Chapter 4: Why choose a dynamic ergometer?

Dynamic versus static Ergs

On a static erg, the rower is required to put in six times as much energy accelerating / decelerating just their bodyweight, compared to a boat or a dynamic erg where the energy is split between the bodyweight and the boat/erg.

Cas Rekers (designer of the Rowperfect) has performed tests comparing the 'indicated' power output with the flywheel fixed and without the flywheel fixed (floating) - the subject gained about 10-20% power output with a floating flywheel, representing the additional power that the athlete that could apply to the flywheel instead of using that energy to accelerate his bodyweight.

More energy is used up by accelerating just the body backwards and forwards than by accelerating the body + (lighter) boat/erg in opposite directions.

This is also one reason why the 'catch' on a static erg feels relatively 'slack' compared to a boat: the initial pressure on the feet is actually being used to decelerate/accelerate the body so the acceleration of the handle (as sensed by pressure in the hands) can only begin once the body has changed direction. The catch in the handle feels 'late' compared to the catch on the stretcher.

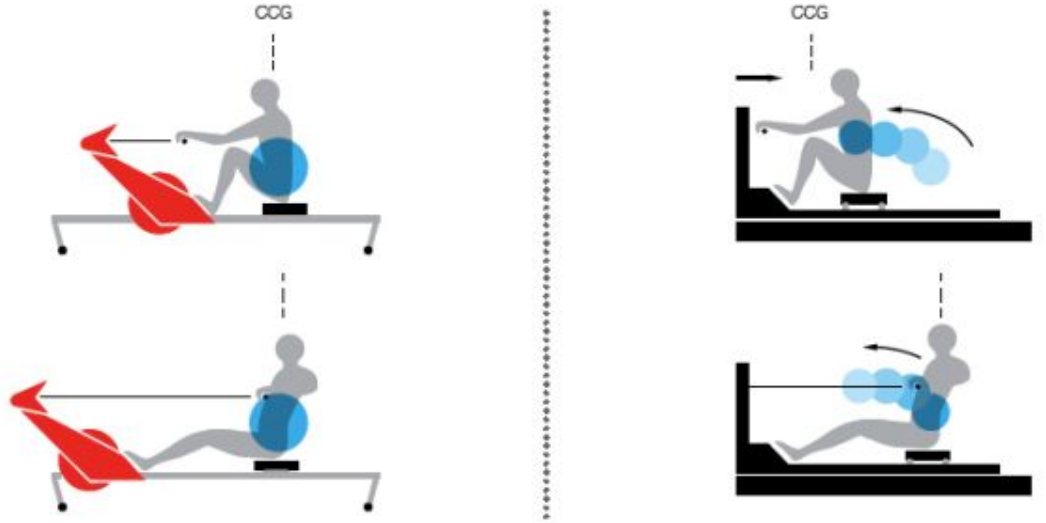
Did you get that message?

If you train on a dynamic ergo or in a boat you gain 10-20% more power compared to training on a static ergo

AND the stresses on your body are 6 TIMES GREATER.

Take a look at these images - they show the 'common centre of gravity' or CCG of a fixed static erg versus a dynamic erg/boat.

Training using a machine that is directly comparable to your boat will give you the best advantage.



Rower interacts with a light mass.

Rower moves relative to an immovable point.