

Hydraulic?

This Free E-Book is brought to you by [Natural-Aging.com](http://Natural-Aging.com).

**100% Effective Natural Hormone Treatment**  
**Menopause, Andropause And Other Hormone Imbalances**  
**Impair Healthy Healing In People Over The Age Of 30!**

**Hydraulic?**

**By Seamus Dolly**

**Hydraulic?**

by: **Seamus Dolly**

This may sound a little strange, but one day a man called in looking for some water for his car. That was not unusual, until he started to put it into his hydraulic reservoir for the braking system of his car. I was young and curious, but he explained that water would suffice. Many years later and some hydraulic experience, it seems that he was right. Or partly so!

It should be remembered that twenty-five years ago, and anywhere from there back, the properties of rubber seals were different. Not deviating, but going some way to explain where the hydraulic oil/brake fluid, actually went. The fluid and indeed all oils were much different and had little agreement with the rubbers available at the time. Leakages were commonplace.

Though many may frown upon it, water is still efficient as a medium for hydraulic pressure, in the very short term, and especially in the case of a braking system in a general performance automobile. It is the purity of the water that changes its usability, but anything will do in an emergency. Incidentally, pure water is an insulator, though I wouldnt have the confidence to test the theory on a personal level, with four hundred volts. Lol! Seriously though, this would be a reason why battery top-ups, should be done with distilled or pure water. Water hasnt been simply, water, for some time, or since it was chemically analysed.

Modern hydraulic oils have anti-foaming, anti-wear (component-wise), anti-corrosive, lubrication, and heat dissipation properties. They also have special properties that limit their ability to compress, which is the area that hydraulic excels over pneumatic. Higher control comes with the solidity of the fluid, much as that sounds like a contradiction.

Indeed, pneumatic control is favoured where there are risks of contamination, from the oil itself, and this is one of the reasons that air is preferred to oil in a lot of production systems.

## Hydraulic?

Friction does exist, even with fluid, and this as well as compressive forces, is the cause of heat generation. Any such heat generation, can result in a change in the liquids viscosity, thickness/thinness, ability to flow. It can also have a negative effect on the various sealing arrangement, whether steel on steel, rubber/plastic and its composites (sometimes brass or bronze impregnated polymers), or indeed, where cast iron replaces steel. Incidentally, dissimilar materials in juxtaposition and dynamically, are better than similar ones.

Steel on cast iron, generally, is better than steel on steel.

So, while this man went for the only resource available at that point in time, the pressure generated should be similar, or the difference negligible, he would have been missing the lubrication properties that oils achieve. His saving, was the short piston movement, the relatively slow speed of his vehicle, and the limited time of usage.

Hydraulics are exceptional at what they do, and large forces can be transmitted through tight radii, and

indeed, returned through 180 degrees, such is its theory with respect to acting equally in all directions. Hydraulic systems have replaced the numerous and purely mechanical applications, where the moving parts are essentially and consistently lubricated. This is even better in a corrosive atmosphere, where for example, salty air will compromise all exposed parts.

On a lighter note, if such an improvising individual was thirsty, then he would have a choice between his brake fluid reservoir, his window washer reservoir, or indeed, his radiator.

Seamus Dolly is at

[www.CountControl.com](http://www.CountControl.com)

## **A Quick and Easy Guide to Indoor Rowing Machines**

**By John Phung**

Did you know that rowing is one of the best exercises for developing aerobic fitness? Not only does working out with rowing machines or rowing ergometers allow people to develop their cardiovascular system, but they also place considerable demands on your muscular system as well! Unlike cardio machines such as treadmills, exercise bikes and stair climbing equipment, a rowing machine exercises your upper body as well as your lower body. The rowing stroke when using an indoor rower is composed of 65–75% leg work and 25–35% upper body work.

Other benefits of indoor rowing are getting a full body aerobic workout with one machine, and the lack of impact that is experienced when compared to other aerobic activities. When you're jogging outdoors or using a treadmill machine, there is orthopedic trauma placed on your body every time you take a

## Hydraulic?

step. This is not the case with indoor rowers.

When you're looking for the best rowing machines for you, there are many options available. There are four distinct types of indoor rowers: piston or cylinder based rowing machines, flywheel rowers, magnetic resistance indoor rowers, and Water Rowers.

### Hydraulic Rowing Machine

The hydraulic rowing machine may be the best way to go if space is a concern, or if you're on a tight budget and you want an economical indoor rower. Hydraulic rowing machines receive its tension from the amount of air or fluid that's compressed with a cylinder or piston, and can be adjusted by most models of indoor rowers.

Although hydraulic based indoor rowers are low-cost, they differ from air, magnetic and water rowers because the rowing machine technique doesn't allow you to pull in a straight line. The majority of hydraulic piston based rowers require you be placed in an exercise position that does not allow you to perform a natural rowing motion. Because of this, you are unable to naturally synchronize your arm and leg movements together.

### Flywheel Rowing Machines

The air or flywheel rowing machine for exercise offers a similar feel to outdoor rowing. Flywheel exercise rowing machine receives its resistance from the pulling motion, which spins a flywheel with fan blades attached. The resistance is provided by the wind. To increase the resistance of a flywheel rowing machine, all you have to do is pull harder. This moves the flywheel faster, and a greater wind resistance is provided from the fan blades of this type of indoor rower.

Compared to piston/cylinder or hydraulic based rowing machines, air rowing machines provide a more natural, continuous, and smoother rowing stroke.

The Concept 2 (or Concept II) rower is among the most popular flywheel air rowing machines. This machine is used by fitness enthusiasts, health clubs, corporate fitness centers, and rehabilitation clinics as well. Along with health, fitness and rehabilitation purposes, the Concept2 is the rowing machine of choice for indoor rowing competitions around the globe, such as the World Rowing Championships and the European Indoor Rowing Championships.

Indoor Rowing Championships and the European Indoor Rowing Championships.

### Magnetic Resistance Indoor Rowers

A magnetic resistance fitness rowing machine is known for being virtually silent and providing a smooth rowing stroke. Unlike flywheel based indoor rowers which receives its resistance from the wind, magnetic rowing machines utilizes a magnetic brake system.

One of the main aspects you'll notice with magnetic rowing machines is that it doesn't produce much sound at all. Rowing machines based on magnetic resistance produces no friction (like the flywheel or

## Hydraulic?

Water Rowers), thus providing a silent workout.

Fitness rowing machines based on magnetic resistance are available utilizing only magnet resistance or a combination of magnetic and air resistance.

### The WaterRower

The WaterRower is an ideal rowing machine for those who participate in outdoor rowing. The Water Rower's unique patented Water Flywheel has been designed to emulate the dynamics of a boat moving through water. Just like rowing outdoors, the WaterRowers' flywheel receives its resistance by overcome the effects of drag as water moves past the tank. This indoor rower is also virtually silent when in use. All you hear is the swishing of the water while using this rowing machine.

The WaterRower is constructed with a wooden frame. This makes this rowing machine one of the most attractive models available, and the mechanical vibrations (common to other indoor rowers) are dampened. There is also a commercial version of the Water Rower sporting a metal frame.

Another model of water based rowing machine is the First Degree Fitness Fluid Rowing Machine.

### Summary

In sum, whatever type of rowing machine you choose, rowers are an excellent choice for developing aerobic fitness and building a healthy heart.

John Phung is certified personal trainer providing easy to understand information about

indoor fitness

rowing machines

,

Concept 2 rowers

and

WaterRowers

.

Related Content:

Read more Content at

: A genuine resource center for Quality Ebooks and Softwares

Hydraulic?



This Free E-Book has been brought to you by [Natural-Aging.com](http://Natural-Aging.com).

**100% Effective Natural Hormone Treatment**  
**Menopause, Andropause And Other Hormone Imbalances**  
**Impair Healthy Healing In People Over The Age Of 30!**