myomed

MUSCLE PAIN & INJURY

MIGRAINES

TINNITUS

VERTIGO

SINUS

ENDOMETRIOSIS

Myofascial Medicine –
Natural Hormone Clinic

The History of Myofascial Medicine

The documentation of this work begins in the middle of the 19th century. From that date onward, medical doctors have been reporting the observations that skeletal muscles contain taut bands with a firmer nodule along the taut band called a trigger point. Pressure on the trigger point produced referred pain. Also documented was evidence that the injection of anaesthetic into the trigger point produced positive change in both the local tenderness and the referred pain.

In 1940 Dr Janet Travell practising in New York USA developed pain in her right shoulder radiating into the right arm. This partially disabled her for a year and the treatment options available produced only short-term relief of symptoms. She searched the literature and found the evidence noted above. Her father was a physician and injected the trigger points. A full recovery followed and her pioneering work into myofascial pain began.

Dr Travell examined her own patients and found that when they had pain, frequently there were skeletal muscles that contained taut bands and trigger points. She also found that by applying pressure to the trigger point she could elicit referred pain that reproduced their symptoms, and injecting these trigger points with anaesthetic produced positive change. She began to collate this information and gradually documented the referred pain patterns that emanate from each of these specific trigger points in the different skeletal muscles.

In May 1955 she was called to treat Senator John F Kennedy. In 1954 Kennedy had surgery to his lower back because of a disc lesion thought to be responsible for his low back pain radiating into the left buttock and leg. This was complicated by a wound infection and another operation four months later to remove the metal plate. More importantly, the pain for which he had received the surgery had not changed at all. He was a product of failed back surgery.

In her autobiography Travell writes, "At our first meeting the thin young Senator on crutches could barely navigate the few steps down from the sidewalk into my ground floor office. Left sided pain in his back and leg made it almost impossible for him to bear weight on that foot, and a stiff right knee since a football injury in his youth made it difficult for him to step up or down with his weight on the right leg, because that required bending the right knee…….When I examined him, the reality of his ordeal was brought home to me by the callus under each armpit toward the shoulder blade where the skin had borne his weight on crutches for so long…….

That day I was able to demonstrate the role that residual muscle spasm may play in long standing pain and stiffness of a joint after injury; the range of motion at his right knee was increased at once by my brief and simple treatment of the knee muscles that were in spasm."

Travell admitted Kennedy to New York Hospital for a week where she treated his back. The surgery had not failed. The surgery had been a success but the associated myofascial pain syndrome had not been diagnosed and included in the management plan.

Dr Travell continued to look after Kennedy and was appointed the White House physician when he became President. She was the first woman and first non-military appointment to that position. She served under Kennedy and after his assassination was reappointed by Lyndon Johnson before returning to private practice and her study of myofascial pain.

The History of Myofascial Medicine

David Simons began his distinguished medical career in the United States Air Force as a clinician and research scientist. He was active in the early man in space studies and piloted a record setting manned balloon flight to over 100,000 feet in August 1957. He retired from the Air Force in 1965 with the rank of Lieutenant Colonel. His civilian career has been in Physical Medicine and Rehabilitation. In 1983 he was appointed Clinical Professor, Department of Physical Medicine and Rehabilitation, University of California, Irvine.

Working together Travell and Simons wrote the definitive reference text on myofascial pain, Myofascial Pain and Dysfunction; The Trigger Point Manual. This was published by Williams and Wilkins with Volume 1 in 1983, Volume 2 in 1992 and the revised edition of Volume 1 in 1999.

Dr Travell died at the age of 95 years in August 1997, and Professor David Simons continues as the world leader encouraging research and dialogue and lecturing in this new field of medicine.

Myofascial medicine is gradually gaining momentum within the health care professions. There have been regular world conferences since 1989, three Australian conferences, there is a peer review journal related to fibromyalgia and myofascial pain, the Journal of Musculoskeletal Pain, and the term myofascial pain is becoming more frequently used by medical practitioners and paramedical personnel.

International Status

Journal of Musculoskeletal Pain

Edited by Jon Russell MD, established in 1993, publishes articles on fibromyalgia, myofascial pain and related subjects. Subscription information can be obtained from Haworth Medical Press at www.haworthpressinc.com or by email at getinfo@hayworthpressinc.com. Any practitioner seriously interested in myofascial medicine should obtain a subscription.

International Myopain Society

This is a non-profit, international, interdisciplinary organisation for research scientists, physicians, other health care professionals, institutions, foundations, and commercial companies interested in exchanging ideas, conducting research, or learning more about soft tissue pain syndromes like myofascial pain and fibromyalgia. Keep in touch at www.myopain.org or email at russell@uthscsa.edu.

Definitions

MYO = MUSCLE

FASCIA = CONNECTIVE TISSUE

MYOFASCIAL SYNDROME
The sensory, motor, and autonomic symptoms caused by myofascial trigger points.

MYOFASCIAL MEDICINE
The study of myofascial syndromes.

MYOFASCIAL TRIGGER POINT
A hyper-irritable spot in skeletal muscle that is associated with a hypersensitive palpable nodule in a taut band. The spot is painful on compression and can give rise to characteristic referred pain, referred tenderness, motor dysfunction and autonomic phenomena.

LATENT MYOFASCIAL TRIGGER POINT
A myofascial trigger point that is clinically quiescent with respect to spontaneous pain; it is painful only when palpated.

ACTIVE MYOFASCIAL TRIGGER POINT
A myofascial trigger point that causes a clinical pain complaint. It is always tender, prevents full lengthening of the muscle, weakens the muscle, refers a patient-recognised pain on direct compression, mediates a local twitch response of muscle fibres when adequately stimulated, and, when compressed within the patient's pain tolerance produces referred motor phenomena and often autonomic phenomena, generally in its pain reference zone, and causes tenderness in the pain reference zone.

WHAT DOES THIS MEAN?
In simple terms this means that when muscles injure they develop a taut band within them that has a firmer more tender spot along it termed a trigger point. From birth our muscles age. They express this by accumulating more trigger points. If these are latent we are not aware of them. They just make us gradually more stiff and weak. If they become more sensitive they refer pain to an area of the body characteristic for that particular trigger point.

PREVALENCE
The International Association for the Study of Pain states that approximately 50% of all chronic pain is caused by myofascial trigger points. It is probably greater than this.

The experience of Dr Whiteside with sports people indicates that perhaps 90% of all sports injuries are myofascial.

Many non-pain symptoms are caused by active myofascial trigger points. The sternocleidomastoid muscles at the front of the neck refer changes in balance, vision, and hearing, and can produce nausea and dizziness. The pectoral muscles on the front of the chest can cause heart palpitations. The abdominals and the long back muscles can cause bowel and gynaecological problems. This is the reason the term myofascial medicine is used.

Myofascial syndromes are common but not commonly diagnosed.
As doctors become skilled in the diagnosis and treatment of myofascial syndromes the entire infrastructure of medical science will be changed. It will be a paradigm shift.

Dr John Whiteside M.B.B.S. BSc

Diplomate American Academy of Pain Management
Fellow Australasian College of Nutritional and Environmental Medicine

Dr Whiteside graduated M.B.B.S. at Monash University in 1976. After working in general practice in Melbourne and Perth, he has specialised since 1988 in the new field of myofascial medicine. In 1988 he was trained by the two pioneers of this work in the USA, Dr Janet Travell and Prof. David Simons. In 1989, he attended the first international symposium of myofascial pain and fibromyalgia in Minneapolis USA. He returned in 1990 as an invited lecturer to a national conference on myofascial pain in Washington DC. Following this conference, he underwent further training in clinics in Seattle and Vancouver. In May 1993 he completed the postgraduate course with the Australasian College of Nutritional and Environmental Medicine and in December 1996, was awarded a Fellowship of that college. In 1995 he attended an advanced course in myofascial therapy in San Diego, California. In September 1997 he lectured with Prof. David Simons at the first Australian Conference on myofascial pain on the Gold Coast in Queensland. He continued as part of the myofascial team at the national conferences in 1998 and 1999. In May 1998 he lectured in Oslo, Norway, at the Norwegian Sports Medical Institute. In 1999 he worked as a consultant to the Brisbane Lions Football Club, travelling on a regular basis to treat the players and teach the medical staff this new technique. He is currently training other medical practitioners.

Sports Injuries – Personal Experience

The speed and power of trigger point injection therapy is best seen in the sporting arena. I have now treated over 3000 athletes and, almost without exception, all have responded positively to the release of the taut bands within skeletal muscles and very frequently have returned to training after one or two sessions.

I am firmly convinced that when athletes injure, the injury is the formation of a taut band. If the injury occurs with sufficient force some of the muscle around the taut band tears but the tear is an associated event and is not the injury. The injury is the development of the taut band.

The main reason that athletes take so long to get better is because they ice their injuries. When ice is applied, the taut band becomes tighter and any blood that has spilled out from the associated tear is locked into the area where it can coagulate and later become fibrous scar tissue. If the injury is heated as soon as possible after it occurs, then the taut band begins to relax and the vasodilatation allows rapid clearing of the spilled blood from the area.

Apart from very few exceptions where there is an arterial bleed, and this is normally obvious at the time of assessment, all bleeding from these injuries is venous. As soon as the pressure builds up around the vein, it is sealed by the normal repair mechanisms of the body. This seal will not be broken by heating the area. I advise all my patients to heat as soon as possible and never use ice.

The RICE (Rest, Ice, Compression, and Elevation) principle is wrong. It delays recovery and can shorten athletic careers.

MyoMed

MyoMed has been established as a service organization to doctors practising myofascial medicine.

- A source of information
- Exchange of ideas
- Treatment
- Training
- Accreditation
- Quality Control

Training

At this stage the main course being prepared by Dr Whiteside is specifically designed for medical practitioners. It is to teach the use of the trigger point injection technique.

Treatment

- **INITIAL CONTACT**

When you telephone for an appointment my front desk staff will allocate a 30 or 60 minute session depending on the nature of your problem. All myofascial consultations and treatments at MyoMed are privately billed to the patient.

- **FIRST SESSION**

Most problems require a brief assessment and trigger point injection therapy is started immediately. More complex problems may require a longer assessment with treatment delayed until perpetuating factors have been managed.

- **TRIGGER POINT INJECTION THERAPY**

This is now almost painless by using Entonox (nitrous oxide and oxygen). This is more commonly known as laughing gas often used by dentists or during childbirth. Some patients actually describe the procedure using Entonox as a very pleasant experience.

The effect wears off immediately and it is safe to drive. Although we do recommend you have somebody drive you to your first appointment as some patients do not feel able to drive home after the treatment.

As the needle releases the taut band the muscle twitches and relaxes. This is felt by the patient as a focal cramp or "grab" of the muscle. At this point the local anaesthetic is injected and the muscle relaxes. A number of taut bands are treated at each session.

- The injections are into the muscle only.
- The injections are of dilute local anaesthetic.
- There is no cortisone used.
- There are no injections into joints.
- There are no injections into spinal structures.
- The injections are generally less painful than expected.

MyoMed

• COST OF TREATMENT
Workers Compensation and MVIT fees must be paid privately by the patient at the time of treatment. Receipts will be issued with documentation as necessary. The patient can then request reimbursement from the insurance company.

Private Patients

Duration of Session	Dr Whiteside's Fee	Medicare Rebate
30 minutes	$170	$38.00
60 minutes	$340	$61.00

Please Note: Most simple problems respond within 1-3 treatment sessions, with minimal treatment needs after that time. More widespread chronic pain may take longer to treat. A reasonably accurate assessment can normally be made after the initial assessment. A trial of therapy can then be discussed and sensible goals set.

Treatment proceeds to full recovery or substantial improvement requiring minimal further treatment.
If insufficient progress is achieved, treatment is stopped and the problem re-evaluated.

Clinic Details

Address	1014 Beaufort Street, Bedford 6052
Telephone	(08) 9471 8911
Facsimile	(08) 9471 8922
E-mail	reception@myomed.com.au
Web Site	www.myomed.com.au
Clinic Hours	Monday to Friday 9.00am - 5.00pm

Important Patient Information

• Vitamin C at a dose of 1gm three times per day should be taken throughout treatment. If possible begin this three days before the first injection session.

• During treatment do not take any analgesics that contain asprin. If possible this should be ceased three days before the first session.

• If you are taking anticoagulants please state this information at the initial assessment.

• If you are suffering from an infective illness (flu, cold, gastroenteritis, boil, abscess, sinusitis etc.) you should cancel your appointment for trigger point injection therapy. Injections place a demand on the immune system and could cause the illness to become worse.

Skeletal muscles are more sensitive during an infective illness and do not respond well to the trigger point injection therapy.

• Do not come for treatment fasting. If your appointment is in the morning make sure you have a good breakfast. If it is in the afternoon have breakfast and lunch. If it is very late in the day and before dinner have a substantial snack within 2 hours of the treatment.

• Light training using the muscles injected can begin 2 to 6 days after trigger point injection therapy. It is OK to maintain aerobic fitness with activities that do not use the muscles injected.

• Driving immediately after trigger point injection therapy using entonox gas –
most patients find they recover from the gas within a few minutes and are safe to drive.

If you have been sensitive to medication or alcohol in the past, or faint easily, it may be best to bring a driver on the first visit to test your recovery.

• The amount of soreness and stiffness following treatment varies considerably. Most people can drive after treatment to the back region but some areas such as the neck and the calf muscles, or intensive treatment to hamstrings make it difficult.

If there is any doubt discuss this with our staff and bring a driver.

• Soak in a hot bath for 15 minutes as soon as you get home after treatment.

• The injection pain is totally gone by 7 days. If you have pain after one week it means the muscles are still tight. It is best to return for treatment as soon as possible. Most injuries resolve permanently within 1 to 3 treatments.

• Note the visible bruising from the injections may be prominent and may persist long after the injection pain is gone. Any pain after 7 days is due to residual trigger points not the visible bruising.

• If you have anti-inflammatory tablets at home begin these the day before the treatment and continue for 2 days following treatment. If you do not have these they can be prescribed at the first session. Using anti-inflammatories limits the post injection pain to 2 days or less.

• Follow up massage assists recovery but is not essential. It is best done 4 or 5 days after trigger point injection therapy.

Important Patient Information

• At day 8 following trigger point injection therapy you should be returning to full training. If you still have pain or restriction book another session or call me to discuss further management.

• To prevent future injury always heat and stretch. NEVER ICE YOUR INJURIES. Ice makes the taut bands tighter and locks any blood that spills from any associated tear to the area where it can clot and produce scar tissue. Heat relaxes the taut band and allows the body to remove the blood from the injured area.

The best way to test this advice is to try it! You will be impressed with your rate of recovery compared to previous injuries when you used ice.

Duration of Treatment

Foot Pain

Pain localised to the foot without pain in the calf will normally resolve in one or two, occasionally three, 30 minute sessions. For an initial assessment book 30 minutes.

Calf Pain

Shin splints, achilles tendonitis, compartment syndrome, past history of stress fractures, calf cramps.
Trigger Point injection therapy very frequently produces total recovery in these cases. Each treatment session is very intensive and requires 30-60 minutes. The calf is often very painful following treatment and it is best not to have to drive home. The pain from the injections may remain high for a full week until the next session. A single calf may take three sessions of 1 hour each to complete.

Hamstrings

Normally one or two 1 hour sessions will produce a full and permanent recovery. Sometimes a third 30 minute follow up session is required.

Brian Lara suffered from a hamstring injury for 8 months coming into the summer cricket season with Australia in the 2000/2001 series. He was treated with trigger point injection therapy immediately after the Perth Test in December 2000. This was a 90 minute session and was extremely intensive. Six days later he played in Tasmania and scored 231 runs. Normally it would be best to rest completely for one week following such a large procedure but this case does illustrate how quickly recovery can occur if it is important for an elite athlete to compete in an important match.

Groins and Quadriceps

Normally one to three 1/2 hour sessions. They follow much the same pattern as hamstrings.

Duration of Treatment

Knee Pain

The most common cause of knee pain is taut bands in the quadriceps femoris muscles. These frequently recover completely with one or two 30 minute sessions.

Abdominal Muscle Pain

One 30 minute session.

Chest Pain

Unilateral, 30 minutes; bilateral, 60 minutes.

Upper Back

One to two hours if unilateral.

Lower Back

30-60 minutes if unilateral.

Shoulder

Normally two to three hours, but difficult, long-standing problems may take six hours.

Neck

Normally one to two hours with a higher probability of follow up 30 minute sessions.

Headaches/Migraines

Normally three to five 30 minute sessions will be sufficient to complete most of the work.
Some follow up 30 minute sessions may be needed at intervals longer than 1 week apart.

Face and Jaw Pain

The specific facial muscles should only take one to two 30 minute sessions to release. However these problems often have associated neck and back problems that also need treatment.

Frequently Asked Questions

• What is the treatment called?

The treatment is trigger point injection therapy. This is a short acting local anaesthetic. Injured muscles contain taut bands. The needle disrupts the taut band, the local anaesthetic helps the muscle to relax.

• What happens when the local anaesthetic wears off?

The local anaesthetic is used to assist the muscle to relax. It is not used to anaesthetise the area.
Successful treatment depends on the skilled placement of the needle by the doctor.

• Can trigger point injections injure the muscle?

Repetitive injections of local anaesthetic into the muscle has no negative long term effects. It will not cause any scarring in the muscle.

• What will the area treated feel like after the injections? What can I do to help recovery?

Initially the treated area feels sore and stiff. Intensive sessions can result in significant post treatment pain and it is always good to have a driver to take you home.

The very best thing to do as soon as possible after treatment is to soak for 20 minutes in a hot bath or spa. This consistently reduces the stiffness and soreness. Hot packs can then be used as frequently as desired and other sessions in the bath or spa will help over the next few days.

If your stomach can tolerate anti inflammatory medication this will help. If possible start the day before treatment and continue on the day of treatment and the next 2 days.

Regular stretching and heat is the key to quick recovery. Stretch for 30 seconds or longer to the point of discomfort, not severe pain. Hold the stretch steady. Do not "bounce" the stretch. Breathe deeply and slowly and let the rest of your body relax. This allows you to stretch a little further each time you breathe out.

Do your stretches as frequently as you can. Every two to four hours is good. If you want to stretch every 30 minutes that is better, but most people find this difficult.

Each stretch session should include two or three long stretches.

Avoid strenuous exercise or weight lifting of the part treated for two to four days. As a general rule when the injection pain has decreased to the point you feel comfortable you can resume normal activity. You can rely upon your common sense.

No danger will come to you if you resume too early. The pain might return but this can be attended to at the next session.

Frequently Asked Questions

• Will I get any bruising?

Yes. In almost all cases some bruising will occur. This can be small or it can be large and impressive. In the arm and leg the bruise may track down and cause swelling of the wrist or ankle.

The bruising looks bad but is not a problem.

Note: the pain from the injections normally lasts four to seven days. The visible bruising may last two to three weeks. Patients commonly return to the next treatment, point to the bruise, and say "it is still sore because of the bruise". The bruise is no longer sore, it is tight muscle beneath the bruise that needs to be released.

Taut bands often require several sessions to make them let go completely. Pain in the area treated after seven days means more injections are required into the same area. It is safe to inject through the bruise to release these stubborn taut bands.

• What if the needle hits a nerve?

This happens occasionally. When a taut band is injected the patient feels a deep intense grabbing pain. When the needle touches a nerve the pain is like electricity, very sharp and clearly different. The doctor injecting can see this difference and the needle is immediately withdrawn.

The nerve does not suffer any permanent injury by being touched by the needle. The "nerve pain" subsides immediately or within a few seconds in almost all cases. A smaller group may take several minutes.

Occasionally the "nerve pain" may persist until the next session. This is usually intermittent and is a sharp catching pain with certain movements. There may be an area of skin nearby or at some distance from the injection site that is tingling or numb. This normally releases by a further injection into the same area where the nerve was touched. It is usually caused by a very focal segment of a taut band and the second injection produces a very brisk twitch response with intense deep pain plus the sharp nerve pain component. Following this the nerve symptoms normally are completely gone immediately following the procedure.

Very rarely the nerve will suffer injury that requires two to three weeks to recover. Since I (Dr Whiteside) began this work in 1988 I have not seen any nerve problem persist beyond that point, and I have only seen it once.

• Who is allowed to do trigger point injection therapy?

Only qualified medical practitioners can do trigger point injection therapy.

Frequently Asked Questions

• What is the technique called dry needling?

Dry needling is better termed intramuscular stimulation (IMS). This is the use of acupuncture needles to release taut bands. It can be used by practitioners who are not doctors. Some physiotherapists use this technique. The IMS technique is a variation of the myofascial acupuncture described in the next section.

• Is trigger point injection therapy the same as acupuncture?

Traditional acupuncture is based on knowledge built up over many years and is directed to lines of energy within the body. Most acupuncturists in Australia use traditional acupuncture. This is totally different to trigger point injections in general and trigger point injection therapy in particular.

Trigger point injection therapy is a physical technique directed at palpable taut bands in skeletal muscles. When the needle penetrates the trigger point the taut band twitches (twitch response) and then relaxes with the assistance of anaesthetic.

There is a new acupuncture needle technique called Modern, Western or Myofascial Acupuncture. In Australia this is mainly practised by medical practitioners trained by Dr Simon Strauss in Queensland (www.paineducation.com.au). With this technique the acupuncture needle is inserted into the trigger point producing objective deqi (pronounced derchi). It is a complex and sophisticated method. This technique and Trigger point injection therapy will become integrated.

• What is myofascial medicine?

The study of those symptoms caused by myofascial trigger points. The main symptom is pain.
Trigger points can also produce dizziness, nausea, changes in vision and hearing, increased nasal or sinus congestion, jaw problems, teeth pain, heart palpations, irritable bowel syndrome, altered menstrual cycle, and infertility.

• What is a taut band?

A taut band is a line of tightness within the belly of the muscle. It forms when the muscle suffers too much work over a period of time or after an acute injury.

It can be thought of as a type of fuse box mechanism. When the power coming into your house surges, the fuse breaks first to protect your electrical appliances. When a muscle is asked to do too much work, a taut band develops to restrict further use.

A myofascial practitioner can feel these taut bands by palpating your muscle. They can be very fine, like pieces of string in small muscles or large and thick in big muscles.

Frequently Asked Questions

• What is a trigger point?

This is the tightest segment along a taut band. It can be felt as a nodule or a longer part of the taut band. It is the most sensitive part of the taut band and when it is pressed it often refers pain into another area.

A trigger point exists where the nerves attach to the muscle at the motor end plate. The injury to the muscle causes continual irritation at this point. The muscle fibres bunch up and a taut band develops along that particular anatomical line.

Trigger point injection therapy is aimed at the trigger point. Accurate placement of the needle destroys the injured motor end plates and the anaesthetic cuts off their nerve supply to the spinal cord and the brain.

• Does Trigger point injection therapy produce a permanent recovery?

In a young fit individual with a local injury the recovery is normally quick and permanent. Chris Scott of the Brisbane Lions Football Club was treated at the beginning of 1998. During 1997 Chris played a total of two hours of football because of chronic hamstring problems. He travelled to Perth and stayed for two weeks and had four treatment sessions. He had no hamstring problems, and never missed a game through injury, for the next three years until he re-injured in the finals of 2000.

In those who are older or less fit it depends on the total health and attitude of the individual. Myofascial medicine is holistic. It asks why has this person failed to recover from this injury? Using advice about diet, stress and fitness the therapeutic environment can be improved.

If the patient really wants to make a full recovery, myofascial therapy can assist the return to good health.