<-Back to rowing news.

Excerpt from posts by A3aan on RSR

Ergometer brands

http://www.waterrower.com The waterrower is a type of indoor rower that uses a barrel with water to create resistance. It is much quieter than any other erg and looks kind of.... well just check the website.

http://www.rowperfect.demon.nl/ The RowPerfect is a more sophisticated rowing simulator, made in the Netherlands, that amongst many advantages reduces strain on the lower back during the exercise. On the RowPerfect both the flywheel section and the seat slide on the sliding.

Concept II is most widely used by rowers and a very good product. Pretty straightforward machine, but does not have the advantages mentioned above.

Tunturi is not used by rowers at all, because its simulation of rowing is apparently pretty poor (I haven't tried it). On the other hand, rowers tend to stick to wat they know, so Tunturi (and there are a few more 'impopular' brands) might actually be okay, especially for non-rowers.

The RowPerfect Ergometer

Advantages:

- better simulation of rowing,actually improves my sculling technique, instead of deteriorating it like a C2 does. Main difference: no need to move the body up down the slidings and therefore a much slicker pickup of load at the catch. The reality is that the RowPerfect is much, much better than any static erg I know of, and also still a lot better than the Concept Slide.
- Force/Time curve drawn realtime for each stroke. This shows the exact force curve for each stroke you row,

allowing you to improve inefficiencies in your stroke at a very detailed level. You can even put the typical force curve of an international level rower on the background and try to model your own stroke to it.
- More technically challenging to row. Because of the better simulation of rowing, you have to maintain a certain minimal level of technique whilst rowing the RowPerfect, otherwise you end up hitting front- or backstops which is not a very rewarding feeling. This means that workouts require more concentration and towards the end of longer sessions it can become really difficult to keep it going as it should. This is in itself an advantage but it can at times reduce training motivation.

Disadvantages:

- more expensive than the Concept2, especially if you include the computer interface and software in the price (which you should, for otherwise you miss out on one of RP's most outstandin features - the time/force curve)
- not so easily available. Mail order is of course possible, there are suppliers in UK, Australasia and Holland.
- More moving parts. The machine does more, and thus the design is more complex. In the long run this could mean a bigger risk of wear and breakage. CARE's service is outstanding though, and after 1.5 year I have experienced no problems with mine. Another related issue is safety. If you have little kids running around you should not row the RowPerfect. This also holds for any other erg, but less so.

On a regular erg, many rowers are just going through the motion of sliding up and down and pulling the handle, but don't do anything that really resembles rowing - this is all too easy to do when you have to train for 90 minutes on the thing. In my opinion this really wreaks havoc on your boat moving skills, these rowers would be far better off rowing 30 minutes with high-quality strokes on a RowPerfect than mimic the motion on a static Concept 2 for that long period of time.

Rowperfect website: http://www.rowperfect.demon.nl/ Addresses of the RowPerfect suppliers:

CARE The Netherlands
Baalder Esch 8
7772 JV Hardenberg
The Netherlands
+31 523 27 01 84 (voice)
+31 523 27 01 85 (fax)

Rowperfect UK
Tony Brook or Harry Mahon
4 Chestnut Rd
Kingston, Surrey KT2 5AP
0181 546 1834 (voice/fax)
Email: rowperfect_uk@msn.com

CARE Rowperfect Australasia
Attn. Peter Mills
9B Piermark Drive
North Harbour Industrial Estate
Albany
Auckland, New Zealand
Email: sculler@xtra.co.nz
+64 94 1544 04 (voice)
+64 94 1544 80 (fax)
+64 21 6349 56 (mobile)

RowPerfect simulation charactersitics

One thing we can all agree on: The RowPerfect is not a boat. The key element of simulation is not to exactly replicate the original task (for then we would need a boat, wind, water and waves), but to create a suitable abstraction that allows practice of some aspects of the original task whilst controlling other aspects. In general, humans tend to find coordination of a sudden change the most difficult task, like landing a DC10 in a flight simulator or driving through a tight bend in a racing game. One of the most difficult aspects of the rowing motion

(besides of course controlling balance under wind and wave conditions) is the turning points in the stroke, because there the direction of movement has to change in a very short period of time. The execution of these turning points is crucial in the boat, and can be very realisticly practiced on the RowPerfect (with realistic feedback from the machine), which is not the case on a static erg. The RowPerfect does not simulate rowing in every aspect, because the RowPerfect is not a boat. However, it does simulate rowing very closely in the most crucial aspects of the motion: the turning points.

Cheating the Concept II erg

If you overpull the finish beyond a certain threshold (Compared to proper boat technique) the air resistance factor goes down. This is cause by the way air flows through the small holes in the cage. The actual air resistance will thus be lower than the air resistance assumed by the computer. This can give up to 10% difference between actual power and measured power (according to Cas Reekers, maker of RowPerfects, who has done quite some research on rowing boats and ergs). I see many people who erg a lot on Concepts use this technique.

Lucerne, Switzerland

You only need a ticket for the regatta on sunday. It costs 5 swiss francs for students otherwise it's 10 francs. You can be a student pretty easily - I showed my health insurance pass and that made me a student... The nicest viewing point is just after the 1000 metre mark where the course is closest to the shoreline. The beer and sausage prices are quite exorbitant : 3.5 francs for a beer and about 5 for a hot bratwurst with ketchup... Much cheaper to bring some stuff from the town supermarket, although the Lucerne organisation might not really approve of this. Another nice place by the way is the start, where you can sit on beach chairs or even swim in the Rotsee lake right behind the starting line during races.

Training advice

Starts

It is very hard to just give a drill. You really need a coach for this, or enough expertise in the boat to feel what is right and what isn't. A coach can see if the boat is accelerating optimally, which is very hard to judge when you are rowing. The best drill is just to practice starts + 10 or 20 strokes a lot. After 2 or 3 attempts, do some normal rowing to loosen up otherwise the starts become too tense.

Timing

Pause drills: (1)after the finish
(1.5) hands-half-away
(2)after the hands-away: balance the boat by slightly adjusting the height of the extraction and the height of the hands-away motion. Adjust in small amounts.
(3)after hands-away and body lean: Arrive in the pause simultaneously, after the pause make sure the seats depart from backstops simultaneously and easily: think not of gliding the seat forwards but letting the boat glide towards you (and slowly pulling your feet in).
If (3) goes well, try it with squared blades. This is good for stroke preparation and timing in the recovery. All drills for 10-20 strokes at a time not much more.

Pause drills in the pair

I use the pause at the finish (we call it 'stop one') sometimes for myself as well as for crews I coach. However, I try not to do it too often or for too long because I think pausing after the finish is not very good technique. In my experience, if you let rowers do any excersie (and especially 'stop'-type excercises) too much, they will adapt their rowing to it. The exercise then becomes a mere 'trick' (see how some crews rush towards their 'stop' when doing hands-away or hands-and-body stops) instead of a short interruption of the fluent rowing stroke. I also frequently detect a residu of the stop lingering in the regular strokes following the exercise, in case of 'stop one' this is not desirable.

As an alternative excercise I sometimes use 'stop 1.5', which consists of a pause after the finish, but with the hands half away (about 20 cm from the body). This avoids having the rowers stop their hand motion at the point where it is most crucial that they DON'T stop their hands, but still allows them to synchronise their motion and

find balance.

On pair rowing in general: I think it is very, very difficult, especially after you pass through the initial intuitive phase and start to think about what you (and your partner) are doing. The only solution I know is just making many, many miles over many, many years and finding a solution for balance problems in the boat. As a coach I think it is nearly impossible to really improve a pair with drills and such, because it is so hard to see what is going on. Just look at the boat-type: when I first saw a pair in my life I thought it was a prank boat, not meant for serious rowing.... Now I think different, and respect the pair as being the most difficult boat type there is.

Blade extraction

In my opinion (and just look at any top level sculler for confirmation) it is perfectly normal to start feathering the blade during extraction. With a bigblade this can start sooner than with a macon blade because the shaft is nearly at the top of the bigblade, so (nearly) the whole blade will turn 'with' the flow of water when you feather. However, it is poor technique to use early feathering as a means to avoid the blade getting stuck at the finish. In this case the problem is loss of pressure in the end stroke and it should be solved in the stroke (i.e. good connection of fingers to feet and constant acceleration throughout the stroke). That is why 'square blade' rowing is considered a good excercise by many: you can't hide loss of pressure by twisting the blade out. If you have a good end-stroke, turning the blade on extraction is good, saves time and increases speed. As long as your finishes remain clean (not a lot of splashing and gurgling going on) you are doing fine.

Recovery

Let the boat come towards you, keep on gradually pulling your feet in until the blades are back in the water. Make sure you are not slowing down on the last 20 cms of slide, for this wil (unnoticeably) check the boat.

The drill:Stop the boat and let two rowers keep the balance. The two others start at the finish and perform one single recovery without taking a stroke. The rowers balancing the boat can feel if there is check and they can judge the backsplash (there should be a small splash from the blade towards the bow at the catch). Tips: upper body should be prepared for the catch as soon as the seat starts gliding forwards, no leaning and reaching after that! The blade should also be prepared for the catch in time, ultimately when the hands cross the feet.

Missing water

Drill: Square blade rowing. Focus on body preparation and blade preparation (as mentioned under 'recovery'). Missing water is a result of not being ready to catch on time. You can extend the exercise under 'recovery' by taking one solid stroke after the recovery. Try to create a marked pause between the catch and the leg drive (as an excercise!) to learn that catching the blade and driving the legs are two separate things.

Burying the blade

If the blade goes too deep right after the catch and comes back to the surface in the second part of the stroke you are probably using your back for the catch instead of relaxed dropping of the blade followed by finding pressure on the stretcher.

If the blade see-saws throughout the stroke (going up and down towards the finish) the coupling between legs-back-shoulders-hands is too rough, creating peaks and lapses in the force curve on the blade (pressure peaks make the blade go too deep, pressure lapses make the blade go up). For correction you should try to take less forceful strokes and make sure the pressure does not drop, especially between the end of the legdrive phase and the beginning of the end-stroke (back and arms).

If the blade is too deep at the finish and cannot be extracted easily you either have a rigging problem (too little or even negative pitch on the blade) or have lost pressure in the end stroke which results in the blade being caught in your collapsed puddle. Solutions: change the pitch (4-5 degrees forwards on the blade and 0 lateral pitch should be ok for most purposes but it really depends on the blade, boattype and experience level of the rower). If you lose pressure in the end stroke, try rowing with feet out of the shoes (and don't cheat by keeping your heels in the heel-cups either!) for a while, then try to keep the handle motion going around the finish. You should be able to feel that you are pressing down on the stretcher right until the extraction of the blade. If you are not, extract sooner.

Quick catches

1/2 slide rowing, focus on quick hands-away, good preparation (even more crucial now) and catches. When it is going well, raise the rate to about 50-60 strokes per minute. Total drill should take about 40-50 strokes, then some normal rowing and you can try it again. This is also very good preparation before a regatta if you want to increase your base rate.

Endurance

For endurance, do long outings at rating 20-24. I consider 16-20 kilometers a long outing. It takes quite some time (and miles) to truely gain endurance. You can enhance endurance with strength by doing strength-endurance workouts. On the erg or in the boat row 3 or 4 sets of 5-8 minutes at 15 strokes per minute, maximum power. Rest time around 3 minutes. Endurance is less rowing specific than many other training goals, so you can choose to do part of your endurance work on the erg, running, cycling or otherwise.

Speed

For speed, I'd suggest doing short sets at or above race pace (and rate). For instance 4 x 1000 metres @ race-rate+3 or 3 x 1500 metres @ race-rate+2. You can also opt for even shorter sets: 10 x 250 metres @ 40 spm or 6 x 500 metres @ 35. Of course it depends on your ability and fitness how many sets you want to do, and at which rates. This is just an indication, maybe a little bit too far out for the average masters crew. In between the sets take some rest, but not too much. Something like 2-3 minutes should be enough. Keep rowing lightly during the rest time.

Leg drive

Most important: legs first.

Drill 1: legs-only rowing. First try it with two rowers balancing the boat, later with all four. Make sure you keep length at the catch and sit up strong. The hands should never come behind the knees during this drill! Just drive with the legs whilst keeping the upper body in the catch position and the arms extended. Pay attention to the feeling of 'hanging on' to the oar while the legs are pushing. Alternate with regular strokes at strong paddle.

Drill 2: start off rowing light paddle with all four. After 10 strokes make the end-stroke (arms and shoulders) strong, keeping the rest light. 10 strokes later make the backswing also strong, then the last halve of the leg drive and finally the complete stroke. The point is to keep acceleration in the stroke towards the end and keep pressure on the buried blade. Also you can feel in this exercise how the other rowers are applying pressure, because of the transitions from light to strong paddle in the stroke. This helps all rowers to attain more equal force application.

Injury prevention

Warm up before doing fast pieces.
Cool down after each session.
Stretch those muscles whilst showering.
Eat and drink well, sleep well.
Pee on your blisters.
Don't underestimate tendon troubles: take rest immediately! Avoid recurrence by changing grip (you can try rowing with the thumb of the outer hand ON TOP of the oar) and technique (wrist flat throughout the stroke, if necessary helped by taping a popsickle stick to the wrist).

Middlefinger pain

I had a middlefinger injury once, but mainly in regular rowing. I solved it by first taking it easy for a week (and crosstraining) and when I rowed again, changed the way I held the handle. I know two useful variations: thumb on the oar instead of under and/or pinky on the outside of the handle instead of on top (outer hand only of course). Thumb on top reduces stress on the tendons en changes the pressure on the other fingers when pulling. The pinky helps keep the oar in the oarlock better (a totally different topic) but also changes the pressure on the other fingers due to the different grip.

On the erg, just make sure to keep a very relaxed grip (or better put: don't grip, but hang on to hooked fingers, you probably know the story). Some people have a problem with the handle getting slippery during the erg workout due to sweaty hand in combination with the rubber handle cover. When it gets slippery you might tend to grip too tightly, so maybe putting a sock or some other cloth around the handle could help (or order different erg grips at Concept II). Another simple suggestion is to set the resistance much lower than you are used to, so you can erg less on brute force (and thus less stress on your hands) and more on quick turning points and maybe a slightly higher rating to achieve the same scores.

Which rating is the most efficient?

Higher ratings tend to be less efficient than lower ratings in the sense that you get less speed for the same effort you put in (or the same speed for more effort). The reason we row at higher ratings is because we don't care about efficiency, but about winning (i.e. minimizing the time needed to cross a stretch of 2000 metres). If the standard regatta distance were 100 km. then this would change, and rowers would row closer to their most efficient stroke rate, which would be lower.

For an individual rower, the optimum stroke rate for a given distance can be determined by experimentation. Each rower can have a different optimum that can be found by rowing several identical pieces at different rates and recording the rowed times. You will have to do this several times (on different days) to get some seemingly valid information. I would use 500 meter pieces and for instance rates from 26 through 36 (steps of 2). You can plot a graph and detect the point were there is no more decrease in rowed time when the rate is increased. This is the absolute limit for your strokerate at current technique/fitness level (and using the current boat and rigging). You can additionally find the area where the graph starts to serisouly decline, i.e. the efficiency starts to significantly drop. This might be a useful indication for your optimum race pace strokerate.

Steering on the drive or on the recovery?

If you try to steer en eight whilst the blades are in the water, you are using one stamp-sized rudder to say "let's go around this bend" against eight big-blades that say "let's go straight ahead". You'll need to turn you rudder pretty far to convince those eight blades that they are wrong. So steering in the recovery requires less angle on the rudder and costs less speed. Be careful however not to disturb the balance of the boat too much. This can be done by steering in small amounts, and not too abruptly. When a very tight bend has to be taken, gently apply no more than 45 degrees on the rudder (the maximum rudder position you should ever use!) and keep it there as long as needed. The rowers will adapt to the rudder position and keep the boat balanced throughout the bend if the rudder stays the same.

Chafing the inside of the arms when sculling

Assuming that you are chafing the insides of your underarms against your body. Sounds to me like it might be a rigging or a technique issue

Rigging: Your overlap might be too big (the distance the handles overlap when the oars are perpendicular to the boat) which forces your hands to cross too far during the stroke. Solution: increase span and/or decrease inboard oar length. Also your strechter might be too far sternwars, resulting in not enough space at the finish to clear your body with your hands. Solution: move the stretcher towards the bow until you have about one hand-width space between the handles when in the finish position.

Technique: Make sure you pull your elbows slightly outward (but not upwards!) so you can keep them clear of your body and apply force in a natural direction (i.e. orthogonal to the handle).

Alternatively, you might be wearing clothing that is too rough. Try smoother material.

Effect of breathing capacity on overall performance

A rowing friend of mine (do I even have any non-rowing ones?) once had his jaw broken after looking at a skinhead's girlfriend for a fraction too long. His jaws had to be set with a lot of wire and screws and stuff. He was in the middle of selections for the freshmen's eight at the time, so he just kept on training on the erg, breathing through clenched jaws for about six weeks.

After his jaws were released, his erg scores rocketed (down that is, so maybe I should say 'plummeted', but that sounds odd) due to the much easier breathing. The only problem was that his muscles couldn't keep up with this 'improved' lung capacity and he totally trashed himself during the first tests to the point that he couldn't get off the erg at all and had to be carried away by teammates.

From this I could conclude that improved breathing capacity does indeed improve the overall performance up to the point that other factors become limiting.

Rushing the slides

For starters I try never to emphasize the "don't rush, you sick bastards!" type of coaching, because that leads to dramatic slowing down and waiting before the catch.

To get them to do what we all want, I usually emphasize:

* finishing the stroke while feet are still pressing down on the stretcher. Why? If rowers lose pressure at the end of the stroke they usually end up wasting time trying to extract the blade and turning the hands around, this wasted time is then made up by rushing the slides. I often coach this by telling them to keep the stroke short at the finish (and long at the catch).

- Quick hands away, keep the turning motion going around the finish and end the stroke in "stop 3" (the moment right before you start sliding).
- watch the seat of the rower before you and start sliding at the same moment as him/her
- visualize not "sliding towards the catch" but letting the boat run underneath you until the blade is in the water. Feel your feet coming towards you during the recover, relax all leg muscles (and upper body as well). If the leg muscles are relaxed, a crew can recover together much more easily because you can feel what the boat is doing (i.e. how the crew is recovering) and don't have to control your own sliding speed actively.
- keep sliding until the blade is in the water, don't hesitate, slow down or drop the hands before the catch. Visualize the hands moving towards the catch in a straight line right from the extraction of the blade. (i.e. plan ahead, visualize the precise place and moment of catching when you start recovering).

This type of coaching approach is based on explanation of one of the above issues (not more than 1 at a time!) when the crew is not rowing, and then very frequent feedback on the issue when the crew is rowing. I always try to coach this aspect for the complete crew, and don't single out individual rowers. In my experience the crew cannot focus on rowing together (essential for a smooth crew recovery) if the rowers are being coached individually.

The only drill I use for this is "stop 3" every stroke. Usually I let 2 rowers balance the boat while the rest pause right before sliding commences, each stroke. The cox calls out "go" after each pause. Doing this drill with square blades allows for more focus on the simplicity of the motion, without the usual feathering difficulties. You could do "stop 3" squared blades first and then "stop 3" with feathering.