

the **CrossFit** JOURNAL ARTICLES

Using Worldwide Erg Data to Fine-Tune Your Training

Judy Geer

Would you like to hone your indoor rowing training to target the specific areas where you need it most?

There's a powerful source of international training data available on the Internet. Since 1999, rowers all over the world have been entering their personal best times for a variety of race distances on Concept2 rowers into a database called the Online World Ranking. The tests range from a 500-meter sprint to the 42-kilometer marathon, and the age groups range from under 18 to over 80. Men, women, lightweights, and heavyweights have all been submitting their times. There are now thousands of data points collected here. The database is easy to access, free, and searchable, so it's easy to pull out just the data that you want.

OK, great. But why should you care about someone else's rowing results? How can other people's data help you to become faster and fitter?

There are a number of ways that you can use this data to improve your own fitness, from setting goals to monitoring progress to analyzing strengths and weaknesses.

First, though, here's how to access the database:

1. Go to www.concept2.com.
2. Click on **Ranking & Log** in the upper right corner.
3. Click on **Rankings** in the upper right corner.
4. Now choose the distance, age group, gender, and weight class that interests you. You can choose to specify city, state, and country, but

for our purposes it's best to leave these blank in order to get the biggest data pool.

5. Note that the ranking season ends on April 30. The later in the season it is, the more data there will be. If it's early in a season, it would be more informative to use the prior season's data.
6. Click **Continue** to start the search. Within a few seconds, the results you requested will be displayed.
7. The fastest performance to date during the season specified will be shown at the top of the list. Above the table, you will find the scores that correspond to the 90th, 75th, 50th, and 25th percentiles for the data pool you requested, as well as the average score.

How good is this data? The Performance Monitor on the Concept2 Indoor Rower is not just a simple revolution counter. It carefully measures the acceleration and deceleration of the flywheel on every stroke and uses that data to calculate the actual power being dissipated by the flywheel, which it then converts to speed, pace, watts, and calories for the display. It also recalibrates itself with every stroke to account for environmental conditions. And every flywheel is calibrated at the factory so as to keep the calculations accurate to within .01%. This accuracy is what makes it possible to compare scores rowed anywhere in the world. Indeed this accuracy makes the Online World Ranking possible.

Now that you have all this data at your fingertips, here's how you can use it to improve your own training.

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Test yourself

Use the pre-set workout function of the Performance Monitor (PM) to set the exact distance for your time-trial. As you row, the PM will count down the meters to zero and then display your time at the end. Record your time. You can also use the memory function to obtain additional information about your workout, such as average pace.

Rank yourself

Go to concept2.com and set up a personal logbook, if you don't already have one. Enter your time-trial result and click the Rank button to rank your piece. Now click the Ranked Workouts tab to view your standing. You can also go back to the searchable Online Ranking itself, enter your event, age group, gender, and weight class, and find yourself in the list. Now that you've done this for one distance, try a few more. The more you do, the more you will learn about your own conditioning relative to everyone else who has entered data.

Challenge yourself

Now that you know where you stand, you can start to set goals. Take a look at the fastest times for the different distances. There is always the ultimate goal of besting everyone else...and bringing home a world record in one or more categories. Or maybe you just want to set a goal of improving your percentile ranking by five or ten points for each ranking distance. See how high you can get in the rankings by April 30, when the '07 season closes.

Analyze your strengths and weaknesses

The most powerful way to use the data, though, is to compare your own personal best scores for all the different distances to the accumulated data for your age/gender/weight class, you can learn a lot about your relative strengths and weaknesses. At which distance is your percentile ranking the highest? At which distance is it the lowest? Are you in 90th percentile for the 500-meter piece, but only average for the 10k? Armed with this information, you can then focus your training program where it will benefit your conditioning the most.

As an example, the following tables contain data obtained from the online ranking for men's and women's age 30-39 heavyweight categories. ("Heavyweight" is an old rowing term that means over 165 pounds for men and over 135 pounds for women.) The first column contains the time-trial distance in meters. The second column, "2007 Record," is the fastest time that has been posted for that distance since May 1, 2006. The third column, "Record pace," indicates the pace per 500 meters that was required to achieve the record time. It is helpful to understand pace since the PM displays it while you are rowing. It's just like time per mile in running. The faster you go, the lower your pace number because it is taking you less time to row 500 meters.

Add your own data to the last two columns. If you didn't record your pace, you can use the pace calculator at <http://www.concept2.com/us/training/tools/calculators/pacecalculator.asp> to quickly calculate it from your time.

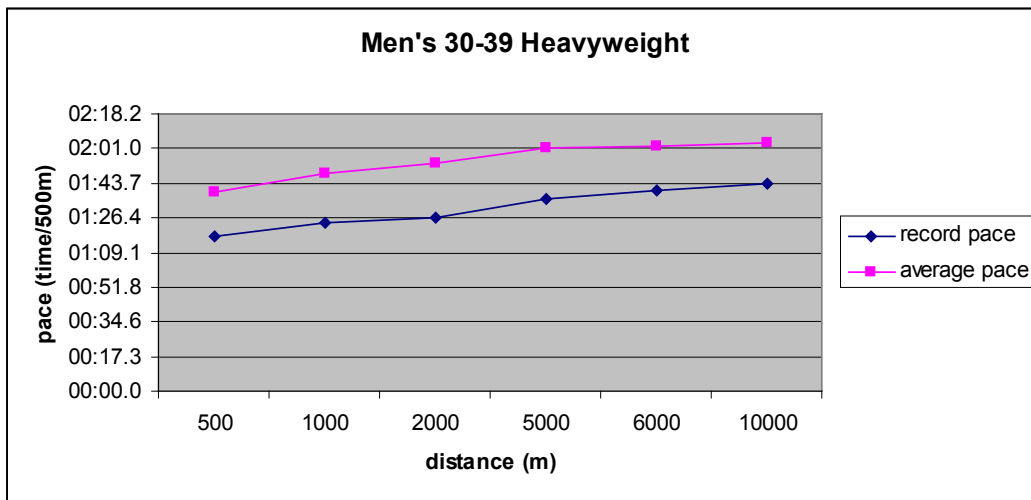
Women 30-39 heavy – 2007 data

Distance (m)	2007 Record	Record pace	90th %ile	75th %ile	50th %ile	25th %ile	Average time	Average pace	Your time	Your pace
500	01:37.7	01:37.7	01:47.2	01:53.4	02:03.0	02:13.4	02:06.6	02:06.6		
1000	03:39.2	01:49.6	03:46.3	03:55.9	04:16.6	04:33.4	04:25.4	02:12.7		
2000	07:09.9	01:47.5	07:36.0	08:08.0	08:43.1	09:39.8	09:03.9	02:16.0		
5000	19:46.4	01:58.6	21:03.0	22:15.0	23:51.0	25:36.7	24:18.4	02:25.8		
6000	24:09.4	02:00.8	25:18.7	26:32.8	28:00.0	30:00.9	28:34.7	02:22.9		
10000	40:57.8	02:02.9	42:47.9	44:46.0	46:40.6	50:12.0	47:55.1	02:23.8		

Worldwide Erg Data (continued...)

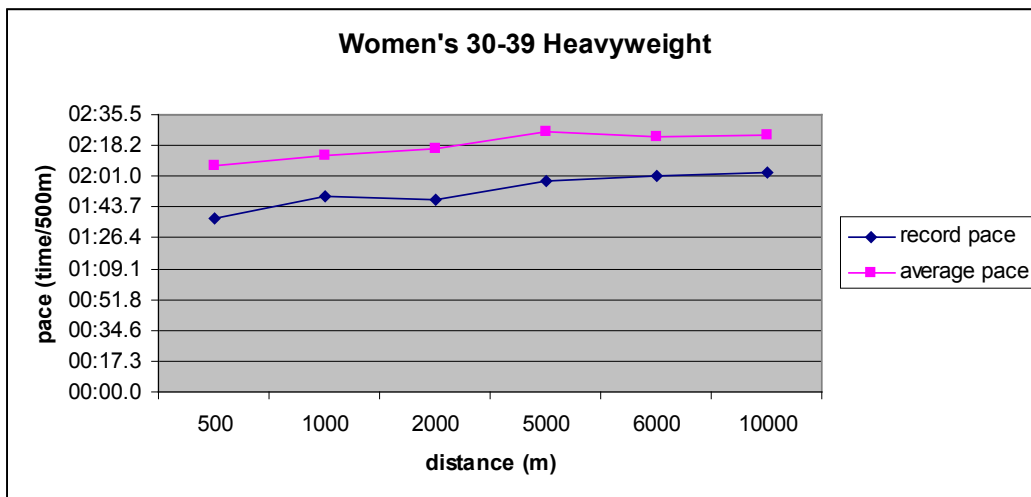
Men 30-39 heavy – 2007 data

Distance (m)	2007 Record	Record pace	90th %ile	75th %ile	50th %ile	25th %ile	Average time	Average pace	Your time	Your pace
500	01:17.5	01:17.5	01:26.7	01:32.0	01:37.6	01:44.9	01:39.6	01:39.6		
1000	02:48.3	01:24.2	03:10.0	03:18.3	03:30.2	03:51.7	03:37.6	01:48.4		
2000	05:46.7	01:26.7	06:38.8	06:57.1	07:23.1	07:56.0	07:33.0	01:53.3		
5000	15:55.3	01:35.5	17:59.1	18:44.1	19:44.7	21:12.0	20:11.5	02:01.1		
6000	19:57.1	01:39.8	21:38.5	22:30.6	23:46.9	25:54.0	24:28.7	02:02.4		
10000	34:23.8	01:43.2	37:07.2	38:27.5	40:27.6	43:12.6	41:11.2	02:03.6		



Now let's plot the data to get a visual sense of what's going on. These plots show the time-trial distance along the x-axis (horizontal) and the pace (in time per 500 meters) on the y-axis (vertical).

As expected, as the time-trial distance gets longer, the pace slows, and thus the pace number gets larger.



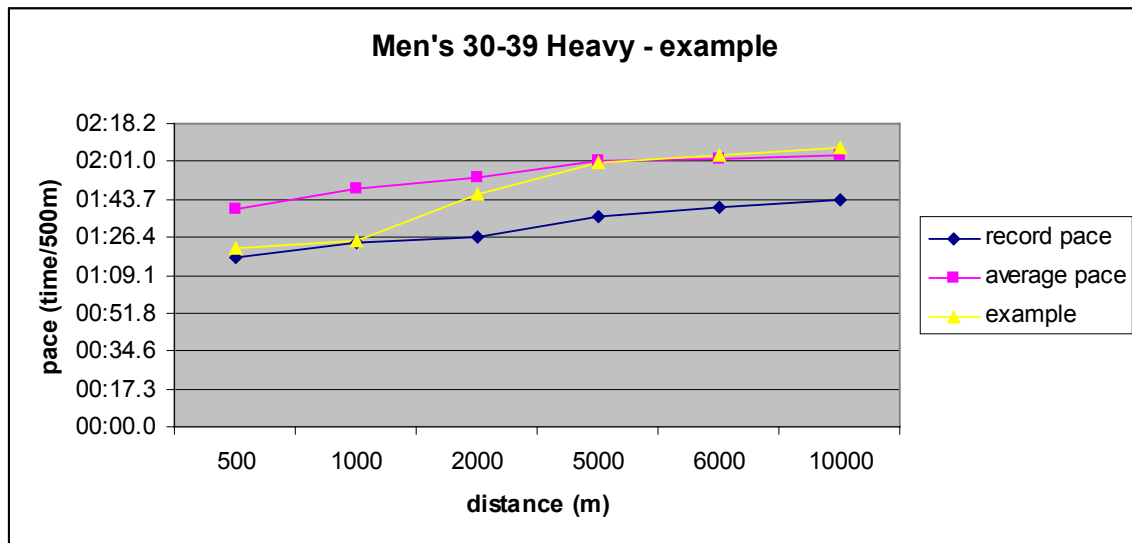
Worldwide Erg Data (continued...)

Now comes the best part. Add your own data to this graph and see where it falls.

Below is an example. Note that our sample person is performing very close to the records for the short time-trial distances, but fades to average and even slower than average as the length of the test increases. This person needs to work on the aerobic system by doing more training at levels at or just below his anaerobic threshold and by building his endurance.

A person with the opposite curve—average on short pieces and better than average at longer pieces—will need to do more anaerobic work. Short intense intervals at high intensity should be worked into the training program on a regular basis.

All that data is waiting; take advantage of it. Test yourself, rank yourself, analyze your strengths and weaknesses, and then take the steps you need to take to improve.



Judy Geer was a member of three U.S. Olympic Rowing Teams (1976, 1980, 1984). She placed sixth in both 1976 and 1984; 1980 was the boycott year. Since then, she and her husband Dick Dreissigacker (also an Olympic rower) have raised three children, now ages 15, 18, and 20, who are national-level competitive athletes in their own right. Judy continues to train and race in sculling, running, Nordic skiing, and biathlon.