



17kg

Why so important?

It just is.



INDOORSCULLER

Rowperfect

CRITICAL MASS

Indoorsculler, the only boat-weight matched rowing machine



Why 17kg is so important?

FIXED ERGS ARE DAMAGING

The ergonomics of fixed head rowing machines require up to **90%** of the rower's leg strength to be used to reverse body momentum at the catch, compressing knee cartilage. At the finish the reverse occurs to stop the body rocketing backwards – the result is a massive jerk on the hip flexors, placing compressive and shear forces on the lower spine.

In contrast, **WHETHER YOU'RE IN A BOAT OR ON THE INDOORSCULLER**, the maximum leg strength used is **10%**. Force required is directly proportional to the mass of the boat: the heavier the boat the more power required to reverse the body momentum - our machine weighs 17 kilograms; so exactly the same as a racing scull with its oars, or a rower's portion of a crew racing boat, whereas a fixed head rowing machine mimics a boat weighing several tonnes!

Thus the result of a fixed machine's ergonomics is diametrically opposite in terms of muscle and nerve control, with major attendant injury risk, and additionally the coordination pattern and muscle power to take a stroke is very different to that required in the boat.

It's also easy to explain why you end up producing more power from your knee than your hip on a **FIXED ERG** – a stationary erg gives you a score based on how quickly you straighten your knee, so you use your quads way too much and reduce the power from your gluts and hamstrings.

Research at Sydney University has clearly shown that the power produced goes from 3:1 hip:knee (in boat or on our machine) to 1:3. So there's a **MAJOR DIFFERENCE**, likely to result in reduced hamstring and gluteal development thus rendering the user even more prone to back injury, and at the same time rewarding a hard kick at the catch with a good score.

CONSEQUENCES

These serious injury risks associated with fixed flywheel ergometers almost pale into insignificance when compared to what you're doing to your brain as you move up and down the slide, with your poor brain bouncing back and forth inside your skull. It's actually very interesting to sit a bowl of jelly on the seat of any fixed ergometer and move it up and down the slide at rate 30 - you see exactly what your brain is doing when you row on one (in fact your brain moves further than the slide as the movement of your trunk adds about 30cm to the movement range of the head)

Compare that to the gentle rocking movement of your head in a racing boat or on the IndoorSculler: your head moves a maximum of 30cm per stroke; and you can't use your anchored feet as you do on a fixed ergometer to jerk your body to a stop at the finish, so deceleration must be smooth and coordinated. The result is a smooth, rhythmic and satisfying motion – rowing as it's meant to be.

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