



## Marius Morstad on endurance training pt 1.

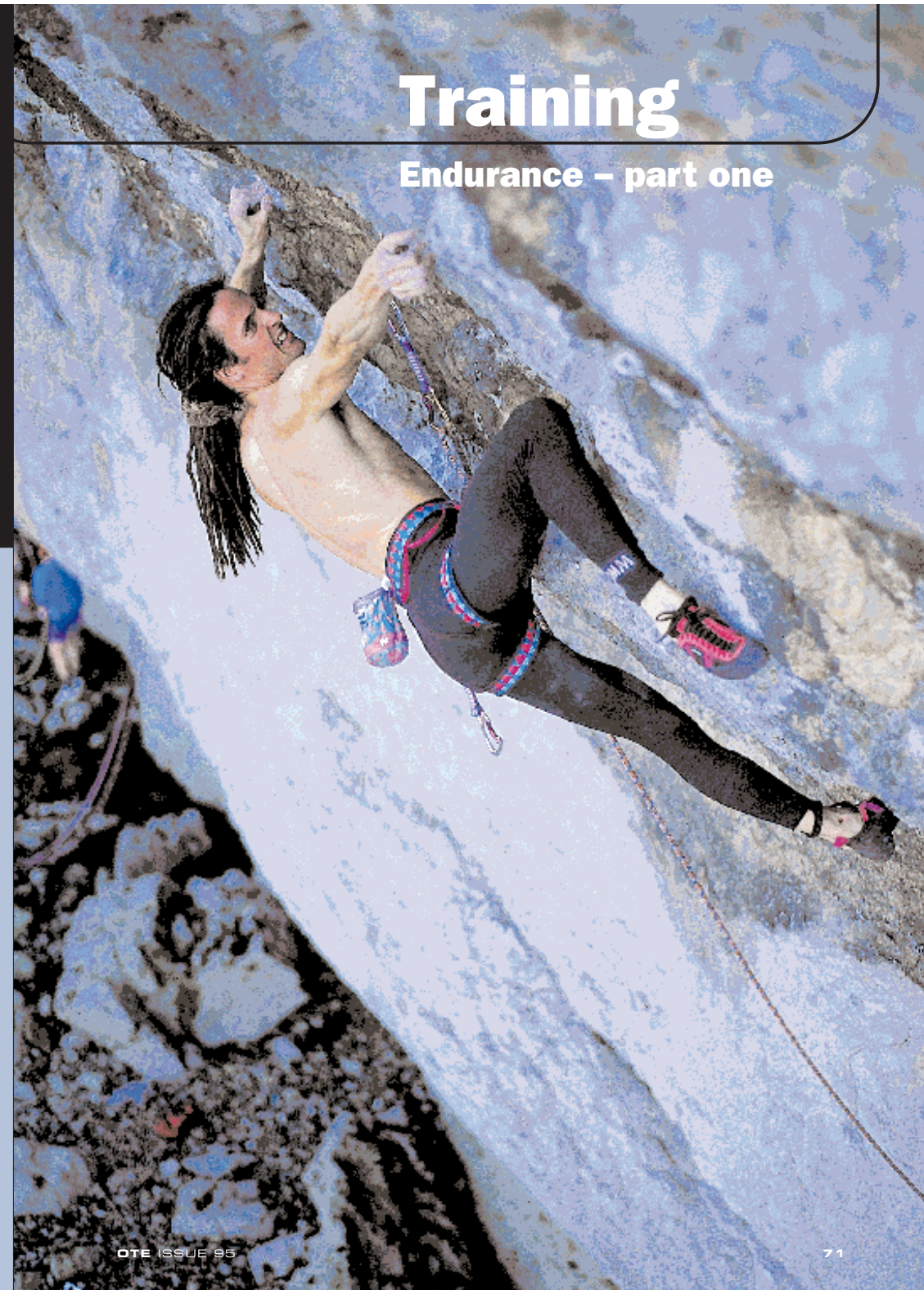
Left: Marius Morstad showing Ben Moon, Jerry Moffatt and Malcolm Smith how to climb at Fontainebleau. In most cases bouldering would be defined as a high intensity (read high level of difficulty) activity and is not suitable for endurance training. Doing a circuit at Fontainebleau would be an enjoyable exception to that rule. Darrren Stevenson

So far we have approached the underlying factors that improve the ability to do one move by attacking the mechanical factors concerning strength. If you get stronger, moving gets easier because you use less energy doing a move. If you spend less energy doing a move (because you can climb quicker or use a smaller part of the muscle), you've got more energy left for the rest of the climb, making it feel easier. In this article we will approach improving your climbing skill from a physiological perspective, in other words to have more energy available per time unit, so fatigue is delayed. But here I run into cultural trouble: for most climbers endurance training means getting pumped, and the more pumped the better. This training culture transferred into another sport, running for instance, is pretty funny. Imagine a middle distance runner going at full speed until his legs are so stiff that he can't move any more. He then lays down for half an hour smoking a fag. When he feels okay again, say after half an hour, he goes again until he is totally wasted, then he rests again or goes to the pub.

Another popular method for endurance training is traversing. It's okay if that's what you want to get good at, but think about it for a second. Climbing is mainly about moving vertically, in 25m of climbing you have moved your centre of gravity at least the same distance. When traversing you only move your centre of gravity a couple of metres in the vertical direction. This also has a direct influence of your climbing technique – what you do, you become. Next time at your local wall, when you see the poser traversing around in his vest, showing off his muscles all impressed by himself, just point this out to him.

To be more specific I will use some terms from regular sports terminology, volume and intensity. Volume will be metres or moves climbed, intensity will be the grade of the route. The key to endurance training – to make your body adapt and change in line with your desire and ambition – is the amount of time spent climbing, doing the moves. These bodily changes are, for different reasons, quite subtle and the body needs to be constantly reminded; if not, nothing is really happening. Okay, you have reached a certain level in your climbing and you want to move up the grading scale. One option is to start climbing at your desired level. But when you do that your volume drops, you climb slower and so your technique changes. You struggle so much that you end up having problems with motivation.

But it doesn't have to be like that. Why not make use of the knowledge that already exists in training methodology to smooth the transition to a higher grade?



# Training

## Endurance – part one

Right: Ben Moon on Sea of Tranquility F8c at Lower Pen Trwyn. Most of the world's hardest routes require high levels of endurance which can only be achieved through a high volume of climbing. Getting the right balance between volume and intensity is crucial to success. Steve Lewis

# Training Endurance – part one

Firstly, find a grade that it is possible for you to on-sight, say four out of five routes of, and almost make it on the fifth, and if you go out the next day you can do the same. It might be an embarrassing grade, but who cares, at least you are comfortable doing it. By doing this you will also increase your self confidence at that level by climbing faster and worrying less. Now you are in the starting blocks to make a plan to improve your endurance. You now have two options: one is to drop one grade and do more than five routes at your tested on-sight level, increasing the volume and decreasing intensity. The other option is to jump one grade up, increase intensity and decrease volume. A typical session could look like this:

Your tested on-sight level is French 6a, go down a grade to 5c and do from 8-10 routes at that level. The other option is to do a couple of easy routes (5c or easier) and then try to do three or four 6b routes. The problem with this method is that you will need a lot of routes you haven't done before and it is quite time consuming. Alternatively, if you know the routes already and don't have so much time to spare, is to do this: find the grade you can climb continuously at for say 20 minutes. Climb, lower down and start again. Vary the route's character and angle, be careful not to choose too hard a route to start with, so you don't get wasted and consequently can't keep the grade throughout the whole session.

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One of the big misunderstandings in climbing and training for improving endurance is that you have to get totally pumped every time, all the time. The problem with this totally wasted habit is that you need more time to recuperate after the session, the total volume in the target area gets small, and naturally you can't climb very hard when your forearms are totally pumped. It also alters your technique in a way you don't want it altered. Another method is to start with a 5a, then a 5b, then 5c, then 6a, then 6b, then try 6c, then go down again. When you already know the routes you have to find the level according to the above criteria.

During the first eight weeks you will mainly be getting used to training, from then on the real work starts and the progress will be slower. To get further you will have to try to increase the volume whilst maintaining the same grade. Try to stay in this process-oriented mood when you are out on climbing trips; lower the grades, climb all day, everyday, when you have the opportunity. Remember to stay sharp and focus on the execution of the moves and don't climb like a headless chicken. It might be too tough to increase the grade/intensity on all weekly sessions, so choose to do only one of the sessions at higher intensity. If you feel pain somewhere or feel tired, just take it easy, take a day off.

A week could look like this:

## Sunday, Tuesday and Thursday

10 routes of 5c (Volume/grade = 250m/5c)  
 2 routes of 5c (Vol/grade = 50m/5c)  
 4 routes of 6b (Vol/grade = 100m/6b)  
 10 routes of 5c (Vol/grade = 250m/5c)  
 Weekly Vol/grade = 550m/5c; 100m/6b  
 Total volume = 650m

Or like this if you know the routes well:

## Sunday, Tuesday, Thursday

10 routes of 5b continuous climbing  
 Vol/grade=250m/5b  
 2 routes of 5b Vol/grade = 50m/5b  
 2 routes of 5c 50m/5c  
 1 route of 6a 25m/6a  
 1 route of 6b 25m/6b  
 1 route of 6c 25m/6c/  
 10 routes of 6a alternating with partner  
 Vol/grade = 250m/6a  
 Weekly vol/grade = 900m/5b, 150m/5c, 875m/6a  
 75m/6b, 75m/6c  
 Total volume = 2075m

The next step will be to increase the volume: metres climbed each session and each week. Adding another session a week can also increase the volume. Slowly increase the volume over the first four weeks but be patient, don't increase the intensity/grade. After four weeks go back to week one, increase the grade but use the same volume, and then slowly, more slowly than in the first four weeks, increase the volume. Take is steady, be sure to be able to follow the program in good style.

This is how it could look like after eight weeks if you know the routes:

## Sunday, Tuesday, Thursday

10 routes of 5c continuous climbing  
 Vol/grade = 5c/250m  
 2 routes of 5c  
 2 routes of 6a  
 1 route of 6b  
 1 route of 6c  
 1 route of 7a  
 10 routes of 6b alternating with partner  
 Vol/grade = 300m/5c, 50m/6a, 275m/6b, 25m/6c,  
 25m/7a  
 Weekly vol/grade = 900m/5c, 150m/6a, 825m/6b, 75m/6c,  
 25m/7a  
 Total volume = 1975m

Marius Morstad works at the Norwegian University for Sport. He is a long time friend and advisor to Ben and Jerry.



Above: Ben Moon flagging, but not through lack of endurance, on The Maximum F8b at Malham. Moon coll

## Ben's bit

### ENDURANCE AND MOTIVATION

As we have already mentioned in the previous articles *motivation* and *climbing more* are the keys to success. We really can't emphasise this enough and we will continue to go on about this throughout the series. Marius has asked me to tell a little story I told him from my early days climbing, although what it has to do with motivation and climbing more I am not sure!

Academically speaking my final year at school was a total disaster but in other ways it was the springboard to greater things. The only reading I managed was that of climbing books and magazines and all I could think about was climbing and how I could do more. In the summer, when the exams started, I remember walking through the house where all my friends were studying hard and just thinking about how much I didn't want to be there and that the summer holidays couldn't come soon enough. When they finally came they ended up lasting a little longer than they should. My exam results came through and surprise, surprise, my school didn't want me back! At the age of 16 I was free to do exactly as I wanted.

I packed all my climbing gear together and headed for the start of the M1. This was about '83 and I had read about a place called Stoney Middleton that apparently was the place to be so I made a beeline for it. I arrived late at night, alone and in the rain and there was not a soul to be seen. I felt totally disappointed, a little bit scared and I remember phoning my brother to try to get some moral support. Not knowing what to do I thought I would hitch over to Wales the next day where hopefully I would meet up with some climbers and finally be able to go climbing. I dosed down by the big oil drums at the garage in the village, a place which later became known as the Land of the Midnight Sun on account of the orange light that stayed on all night!

The next day was the weirdest and was to change my life forever. I had never climbed in Wales although I knew a bit about it from the books I had read and I don't remember having a plan as to where I was going, just that I had to get there. I spent the whole day hitching and just like the previous day arrived late in the evening. My last lift took me to a place I hadn't heard of called Llandudno. The young couple I was with wanted to take the drive around the Little Orme and since I didn't know where I was going I thought I'd better stay with them for as long as I could. As soon as we passed through the toll I knew I had made the right decision. To the left was a huge limestone cliff just swarming with climbers and I immediately told the couple that here would do fine. I jumped out and started walking up the road looking at the climbers. One stood out above all others. He was dressed in a pair of red tights with white socks up to his knees and was hanging on a rope, cursing and swearing about sore skin. I sat down on the wall with some other climbers to watch. After a little time and a lot of effort he made it to the top. The route was called Electric Kool Aid Acid Test, grade E5 6c. It was the 3rd ascent and the climber was Jerry Moffatt. The other climbers around made up a list of who's who in British climbing at the time, among them Ron Fawcett, Andy Pollitt, Chris Gore and Martin Atkinson. Later that evening I was with them all when we got thrown out of the London pub. I couldn't believe how the day had turned out and remember again phoning my brother and telling him I was in the pub with Jerry Moffatt! I became good friends with all of them but best friends with Jerry and we have been climbing together ever since (and he is still cursing and swearing.) That summer, which ranks as one of my best ever, my climbing standard went from E1 to E5. The following year I put up Statement of Youth at Lower Pen Trwyn. Graded F8a it was the second hardest route in Britain.

I suppose the moral of the story is that if you want something badly enough, and go after it with all your heart, things will come good in the end. If you really want to get better at climbing, you will.

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