

## Winter Training Guide Part 3 – Ergo Training

Training on the ergometer is the closest simulation to training in the boat, and has some distinct advantages: you can do it in all weathers and in the hours of darkness; it is especially useful when the river is unrowable because of floods or other problems; you can do it on your own; and most importantly, you can follow a precisely measured work programme more readily than is possible on the water. It is not a complete substitute for training on the water, of course, because you don't have the same opportunity to develop your skills in a boat and as part of a crew, but nonetheless it is a very useful part of your overall training programme and you should aim to have at least one or two sessions a week on the ergometer.

If you are new to ergometers, it's important to know how to set the machine up. The first thing to check is the setting of the damper on the side of the fan, which allows you to adjust the amount of the resistance between settings of 1 to 10. Many people assume that high resistance must be best and set it at 10, but this makes it far too heavy and doesn't reproduce the feel of rowing in a fast racing boat, so set it about 3 or 4. (It makes no difference to the scores you achieve.) You can also adjust the height of your feet on the stretcher by moving the heels up or down – aim to have the strap level with the balls of your feet. You should also adjust the height of the monitor so that it is comfortably level with your eyeline.

It is also very important to row with good technique. The basics of the stroke are well illustrated on the Concept 2 website: <http://www.concept2.co.uk/indoor-rowers/training/technique-videos>. Some further tips are:

- make sure you maintain good posture throughout the stroke cycle. Sit tall and relaxed, don't let your upper body and/or head flop around, avoid any tension in your shoulders or arms, keep your back in a strong position but relaxed.
- during the drive phase, use your different muscle groups in the right sequence to build and sustain strong acceleration of the handle throughout the stroke. Start with a strong leg drive, then swing the body back from the hips during the middle of the stroke. Keep the arms straight and relaxed as long as possible, then complete the stroke by using the shoulders and arms to draw the handle to your chest.
- be patient and complete each stroke properly, maintaining pressure on the footplate and keeping your body stable while the shoulders/arms finish the stroke. (A common fault is to rush on to the next stroke before completing the current one, so that your shoulders start to come forward and/or your knees start coming up while the arms are still pulling.)
- maintain a good rhythm, keeping it slow and controlled on the recovery and paying attention to your hands/body/slide sequence. A good exercise is to see how well you can maintain your chosen pace while gradually reducing the rating. If you're new to rowing it's also good to experiment with rowing at different pressures – from moderately hard to hard to very hard – to experience how each of these feels. Make sure your technique doesn't get abandoned as you increase the intensity.

One mistake that some people make when training on the ergo is always to go flat out until they are exhausted (which usually doesn't take long). As a result they quickly come to hate it and give up using it altogether. But in any case this is not the most effective way to train. Instead, you should use variety in your programme, training at different levels of intensity, each of which

has a different physiological effect. Particularly in the winter, you can derive a lot of benefit from long, low intensity pieces of work on the ergometer.

Ergo training is another large subject and a good deal of useful guidance can be found on the internet (see for example <https://indoorsportservices.co.uk/training/interactive>). However, you should bear in mind that this is generally aiming at those who race over 2000m, whereas we seldom race more than 1000m at local regattas, and the training should be modified accordingly. As with other forms of training, also, you should be conscious of your own physical state and tailor the training to it rather than following a predetermined programme slavishly. If you are feeling too tired from the sessions, for example, drop back to a lower number of sessions or perform them at a lower intensity. It is also vital to be aware of your possible changing needs for more sleep, more food and, perhaps most importantly, more hydration.

Also, if the schedule represents a big jump in training you may need to take longer to build up to the quantity of training suggested. If you are not sure, do less than is suggested here rather than ploughing on and finding it is too much. If you are keeping a log do not try every time to beat (or even match) the time that you did on the previous occasion for the particular type of session. If you 'race' in this way you will initially find it very satisfying but will soon become disheartened and perhaps burned out by overtraining.

The different intensities of training are described on the Concept 2 website in the following table:

<b>Band</b>	<b>Type of Work</b>	<b>% MHR</b>	<b>Rate (SPM)</b>	<b>What it is good for</b>	<b>How you feel</b>
UT2	Utilisation 2. Light aerobic, low intensity work. Sustainable and fat burning.	55-70	18-20	General cardiovascular fitness.	Very relaxed. Easily able to carry on a conversation.
UT1	Utilisation 1. Heavy aerobic work using more oxygen.	70-80	20-24	Higher level of cardiovascular fitness.	Working. Feeling warmer. Heart rate and respiration up. Sweating. Can carry on a conversation with difficulty
AT	Anaerobic Threshold. Harder work. On the aerobic limit. Pushing into anaerobic area.	80-85	24-28	High level of cardiovascular fitness. Building mental and physical tolerance.	Hard work. Heart rate and respiration up. Carbon dioxide build up. Sweating. Breathing hard.
TR	Oxygen Transportation. Working hard. Unsustainable for long periods.	85-90	28-32	Developing oxygen transport to the muscles under stress. Increasing cardiac output.	Stressed. Panting. Sweating freely.
AN	Anaerobic (without oxygen). Short bursts of maximum effort. Unsustainable. Burning carbohydrate.	90-100	32+	Anaerobic work. Increasing speed. Accustoming the body to work without oxygen.	Very stressful. Gasping. Sweating heavily.

**Notes:**

SPM = strokes per minute

%MHR = percentage of maximum heart rate

**As you will see, the key objective is to have the heart working at the right level in order to produce the desired physiological response. This is easy if you have a heart rate monitor, but if you don't then you can still find the right intensity to train at by using the following table to calculate an appropriate training pace to work at, basing it on the result of your 1,000m test. This is only an approximation, however, and after trying it you may want to vary the target pace up or down in the light of your experience, perhaps even by as much as five seconds.**

**Training pace (per 500m)**

<b>1000m test time</b>	<b>UT2</b>	<b>UT1</b>	<b>AT</b>
03:20	02:08	02:03	02:00
03:22	02:09	02:04	02:01
03:24	02:11	02:05	02:02
03:26	02:12	02:07	02:04
03:28	02:13	02:08	02:05
03:30	02:14	02:09	02:06
03:32	02:16	02:10	02:07
03:34	02:17	02:12	02:08
03:36	02:18	02:13	02:10
03:38	02:20	02:14	02:11
03:40	02:21	02:15	02:12
03:42	02:22	02:17	02:13
03:44	02:23	02:18	02:14
03:46	02:25	02:19	02:16
03:48	02:26	02:20	02:17
03:50	02:27	02:21	02:18
03:52	02:28	02:23	02:19
03:54	02:30	02:24	02:20
03:56	02:31	02:25	02:22
03:58	02:32	02:26	02:23
04:00	02:34	02:28	02:24
04:02	02:35	02:29	02:25
04:04	02:36	02:30	02:26
04:06	02:37	02:31	02:28
04:08	02:39	02:33	02:29
04:10	02:40	02:34	02:30
04:12	02:41	02:35	02:31
04:14	02:43	02:36	02:32
04:16	02:44	02:37	02:34
04:18	02:45	02:39	02:35
04:20	02:46	02:40	02:36
04:22	02:48	02:41	02:37
04:24	02:49	02:42	02:38
04:26	02:50	02:44	02:40
04:28	02:52	02:45	02:41
04:30	02:53	02:46	02:42

Here is a sample programme that you might follow in the period October to December, assuming you are using the ergo twice a week:

<i>Week</i>	<i>Session 1</i>	<i>Session 2</i>
1	1,000m test 30 mins UT2	30 mins UT2
2	30 mins UT2	2x15 mins UT1
3	5,000m test	2x10 mins UT1
4	30 mins UT2	2x15 mins UT1
5	40 mins UT2	2x12 mins UT1
6	50 mins UT2	2x10 mins UT1
7	30 mins UT2	2x7 mins AT
8	5,000m test	2x10 mins UT1
9	30 mins UT2	2x10 mins UT1
10	40 mins UT2	2x8 mins AT
11	50 mins UT2	2x10 mins UT1
12	40 mins UT2	2x9 mins AT
13	5,000m test	2x10 mins UT1

2xY mins UT1 means 2 sets of Y minutes with Y/2 minutes rest between sets

2xZ mins AT means 2 sets of Z minutes with Z minutes rest between sets

You may also want to use guidance from the web in devising your own training programme – see for example <https://indoorsportservices.co.uk/training/interactive>.

And here is a sample programme for the following period – January to mid-March:

<i>Week</i>	<i>Session 1</i>	<i>Session 2</i>
1	4x10mins UT1	2x18mins UT1
2	2x7mins AT	2x12mins UT1
3	TEST 1,000m 35mins UT2	2x16mins UT1
4	3x7mins AT	3x15mins UT1
5	2x7mins AT	3x12mins UT1
6	2x7mins AT	2x4mins TR
7	TEST 1,000m 2x13mins UT1	6x2mins TR
8	2x7mins AT	3x2mins TR
9	2x7mins AT	2x4mins TR
10	2x9mins AT	3x3mins TR
11	TEST 1,000m 20mins UT1	3x2mins TR

Particularly for the sessions at higher intensity, you should start the session by warming up and stretching to get your body ready for the hard work involved, and also cool down and stretch again at the end.