*Give it everything*” or “*Leave nothing behind*” or “*Almost there, smash it!*”

### **1.3 VISUALISATION**

Visualising yourself crossing the finish line and imagining how good that will feel may help with motivation, especially in the last quarter or so of the event. Beware, however, not to skip over the many hours of hard riding needed to get there. You want your mind and body to be prepared for the effort, not lulled into a sense of it being easy.

Try to visualise the entire course several times during your training, but especially the last night. See yourself riding it. You are on a good day. It is hard, but manageable. You are keeping a steady pace, riding with a good group. Your heart rate is under control, your pedalling is fluid, you are breathing easily. You drink and eat regularly. The descents are fast and smooth as you take the perfect line through the corners. The landmarks come and go: the col du Glandon, the bridge in St Michel de Maurienne marking the start of the Télégraphe, Valloire, the col du Galibier... You get in a good group and keep drinking and eating while riding fast on the long valley descent to Bourg d'Oisans... Finally, all that's left is the climb to Alpe d'Huez. You take it easy on the steep ramps at the start and pick up the pace after La Garde. Now you are pushing hard and really feeling it. All the effort is worth it as the village finally comes in sight and you finish with a great time!

## **2. STRATEGIES TO REDUCE YOUR PERCEPTION OF EFFORT**

### **2.1 EMBRACE THE PAIN**

During a hard effort, the time will inevitably come when your body tells you to slow down. You can train yourself to ignore these signals (for a while). Long climbs at threshold and high-intensity intervals help to accustom both mind and body to sustained, high levels of effort. Embrace the pain, welcome the discomfort, enjoy your mind's mastery over your body... Don't even think of it as pain, but as something positive: smile at it, feel the warm burn spreading through your muscles, feel the power in your legs and the bike driving forward...

### **2.2 DISTRACT YOURSELF**

The idea here is to take your mind off the pain and discomfort and pedal on auto-pilot while thinking of something else. Be lucid about the cause of the pain, however. Don't make an injury worse, it is not worth it!

Some pain, however, is not specifically injury-related but is a result of the sustained effort. An obvious example is the "lactate burn" in your muscles if you ride for too long above threshold: you can safely ignore this pain and push on for as long as you can tolerate it. The same is true of "hot-foot", which can become severe on a hot day and a long climb. Pushing on through the pain is painful, to say the least, but is unlikely to do any damage.

Distraction involves thinking about something else than the pain. The key is to think about pleasant or positive subjects. Anything negative or stressful will make things worse!

Some different things to try:

- Focus very intently on keeping exactly the same distance from the rider just in front.
- Count pedal strokes (maybe in a foreign language)
- Recite poetry, song lyrics or mantras
- Hold an imaginary conversation

- Relive a memory, or conjure up a favourite place (a beach, a park, ...)
- Think about your future plans
- Enjoy the scenery and the landmarks as they go past
- Let your mind go blank and think of nothing at all.

Whatever works for you, keep it positive, keep bringing your thoughts back to it and don't let the pain intrude.

### **2.3 VISUALISE YOUR TARGET PERFORMANCE**

We have already seen how visualisation can help with motivation. It can also help to reduce your perception of effort. The more you can see yourself doing something in your head, the easier it is to do it in reality. Seeing yourself doing it helps build confidence and self-belief and can also reinforce good technique. Use the technique when doing interval training: visualising yourself powering up the climb or closing the gap to the rider in front will give a greater sense of purpose to the intervals and may help you squeeze out that last few percent of effort.

### **2.4 SMILE**

This is not a joke! There is clear scientific evidence that smiling (or even simply holding a pencil between your teeth to force your face into a sort of smile) releases endorphins and thus reduces your perception of effort, enabling you to ride harder, for longer. Try it next time you do a hard set of intervals. It works for me.

### **2.5 LISTEN TO MUSIC**

If you are on a turbo trainer, listening to music can help crowd out the pain while still allowing you to focus on technique. For maximum impact, choose music with the same beat as your desired cadence.

### **2.6 RELAX**

Deliberately relaxing your upper body and shoulders during a climb should immediately reduce your sense of effort.

### **2.7 LUCKY CHARMS**

If you have a lucky charm that you believe works for you, make sure you bring it. Belief is reality!

## **3. CONTINGENCY PLANNING**

This is a whole category by itself. Contingency planning is about thinking through various things that might go wrong, and planning for how you are going to react. It works because knowing what you are going to do in a bad situation saves time and energy thinking about it. This makes it much easier to stay calm and positive and do the right thing, making the situation less stressful and more manageable.

Here are a few examples. Modify the list to suit your own experience and preferences.

### **3.1 PUNCTURE**

If you have a puncture, you might want to control your emotions (getting mad or frustrated isn't going to help) and then get on quickly and efficiently with repairing it. Make sure you find and remove the cause before putting in a new inner tube, and add a protective layer such as a wrapper or a bank note between the damaged part of the tyre and the inner tube.

### **3.2 BAD WEATHER**

If there is any risk of rain, take a rain jacket. If rain is probable, take long-fingered gloves as well. Rain on the Galibier, even in mid-July, means low temperatures, sometimes close to 0°C. Put your jacket on before it is too late, and in any case before you reach the summit where the wind is always much stronger.

### **3.3 HEAT**

It is often very hot on the final, south-facing climb to Alpe d'Huez. Stop at the feed station and fill both bottles. Keep one to drink and the other to pour on your head, neck and legs. Open your jersey. Start slow and criss-cross the road to stay in the shade. Think of cold places (an icy river, a walk-in refrigerator...)

### **3.4 GETTING DROPPED IN THE VALLEY**

Don't waste energy trying to limit your losses. Ease off and wait for the next group (they are probably no more than a few hundred metres behind). Keep looking over your shoulder so you are ready to accelerate and join the group on as it passes.

### **3.5 BONKING**

One minute all is normal; the next minute it feels like you have ridden into treacle. If you 'bonk' or suddenly run out of energy the remedy is to immediately eat something. A fast-acting gel is usually the best, but if you can't stand the taste almost anything will do. Always keep a reserve in your pocket, just in case.

### **3.6 FEELING SICK**

If you feel sick and unable to take another gel or energy bar, it may be due to dehydration, the onset of heatstroke or simply your body's rejection of sugar after too many hours of fuelling mainly with gels. Take something salty and drink plenty. If the symptoms persist and it's a hot day heatstroke is likely and you must find ways to reduce your core temperature: stop, get in the shade, put your feet in a stream, pour water on your head and on the back of your neck...

### **3.7 CRAMPS**

As soon as you start to feel cramps, back off the pace, take the easiest gear and try to spin them out. Take a fast-acting energy gel and drink plenty. If they persist, get off the bike and stretch the offending muscles, then restart at the easiest possible pace. After a few minutes, you should be able to speed up again.

### **3.8 FEELING DISPIRITED.**

It's not unusual to go through a bad spot on the Marmotte. For most people, the day is two or three times tougher than even a hard training ride. Remind yourself you have trained for this, you are ready for it, you are here by choice. Everybody goes through a rough patch. Look around: if you are hurting, the others surely are too. It will pass.

### **3.9 BEFORE THE START**

Finally, it is worth noting that stress and mental fatigue will increase your perception of effort. It is worth doing everything possible to arrive at the Marmotte in a relaxed, stress-free state.

## FINAL WORD

There's a lot to take in here, especially if the subject is new to you. All these recommendations have solid scientific evidence behind them (references below) and are widely used in the professional peloton.

Training your brain is like training your body: it takes time, and it doesn't happen by itself. Think about it, make a plan, write your plan down, re-read it regularly and visualise yourself reacting in the most effective way.

## REFERENCES

Hutchinson, Alex (2018). [\*Endure – Mind, Body and the Curiously Elastic Limits of Human Performance\*](#), Harper Collins.

Meijen, Carla (editor) (2019). [\*Endurance Performance in Sport, Psychological Theory and Interventions\*](#), Routledge.

On the Alpine Cols blog:

[\*Book review: Endure, by Alex Hutchinson\*](#)  
[\*Riding through the pain barrier\*](#)

## SUPPORT FROM ALPINE COLS

We can help you prepare for your target events in two complementary ways:

1. Sign up for a six-month [\*coaching agreement\*](#) to receive individual day-to-day coaching and one-on-one advice;
2. Join a one-week [\*coaching camp\*](#) to benefit from a big block of training as well as one-on-one coaching on your technical skills and of course plenty of advice and tips for your preparation and the event itself.