

Release Restore Return

Rehabilitation utilizing AquaStretch™ Techniques

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AquaStretch™ is a unique combination of the client's active, intuitive movement with manual pressure and assistance into end range from the therapist (facilitator). This combination leads to the release of fascial adhesions, restoring flexibility and returning the client to a higher level of function.

AquaStretch™ could be called aqua release in that the primary objective is to free up fascial adhesions that are contributing to pain, reduced circulation, nerve impingement and limited mobility. Fascial adhesions form between tissues that normally glide past each other. Adhesion formation is part of the natural healing process. Normally during the remodeling phase of healing, the unnecessary adhesions are reabsorbed. If the client does not move enough or returns to activity too soon these adhesive cross-links between tissues become stronger and possibly calcified.

Inactivity and lack of normal movement also leads to adhesion formation. Research has found fibro-fatty infiltrates within joints after a period of immobilization, which become more fibrotic the longer the immobilization. Additionally histological analysis reveals significant change in ground substance with a 30-40% loss of glycosaminoglycans (GAGs) and water without significant reduction in collagen fibers. The ground substance including GAG's are the lubrication between tissues and are associated with the critical interfiber distance, the distance collagen fibers must maintain from other fibers to prevent excessive intermolecular cross-links or micro-adhesions. Normal collagen has a half-life of 300-500 days the GAG's only have a half-life of 1.7-7 days. Therefore, immobilized tissues become stiff and "dehydrated" in a short period time.

What does this mean clinically? Movement stimulates the production of ground substance and rehydrates connective tissue helping maintain the critical interfiber distance by lubricating the spaces. Movement breaks down fibro-fatty macro-adhesions and guides in the orientation of new collagen fibers as they are laid down by the body. AquaStretch™ provides both a mechanism to break up adhesions and promote greater myofascial movement preventing further adhesion formation.

AquaStretch™ takes a whole body approach working on the theory that the human body is a tensegrity structure. The term tensegrity comes from the phrase, "tension integrity." Described by R. Buckminster Fuller, a tensegrity structure is one that

demonstrates “continuous tension around localized compression.” Tensegrity structures maintain their integrity through a balance of tensile forces throughout the structure with compression members within the body of continuous tension. With this configuration, strain is distributed throughout the structure not just at initial stress point.

“It is the victims who cry out not the criminals” Diane Lee

The meaning of this quote indicates the cause of the symptoms and pain may be distal from the area of complaint. A simple example, of this is when a person breaks their foot and is in a walking boot, this changes their normal movement pattern leading to possible adhesions both at the site of injury and up the lower extremity chain. Several months later the person has complaints of knee, hip or back pain. Which area do you treat?

The answer is you treat the whole person, because of the body’s systemic connectivity it is often necessary to dynamically stretch the whole body not just the symptom area. AquaStretch addresses™ distal adhesions first working towards the cranium, this helps restore normal movement patterns and reduce stress to the area of complaint.

AquaStretch™ restores flexibility and mobility through mechanical release of adhesions leading to reduction of pain and providing mental encouragement to move. This active movement from the client is an essential part to releasing the adhesions. The motion the client goes through is called intuitive movement. Instead of a series of directed motions from a therapist, the client is asked to “move if you feel the need to move” or “move as you want to and I will follow.” Intuitive movement involves trusting the body to move where it needs to go in order to stretch the targeted tissue.

The aquatic environment plays a key role in the success of this technique. Warm water allows the body to relax and begin to release tension. More importantly, buoyancy allows the client to move further with greater ease compared to land, capitalizing on their intuitive movement. As needed, the facilitator provides additional stretch accentuating the client’s intuitive movement. The facilitator follows instead of leading this stretch, keeping with intuitive movement.

It is wrong to think of AquaStretch™ as simply stretching in the water. It targets the adhesions with direct facilitator pressure. These pressure points are not set points nor are they the same for each client, but are determined by instructing the client to “play” with their movement and “freeze” in the position where they feel pain or restriction. Similar to “it hurts when I do this...” however, the facilitator then places pressure with their thumb on the area. Continued communication with the client allows, “fine tuning”

until the facilitator is in the specific area of pain. While maintaining pressure on the adhesion, the client is again encouraged to move intuitively. The pressure point is now a fulcrum placing a more specific stretch to the tissues resulting in a release or breaking down of the adhesion.

This direct pressure is another key component to the AquaStretch™ theory. Moving the body without the facilitator pressure may lead to increased mobility however, the adhesion remains. You probably have had those types of clients where their range of motion is normal but they still have pain and complain of tightness. Remember the body will follow the path of least resistance so flexible tissues stay flexible and tight, calcified tissues stay tight. When performing AquaStretch™ the direct pressure on the adhesion focuses the “stretch” to the restricted tissue gaining a more permanent improvement in mobility.

With increasing mobility and decreasing pain the client’s normal movement patterns can be restored, in turn there is a return to function. Combining AquaStretch™ and therapeutic exercise completes the rehabilitation picture. Exercise design focuses on maintaining gains achieved with the AquaStretch™ and progressing strength, promoting muscle balance and endurance.

Certain clients after their initial rehabilitation with AquaStretch™ require occasional repeat sessions. These “tune ups” are required for clients who have genetic predisposition for adhesion formation (for example, individuals with fibromyalgia); those with occupational or recreational stresses (for example, violin player) and those who do “goofy” things they are not suppose to. Patient education and proper home/ independent exercise can reduce the need for repeat visits.

AquaStretch™ is an exceptional technique often providing immediate reduction of symptoms and improved mobility allowing a more rapid progression of rehabilitation. Giving the locus of control to the client vs. a dependent relationship where the therapist is expected to “fix” the client, I believe, is one of the primary reasons this technique is successful. It is a hands on technique that is not passive, resulting in release of adhesions, restoring of movement patterns and ultimately the client’s return to function.

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