

Neuromuscular/ Physical Therapy

Neuromuscular Therapy (NMT) is an innovative healing approach that combines the best Soft Tissue Manipulation techniques of Osteopathy, Trigger Point Therapy, Massage and other fields. NMT uses a combination of Manuel techniques and facilitated Stretching to identify and treat Soft tissue injuries, pain and dysfunction. The main focus of Neuromuscular Therapy is to not just treat the symptoms but to also identify the cause of pain and can be combined with other modalities as part of a comprehensive treatment program. NMT is utilized at Muscle Injury Clinic for injury prevention and cure. I treat individuals with chronic long - standing pain, acute Sudden pain and Occupational injuries. Listed below are some of the techniques I use to assess and treat Sports Injuries and pain. (click to read more)

Muscle Energy Techniques - (MET) can be applied to a range of acute and chronic conditions which can result in the following therapeutic outcomes :

- Restores functional length and tone of muscle
- Strengthens muscle
- Retrains appropriate function within a muscle
- Deactivates myofascial trigger points
- Mobilizes a restricted joint
- Enhances local circulation

MET can be applied in a variety of ways and each application may be fine tuned to suit the individuality of the patient and the condition of which they are presenting.

Soft Tissue Release - (STR), also known as Active Release Technique (ART), is a dynamic, highly effective technique that has an immediate and powerful effect on muscle and connective tissue (Sanderson, 2002). It involves applying precise pressure during a specific movement, performed in a number of planes of motion, the goal is to provide a therapeutic effect to the autonomic, nervous and fascial systems in a way that leads to spontaneous release of the adhered tissues, thus lengthening the desired tissue. I find this technique very successful in breaking down scar tissue and lengthening restricted muscles.

The benefits of STR include :

- Contributes to a fast a permanent re-organisation of connective tissue, including scar tissue
- Assists the targeted muscle and tissues to be returned to their proper resting length
- Helps to rectify muscular imbalances
- Improves muscle performance.
- Restores normal gliding function of fascial tissues
- Helps mobilise joints

Positional Release - Involves placing of a body part or tissues into any position, utilising and direction or additional vector (such as compression, distraction), into a position of greatest ease (Sharkey,J).

The benefits of PR include:

- Reduced stiffness in joint/muscle
- Reduction of hypertonicity in tissues
- Reduction in muscle tone to enable a lengthening to follow
- Effective treatment for inflamed tissues
- Treatment options where manual methods may cause too much pain or discomfort

Myofascial Trigger Point Release - According to Travell and Simons, a Trigger Point is defined as a ".....hyperirritable spot in skeletal muscle that is associated with a hypersensitive palpable nodule in a taut band. The spot is tender when pressed, and can give rise to characteristic referred pain, motor dysfunction, and autonomic phenomena". What this means is that a Trigger Point will present itself as a "knot" which is along a taut band, or hard felt line along the skeletal muscles, when a muscle presents with Trigger Points, it cannot lengthen and shorten as normal, and as such cannot function properly. A combination of the techniques mentioned on this page can help to deactivate Myofascial Trigger Points.

Mobilisation Techniques - Consists of small passive movements, usually applied as a series of gentle stretches in a smooth, rhythmic fashion to the individual joints. It involves moving the joints in such a way that a small movement of the actual bone surfaces takes place. There's no fast thrusting, manipulating or popping of the joints. Slower movement allows the joint to be taken further, to stretch and massage the connective tissue in and around the joint. This creates a deeper release, and more lasting changes.

The benefits of Mobilisation Techniques include:

- Improved mobility in joints that have less than normal movement
- Decrease muscle spasms and tension
- Stimulate the production of synovial fluid
- Increase joint Range of Motion

Differential Diagnosis - I usually assess my clients to establish if they have a joint, muscular, ligament or tendon injury. By completing a differential diagnosis i am then able to determine whether i can treat the individual or if they need to be referred on to a medical practitioner.

Orthopaedic Sports Massage

A Sports Massage goes deeper than a regular massage. The main aim is to increase range of movement and decrease pain by working on adhesions which form within the layers of muscle and connective tissue. Adhesions can also cause poor blood circulation and a variety of nerve irritations and associated problems.

An Orthopaedic Sports Massage uses a variety of techniques such as cross fibre friction, muscle stripping (which separates individual bunches of muscle fibres and increase muscle length), Petrissage and Effleurage. The Muscle Injury Clinic also specializes in Pre, Inter and Post Event Sports Massage tailored to suit the individuals needs, you don't have to be an Athlete to benefit from a Sports Massage

Trigger Point Dry Needling

Trigger Point Dry Needling involves the insertion of a filament acupuncture needle into a target muscle directed specifically at a Myofascial Trigger point. A primary aim of Trigger Point Dry Needling is to achieve a local twitch response, in turn reducing tension and pain. Trigger Points are little nodules in taut bands of muscle, taut bands shorten the muscle inhibiting muscle function.

Dry Needling releases the taut bands and reduces the pain caused by Trigger Points, the twitch response is energy or if you like electricity being released through the taut band. A Trigger Point is an area that isn't getting good blood flow and has a build up of toxins and debris. The needle is inserted into this blockage making a connection, then energy flows through the muscle giving the body a chance to release the tension it was holding. When we get a twitch response we know something positive has happened, change has occurred. Trigger Points inhibit muscle function, inhibited muscles do not respond well to strengthening or stretching, with the removal of the Trigger Points the muscle will return to health and respond well to Physical Therapy .

Trigger Point Dry Needling is an effective treatment for chronic pain of neuropathic origin and has been demonstrated to have very few side effects. This technique is unequalled in eliminating neuromuscular dysfunction of a Trigger point.

Electro Acupuncture

Electro Acupuncture - Is the use of an electrical current which passes through the needles to stimulate blood flow, The procedure for Electro acupuncture involves the needles inserted as in a traditional Dry Needling treatment, but a small electrode is attached to the needles which are connected to the electrostimulation unit, the current from the unit is passed through the skin and adjusted until the desired stimulation is obtained. A maximum of 12 needles can be stimulated at any one time, allowing for a continuous stimulation of a broad area, the current is slowly increased until the client feels a tapping or tingling sensation, the current is then increased again until the sensation is as strong as the client is willing tolerate. With milliamp currents, the muscle tissue under the needles may twitch, this is considered to be a desirable effect, and while strange in sensation, should not be painful.

The basic premise behind electro acupuncture is to increase the effect of the needles through the addition of the electrical current, the electrical current is able to stimulate more powerfully a larger area than just the needle itself. It is also understood that certain electrical frequencies will induce the release of beneficial chemicals (eg enkephalins and dynorphins) which regulate pain perception in the body.

Electro acupuncture is said to be useful in improving circulation and facilitating tissue regeneration. It is believed that the microcurrent helps cells to produce ATP (the substance needed as energy to fuel all of a cells activities), which in turn helps to improve tissue fuction and stimulate the release of endorphins the body's natural pain reliever. At the Muscle Injury Clinic i utilise electro acupuncture as a powerful modality for treating soft tissue injuries, musculoskeletal pain and neuropathic pain disorders, the duration of electro acupuncture treatment generally lasts between 15 - 20mins and is usually incorporated within a treatment alongside manual therapy techniques.

Electro acupuncture should not be used on clients who have a history of seizures, epilepsy, heart disease or strokes, or on clients with pacemakers.

Taping And Strapping

Taping And Strapping - Can help prevent injury as well as protect the athlete from re-injury whilst returning to sport. The role of tape is to limit the movement in an injured joint to prevent excess or abnormal movement. In addition it should provide support to the muscles surrounding the joint, that may be under additional strain due to a ligament injury.

At the Muscle Injury Clinic a Taping and Strapping service is available during clinic hours by appointment only.

Kinesiology Taping

Kinesiology Taping - Is designed to facilitate the body's natural healing process while allowing support and stability to muscles and joints without restricting the body's range of motion.

By stretching a muscle, applying the tape to the stretched muscle and returning the muscle to neutral position, the tape forms wrinkles or convolutions in the skin. The wrinkling effect appears to be an essential element in ensuring the efficacy of the Kinesiology Taping technique on muscles.

When a muscle is inflamed, swollen or stiff, the space between the skin and muscle is compressed, which restricts the flow of lymphatic fluid. This compression applies pressure to the pain receptors beneath the skin, which in turn relay signals of discomfort to the brain resulting in the sensation of pain.

By lifting the skin, the space between the skin and muscles increase, so the lymphatic fluid between the skin and muscles moves more effectively.

At the Muscle Injury Clinic, i utilize Kinesiology Taping in conjunction with manual therapy techniques to help facilitate the healing process and further reduce the recovery time.