

CALA

Canadian Aquafitness Leaders Alliance Inc.
Handout



Info for people with arthritis who want to exercise in water

WHY WATER, SPECIFIC BENEFITS

This brief summary indicates why water exercise is used for the specific benefit of the arthritis-affected population. Reproduce this information and use it to educate clients and to market water exercise programs.

The combined influences of turbulence, resistance, hydrostatic pressure, buoyancy, thermal conductivity and exercise can restore flexibility and range of motion much faster, safer and with less stress on the body than a typical land exercise program.

Resistance:

Water provides varying resistance to every movement in any direction. This effect encourages the balanced use and strengthening of all muscles, promotes trunk stability and postural alignment. The participant controls the intensity of the workout. The harder one pushes against the water the harder it pushes back. Water exercise provides the excellent training opportunities for muscle balance and strengthening without impacting undue stress on the joints.

Buoyancy:

The body is almost weightless in chest or shoulder depth water. As the water depth decreases, movement is easy without load bearing compression on ankles, knees, hips, and spine. Without this compression pressure and impact to the joints, pain subsides allowing us to regain a fuller range of motion, increased strength, fitness, and function.

Hydrostatic Pressure:

The squeezing effect of the water supports every movement and has a positive effect on the cardiovascular system. While standing upright in shoulder depth water hydrostatic pressure causes a 60% increase in blood volume (700 ml) in the chest cavity. This increase causes the heart to be stretched by the greater blood volume, and increases the heart stroke volume by 32% (Starling's Law). The heartbeat actually slows down 10 to 17 bpm due to the longer filling time of the right atrium. The resulting effect is safety from high heart rates, a well- conditioned heart muscle, superior circulation deep into muscle tissue and increased cleansing of toxins. Hydrostatic pressure also helps to reduce edema or swelling of working joints, especially ankles and knees.

Turbulence:

Movement through water creates additional turbulence. Turbulence has a massage like effect on the body and causes increased blood flow to the skin's surface. Participants feel greatly invigorated and energized. Working against turbulence increases muscle activity and stabilizing and strengthening opportunities.

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Thermal Conductivity

Pool temperature has a significant effect on the effectiveness of Aqua Arthritis programs. Therapeutic water temperature, usually 86-92 or more, helps to warm the muscles so they stretch more easily. This effect is particularly good for people with fibromyalgia, arthritis and flexibility deficits.

Safety: Non-impact or modified impact

Water slows down movement allowing participants time to react. Multi-directional resistance prevents ballistic movement. Buoyancy reduces the risk and dangers of falling. This is one reason why injuries in the water environment are less likely to occur. Water exercise seldom contributes to muscle soreness or fatigue. Water exercise is safe enough to start 7-10 days after surgery, doctor recommendation required. Water exercise can give a head start to recovery and reduce overall therapy needs.

Water Exercise is recommended when:

- Land exercise is too painful
- For all load bearing injuries
- Inadequate trunk stability
- Inefficient circulation
- Inflexibility
- Chronic pain
- Hip or knee replacement
- Diabetes
- Arthritis
- Sports injury
- There is a fear of falling
- Poor postural alignment
- Weakness and fragile bones
- Limited range of motion
- Inadequate balance
- Obesity
- Back surgery
- Mastectomy Recovery
- Respiratory Disorders
- Development delay

Pre and Post Surgery Applications:

Aquatic, (non-impact exercise), helps to strengthen the muscles without impacting on load bearing joints. Pre-strengthening prior to surgery aids a speedy recovery. As soon as the sutures have healed return to the pool for a safe, gentle, pain-free and fast recovery from the surgery.