



Rowing Machines

By Nik Cook

In my opinion a rowing machine is one of, if not the, best piece of home fitness equipment you can buy. There are two main reasons for this. The first is that, aside from cross-country skiing, it offers one of the most complete workouts available. Over 82% of the body's musculature is involved and rowing will yield strength as well as cardiovascular benefits. The second is that it is possible to get a commercial quality piece of equipment for a reasonable amount of money ie: under £1000. For comparison, a commercial quality treadmill will cost you between £9-10,000.

What to look for

There are a number of factors to bear in mind when selecting a rowing machine:

- **Type of resistance:** There are three methods used for generating resistance in a rowing machine. The first, which has been used for the longest, is air resistance. The blades of a fan passing through the air generate resistance. Altering the amount of air reaching the fan using a lever can easily change the level of resistance. The disadvantages of air resistance are that it can be quite noisy and also there can be "dead-spots" at the start and end of the stroke. Second, is magnetic resistance which easily altered and also completely silent. While this may seem an advantage, the audible feedback provided by the other resistance mechanisms is extremely motivating and, without it, rowing can be pretty soul destroying. Finally, is fluid resistance that can be further divided into two types. In the first the water is housed in a horizontal drum and the blades are driven through it. In the second the drum is vertically mounted

and with each stroke a variable amount of water is "lifted" with each stroke. Both have the advantages of consistent resistance through the stroke and the pleasing sound of moving water.

- **Stroke quality:** Closely related to the resistance mechanism is the quality and feel of the stroke. Ideally the stroke

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should be smooth without any sticking or flat points. There should be no give or stretch from the chain/strap connecting your oar to the gearing. Resistance should be constant throughout and the seat should move freely on its rollers. Make sure the range of movement suits your build and that you don't feel either cramped or overstretched.

- **Console/Electronics:** How user friendly are the electronics and what information do they give you? Although

it's great to have lots of programming options too much complexity can easily inhibit training. Look for compatibility with heart-rate straps as; if you're training by heart rate, looking at your wrist is really hard when rowing.

- **Seat, oar and footplate:** Three personal factors that can really impact

on your rowing enjoyment. Check that the seat is comfortable even after 20-30 minutes of rowing. The oar should feel solid in your hand and not flex at all. Footplates/straps should offer a stable platform and adjustability for a variety of foot sizes. On some cheaper models the footplate will pivot. The manufacturers will argue this is to take pressure off the Achilles tendon but, in reality, cost is probably the driving factor for this "innovation".

Concept II model D with PM3

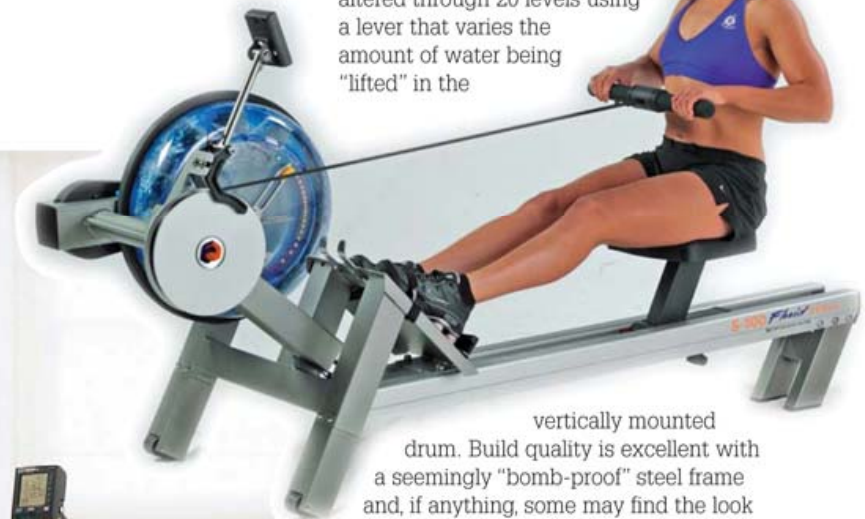
A familiar sight in health clubs, rowing clubs and front rooms the Concept II is the original rowing ergometer. It has even spawned its own sport in the shape of indoor rowing and the associated leagues, records and championships provide great motivation for thousands of indoor oarsmen. However, has the "original" been sitting on its laurels for a bit too long and can it still claim to be the best? The first problem is the primitive air resistance that results in two "flat-spots" at the start and end of the stroke. Resistance disappears while the fan kicks in and then spins out losing you 30% of your stroke length. My second criticism is that the plastic housing around the fan and the flimsy plastic resistance lever simply feel a bit cheap in a machine costing the best part of a grand. The console is great offering easily programmable intervals and nice touches such as a pace boat; power curves and animated rowing coaching. However, for this money, should you have to fork out an extra £39.99 for an optional heart-rate receiver and £25.00 for a strap? Rowing on the Concept II everything

feels good; I've been using one for years. Without even needing to think I alter the excellent footplates, flick the resistance to four and begin to row. It's a bit like putting on a familiar old sweater but once you've had the faults in the stroke and build quality pointed out your eyes start straying to newer and more fashionable models. Buy a Concept II and you'll get a proven machine that'll give you a great workout. If you want to train for indoor rowing it's the only choice but I think the time has come for fitness enthusiasts, and even real rowers, to look elsewhere. Either that, or Concept II need to lift their game.

Best for: People who want to train for and compete at indoor rowing competitions.

Fluid Rower

Once you've rowed a few hundred meters on the Fluid Rower the faults in the Concept II's stroke suddenly become obvious. On the Fluid Rower resistance is constant through the whole stroke keeping tension on the muscles right from the point of catch all the way to the finish. The stroke feels much longer and the workload is much more evenly shared between the arms and legs. Also, because tension is constant, the temptation to use the lower back excessively is reduced. Rowing 500m at a similar split speed to the Concept II I felt as if I'd had a much more complete workout. The amount of resistance can be easily altered through 20 levels using a lever that varies the amount of water being "lifted" in the



vertically mounted drum. Build quality is excellent with a seemingly "bomb-proof" steel frame and, if anything, some may find the look a little too industrial. Both the oar and footplates are well designed. The electronics and the console on the fluid are on the basic side, you can't programme in intervals/workouts and none of the "motivational features" on the Concept II are present. However, the functions you'll need for a good rowing workout such as 500m split pace, stroke rate and power are all there. Also, heart-rate strap compatibility comes as standard. Finally, the sound of the water is really motivating; just make sure you go to the loo before starting to row.

Best for: The fitness enthusiasts looking for the most effective rowing workout.





WaterRower

The first thing that strikes you as you approach a WaterRower is what an attractive object it is. The natural wood finish and simple design makes it a rare piece of fitness equipment that you won't need to hide away. Getting onboard everything feels solid although the one-piece foot-strap is annoyingly fiddly. Once you start to row the stroke feels very smooth and natural although there is a small flat spot on the catch and a slight "sponginess". As you're pushing a fan through water (as opposed to lifting water in the Fluid Rower) the resistance is most akin to an actual oar passing through water. Also, in the same way as "real rowing", the more you put into the stroke the more resistance you'll develop. This is great for motivated trainers but its really easy, and really tempting, to back off and just paddle along when things get a bit tough. Training by heart rate would be essential to maintain effort level and compatibility will cost you an extra £69.99 including a strap. However, I have a number of friends

who have used a WaterRower for a while and, now their bodies are trained to it, find elevating and maintaining a heart-rate tough. Resistance is set by the amount of water in the drum and cannot be quickly changed during a workout. The console



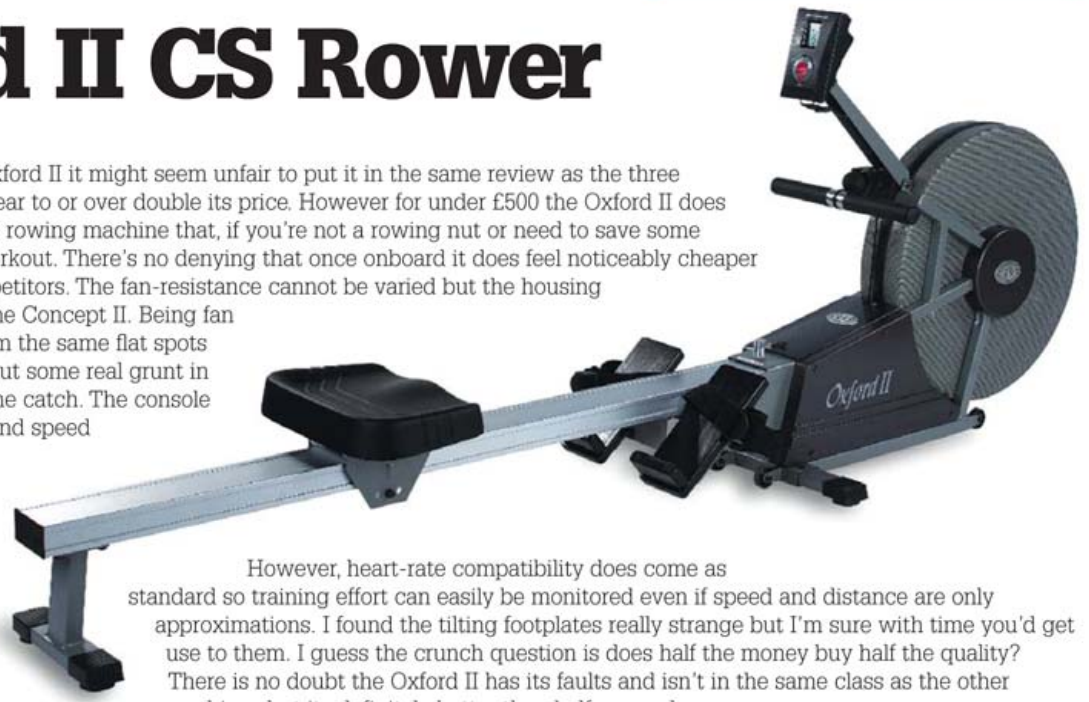
has all the necessary features and is easy to use but, unlike the Concept II, does not allow intervals and workouts to be programmed in and saved. Like the Fluid

Rower the sound of moving water is very satisfying and the WaterRower has the added advantage of easy upright storage without any need for disassembly.

Best for: Motivated, style conscious individuals who want an "on the river feel" and are short of space.

Oxford II CS Rower

Looking at the price of the Oxford II it might seem unfair to put it in the same review as the three others which all come in at near to or over double its price. However for under £500 the Oxford II does deliver a perfectly serviceable rowing machine that, if you're not a rowing nut or need to save some cash, will give you a great workout. There's no denying that once onboard it does feel noticeably cheaper than its more illustrious competitors. The fan-resistance cannot be varied but the housing looks and feels as robust as the Concept II. Being fan resisted the stroke suffers from the same flat spots as the Concept II and if you put some real grunt in there is a noticeable slip on the catch. The console is really basic with distance and speed calculated from the seat moving back and forwards rather than from the effort put through the oar.



However, heart-rate compatibility does come as standard so training effort can easily be monitored even if speed and distance are only approximations. I found the tilting footplates really strange but I'm sure with time you'd get use to them. I guess the crunch question is does half the money buy half the quality? There is no doubt the Oxford II has its faults and isn't in the same class as the other machines but its definitely better than half as good.

Best for: Average home exerciser or fitness enthusiast who wants a good piece of kit without breaking the bank.

I also tried several cheaper rowers down to as low as £249.00 but the drop in quality and stroke feel was frankly terrifying. I was honestly scared to put any power into my stroke fearing that the machine would break. Buying one of these "budget models" would be a false economy and you'd soon have to upgrade either following a mechanical breakdown or extreme frustration.

Final Verdict



If you could take the looks of the WaterRower, the stroke, build and resistance mechanism of the Fluid Rower and the electronics and indoor rowing competitions of the Concept II you'd have the perfect rower. If you're desperate to compete or need the motivation of comparing your times with others then the Concept II is the only option. However, if you're rowing for overall fitness gains as part of varied training programme, the Fluid Rower is a clear winner.