

the **CrossFit** JOURNAL ARTICLES

Why Indoor Rowing?

A Quick List

Greg Hammond

I am often asked, "What makes the indoor rower any better than other forms of equipment for metcon [metabolic conditioning] training?"

The typical measure of aerobic exercise is elevated heart rate, which increases blood flow, bringing oxygen to power the muscles, and of course, a lot of heavy breathing. All this elevated activity of the lungs and heart trains and conditions the cardiovascular system. Rowing, though, has some unique advantages over other forms of aerobic training that are often overlooked.

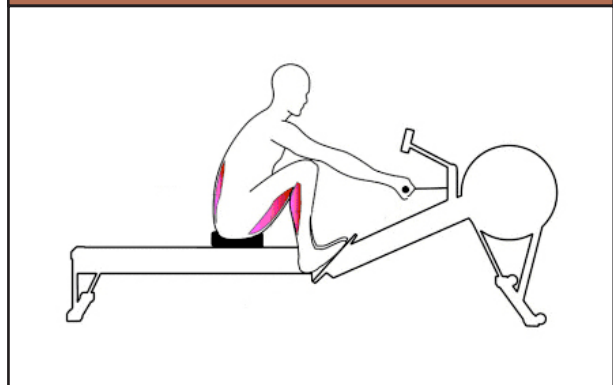
More muscle mass

The advantage of rowing is that more muscle mass is used doing the activity than while running, walking or biking. Your legs, glutes, abdominals, back, shoulders, and arms are all being worked. Of course, as with anything, the actual amount of work being done, and the amount of power being generated, relates to how hard you push yourself. Even on a rowing machine you can just paddle easily, or you can train like an Olympian.

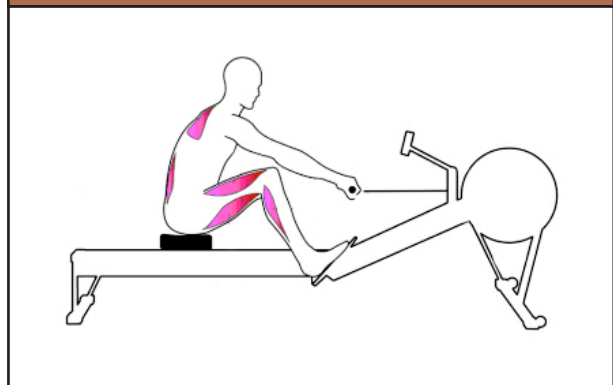
Greater range of motion

Rowing puts all your major body parts through a large range of movement. This is not true of many other forms of aerobic activity. In every stroke, rowing requires full compression and full extension of the arms and legs. Consider the joint rotation during the rowing movement: the ankle rotates through 70 degrees, the knees 130, the hip 80, the shoulder and elbow each about 100. (But it's also scalable for rehab or for individuals with limited flexibility for whatever reason: the stroke can

The Catch



Drive



be shortened to accommodate them, and lengthened incrementally as need.)

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Why Indoor Rowing? (continued...)

Multijoint coordinated movement and balance

Anyone who has tried skimming over a calm lake in a skinny rowing boat (or observed a skilled person doing so) can appreciate the coordination and balance required. But even on a rowing machine, the large movements of leg, back, and arm are executed in a rhythmic whole-body way. The synchronization and coordination of your movements is not defined by the machine, however, as it is on, say, an elliptical device.

Rowing requires learning and skill—i.e., neuromuscular engagement. Learning to make your limbs work together to achieve a goal, even if it is just getting back and forth on the sliding seat while pulling the handle in the most efficient way, is an inherently valuable element of functional movement.

Interval-like force generation

Rowing is not a steady-state activity. “In rowing, you catch, accelerate, decelerate, and change direction twice each stroke. You are constantly overcoming inertia” (Fritz Hagerman, professor of exercise physiology). The drive and recovery cycle of each stroke is essentially a mini work-rest interval, a relatively short burst of explosive power production followed by a brief recovery phase that accumulate to constitute a longer rowing effort, whether a short sprint bout or a more sustained aerobic session.

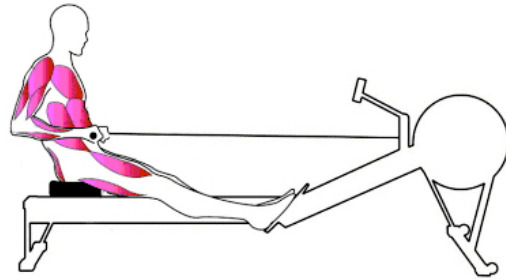
Variable resistance

The beauty of variable resistance is that you can use the rower with everyone from kids to the biggest strongest guy you have in the gym, and from rank beginners to seasoned experts. It is simple: the harder you pull, the more resistance you get. You will never outgrow rowing as you get stronger.

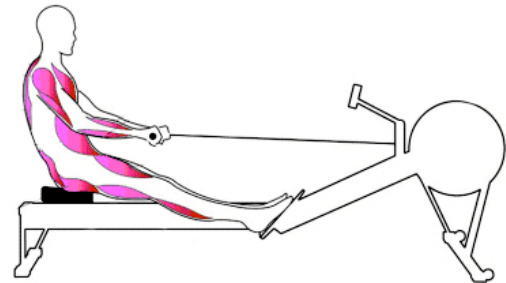
Feedback and performance analysis

The main principle behind the indoor rower's computer, the Performance Monitor, is its accuracy. In addition to letting you reliably chart your output and progress, it also allows you to compare performance across all machines and users and can introduce a competitive element. You can choose from a variety of measurement parameters and display options, including watts, calories, a bar chart and a force curve. In a sense, it's a scaled-up version of the CrossFit whiteboard (“Men will die for points”),

Finish



Recovery



and the data it provides is observable, measurable, and repeatable.



Greg Hammond has worked for [Concept2 Rowing](#) for 11 years, most recently as a liaison to the CrossFit community and to fire and police departments and moto/action sports groups. He has a Bachelor's degree in health science and formerly owned and operated a fitness business called Hammond Corporate Wellness. He was a Crash Rescue Firefighter for the Air National Guard for 8 years and was a longtime rugby player until he took up the safer sport of motocross/enduro riding instead. He has used indoor rowing as part of training for his sports for the past 17 years.