



Aquability for Pain Management

In our 6-week aquability class our aim is to introduce you to how you can use water-based activity to achieve your pain management goals.

WEEK ONE – Principle – immersion & thermodynamics: Relaxation

Warm water immersion is known to stimulate receptors in the skin which can block pain signalling, this can reduce the level of pain felt and the associated muscle spasm and stress which results from the pain.

The buoyancy effect reduces the pressure on joints, bones and muscles making movement easier and reduces disability. Using the pool as a safe environment allows you to take risks with balance as the body is supported.

Being supported by the water creates rest and relaxation possibilities for the body, this triggers your nervous system to move into a healing state, and away from a '*fight, flight, freeze response*'.

These beneficial effects can be achieved by allowing the water to do the hard work for you, **any** gentle movement in the water will do. We will introduce 'Ai chi' as a specific form of aquatic exercise which promotes mind and body relaxation.

WEEK TWO – Principle – Buoyancy: Movement and Flexibility.

Being immersed in the water means the effects of buoyancy (opposite to effect of gravity) will reduce pressure on joints. The deeper you are immersed the less pressure is on the body (standing with shoulders under water = 85% reduction in body weight). This, alongside the increased blood flow to muscles and reduction in pain and muscle spasm allows more movement of the body with greater ease/less effort.

WEEK THREE - Principle – Resistance: Strengthening.

Water provides more resistance than air, which can allow us to build muscle strength in a safe and supported environment. The larger the surface area that "collides" with the water the greater the resistance, so, if we want to work harder, we just need to position ourselves head on to the body of water we intend to "collide" with. Extra equipment can be used to increase the resistance



if needed (gloves, paddles, fins) by increasing our surface area. We can also increase the resistance effect by moving with more speed. Strengthening can therefore be achieved, whilst maintaining low impact on joints and greater levels of comfort than with dry land exercise.

WEEK FOUR – Principle – Hydrostatic pressure: Cardiovascular fitness

Moving in water creates more work for the heart and lungs due to the pressure of the water exerted on the body. The increased effort for heart and lungs, increases the circulation of oxygen, nutrients and hormones to fatigued muscles allowing for exercise to take place with less muscle damage; and stimulates increased fitness in the heart and lung muscles.

WEEK FIVE – Principle – Buoyancy, Resistance & hydrostatic pressure: Balance

Water moves and “pushes” on the body increasing the challenge to balance, whilst providing the buoyancy which means there is little risk of injury when/if balance is lost. It is possible to be braver in challenging your balance, and core muscles (and all those related to balance) can be strengthened with more comfort.

WEEK SIX – Moving on & gaining confidence.

Having introduced you to some different principles of water-based exercises, and how they can achieve a range of benefits; we will review and recap the principles. This will help you plan those exercises that best suit your needs, that will serve as your independent aquatic exercise plan.