PTLMS MANUAL

The purpose of this manual is to train the doctor and staff in the proper use of the Pettibon Tendon Ligament Muscle Stimulator or PTLMS™ for clinical use.

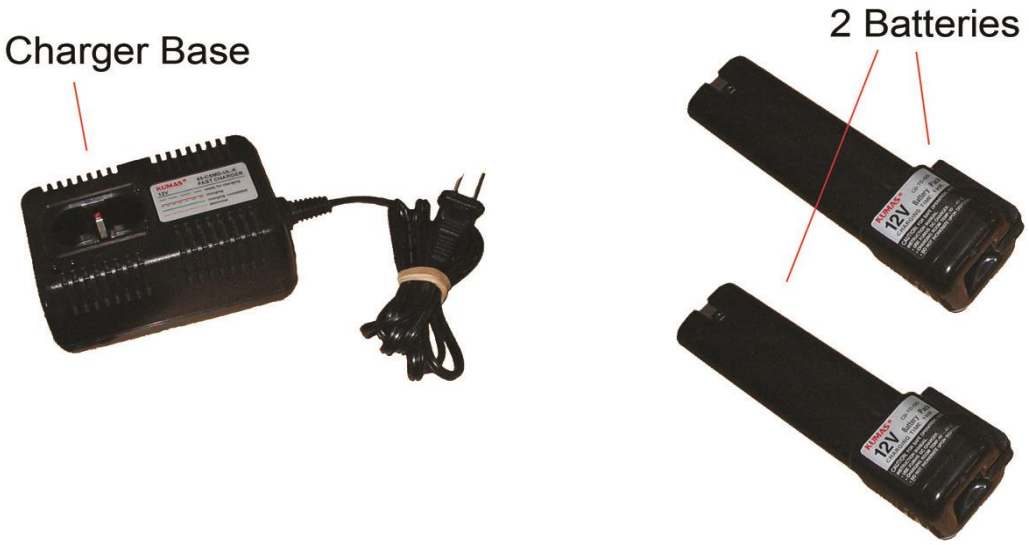
For years, Chiropractors have argued over what constitutes Chiropractic care. Some refuse to utilize anything other than their hands to adjust, while others are of another opinion. It is time to consider the role that deep tissue stimulation plays in the rehabilitation of para-vertebral soft tissue. We must realize that more flexibility is needed in reviewing new concepts that will benefit our patients. The PTLMS™ is revolutionary in that it goes deeply into the tissue to stimulate proper soft tissue regeneration and rehabilitation. It can and often does create reactions in order to begin the regeneration of the tissues. It is powerful in both concept and function. Clinical results and patient feedback steadfastly support the need for and results of deep tissue stimulation. The clinic that utilizes the teamwork of paraprofessional personnel and can scientifically diagnose, measure and correct the subluxation complex, educate the patient and provide soft tissue rehabilitation better serves the patient and the chiropractic profession and grows more successful each year.

The Pettibon System, Inc.

2118 Jackson Hwy · Chehalis, WA 98532

www.pettibonsystem.com

The PTLMS™ set comes with 2 batteries and a charger.



Preparations for use

CHARGING THE BATTERY

Batteries that are properly charged last a long time and will hold their charge. This is vitally important for application to multiple patients in a day. Please train all staff on the proper placement of the batteries and use of the charger to protect the life of your equipment. Please use the diagram on the charger to insure you are getting a correct and full charge.

1. First place charger on a flat hard surface. Plug in charger green light should flash.
2. Place battery into charger by matching the grooves in the battery to those in the charger.
3. The green light will flash, and the red light will be lit continuously while battery is charging.

If you get just a green light or a blinking red light with no green light, then remove battery and replace into the charger. It should take approximately 2-2.5 hours to fully charge a completely drained battery. You can expect about a 20-minute run time under load for a fully charged battery.

PLACE ALL CHARGERS ON A SURGE PROTECTOR!

NEVER leave a fully charged battery in the charger, this can result in the battery overheating and possibly melting presenting a potential fire hazard.

IT IS CRITICALLY IMPORTANT TO REMEMBER TO DRAIN YOUR BATTERY COMPLETELY FOR THE FIRST SEVERAL USES TO RETAIN A FULL BATTERY CHARGE MEMORY

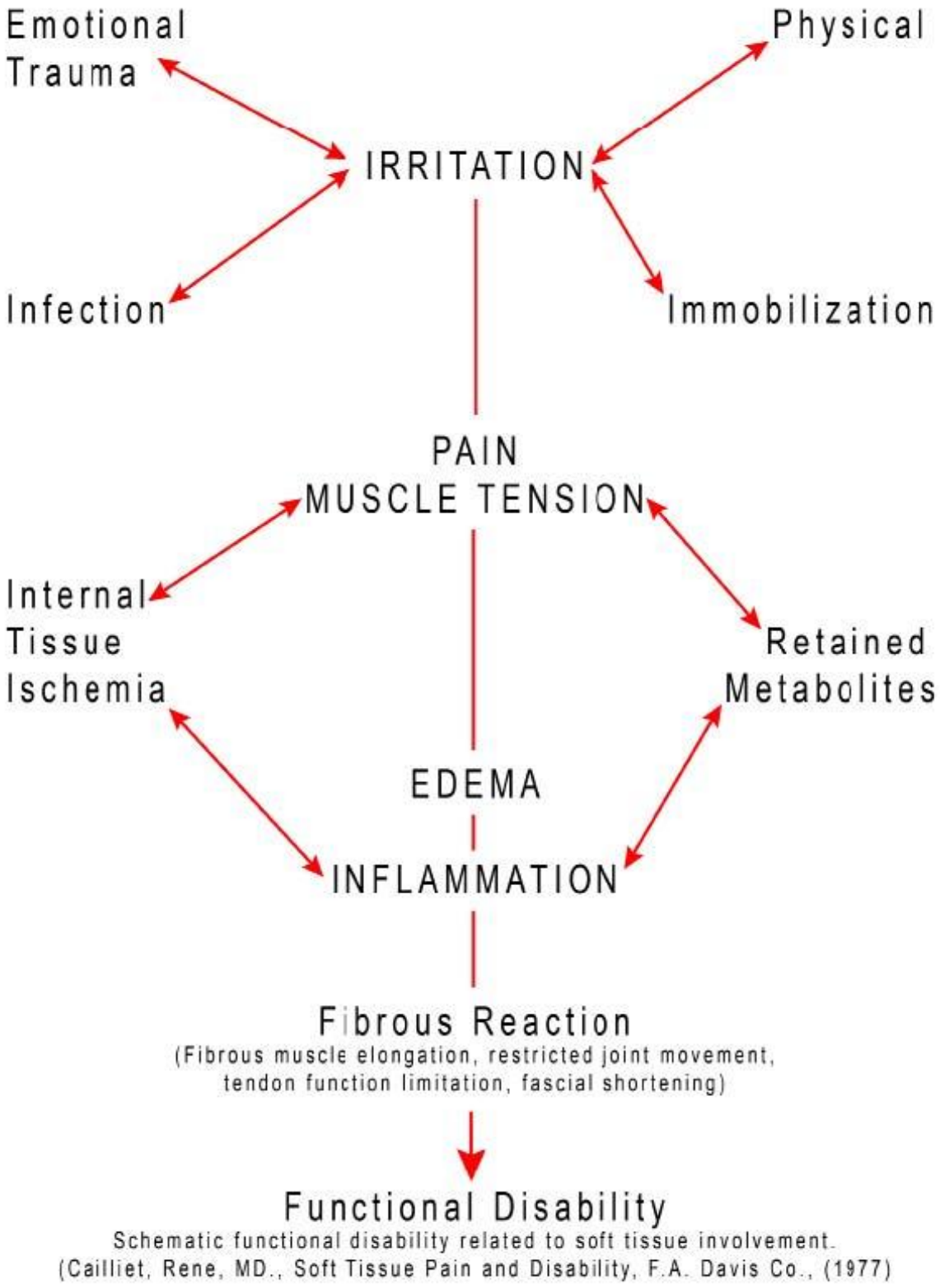
PLACING BATTERY IN THE PTLMS™

1. Open the bottom of the handle by lifting the battery retainer clip.
2. Match the grooves on the battery to the grooves on the inside of the PTLMS.
3. Slide fully charged battery into the unit and close the battery retainer clip.
4. Move the PTLMS™ lock to the unlock position and check the unit to make sure it is functioning properly.

TRIGGER SAFETY LOCK

This is a powerful instrument. Always watch your thumb and fingers, keeping them a minimum of two inches away from the pummeling tip. The Pettibon System is not responsible for inattention resulting in physical harm in the use of this instrument. DO NOT come in contact with the tip while the PTLMS is operating. The trigger safety lock is to be placed in the locked position immediately following each use of the PTLMS™. This will ensure that the trigger is not engaged when the user removes it from storage for use, which may result in injury.

The Pettibon Tendon Ligament Muscle Stimulator (PTLMS™) was developed to enhance the chiropractic adjustment through pain control, enhanced metabolic function and regeneration of injured para-vertebral soft tissues. **FIGURE 1:** Schematic functional disability related to soft tissue involvement.



Schematic functional disability related to soft tissue involvement.
(Cailliet, Rene, MD., Soft Tissue Pain and Disability, F.A. Davis Co., (1977)

CONTRAINDICATIONS

1. Positive Vascular Tests of any kind!
2. Do not use on pregnant women.
3. Do not use over cancerous lesions or open sores.
4. Pathological conditions that might be spread along the skin, lymph, or blood stream- impetigo, lymphangitis, malignant melanoma.
5. If bleeding is present- ecchymosis, bruise, laceration.
6. Acute inflammation- appendicitis.
7. Circulatory disturbance- cardiac arrhythmia or carotid bruit, phlebitis or thrombo-phlebitis, severe atherosclerosis, or varicose veins.
8. Use caution in areas of abnormal sensation- hypoesthesia -patient feedback will be minimized.
9. Loss of structural integrity- recent surgery, joint replacements.
10. Do not use over bone, especially broken bones.
11. Do not use on osteoporotic patients.
12. Do not use on any patient in whom you may suspect a disc herniation or stenosis.
13. Do not use on any patient with a history of stroke or arterial problems.
14. Do not use over visceral areas.

ASSESSMENT AND USE OF THE PTLMS™

The doctor must clear all patients for the PTLMS treatment protocols. This is NOT to be assumed by the technician. Use of the PTLMS™ protocols aids in the elimination of pain and muscle spasms. With pain and spasms relieved, the patient will respond to your care more rapidly as well as be capable of performing in office and home exercises prescribed by the doctor. Objective post examination and post x-ray findings validate the PTLMS™ protocols. Clinics involved in the studies reported a measurable division between those patients who used the PTLMS™ protocols and preparatory exercises before an adjustment to those who did not. The studies also affirmed enthusiastic and positive patient acceptance if properly educated prior to use. Patient education must include why, how what and when the treatment will be performed.

PTLMS™ NECESSITY AND SOFT TISSUE EXPLANATION

Loss of neural conductivity, blood supply and calcium in muscles causes tetany or muscle spasms. Such spasms can be localized or widespread. The degree of tetany may be mild to severe, depending on capillary flow and calcium content. Certain amounts of serum calcium in the muscle are necessary for normal, neural conductivity potentials. Calcium is involved in sodium-potassium balance during muscle activity. When neural conductivity, calcium flow, and or blood capillary flow is impeded, chronic malfunction and spasms result in the affected muscles. Toxic waste buildup in the muscles such as lactic acids, produce painful sore and stiff joints and muscles. Muscle is most affected in the acute subluxation angles, while tendons and ligaments are most affected in the obtuse subluxation angles.

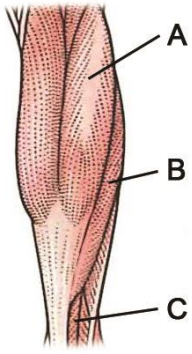


FIGURE 2: Multiple sites of lesions in muscles.

At point **A**, treatment by active exercise, local anesthesia and deep tissue massage are all effective.

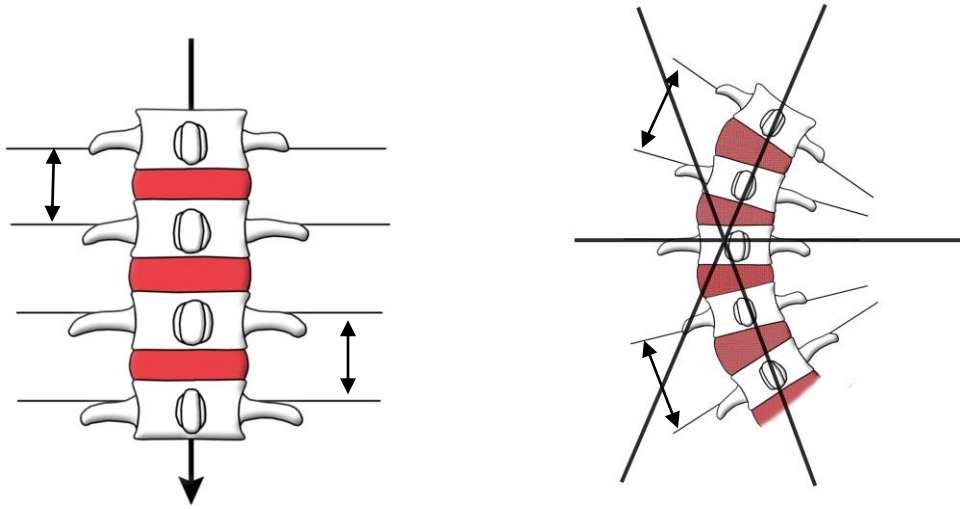
At point **B**, only treatment by local anesthesia and deep tissue massage is effective.

At point **C**, only deep tissue massage is effective, since this point does not broaden with exercise.

Cyriax, James, M.D. Orthopedic Medicine, Diagnosis of Soft Tissue Lesions, Bailliere Tindall, Vol 1, (1982)

Muscles, tendons, and ligaments need the deep traction massage (PTLMS) to arrest and reverse metabolic impedance.

FIGURE 3: Spinal muscles affected by subluxation: Spinalis, Inter-Spinalis, Inter-Transversarii, Longus Quadratus Lumborum, and PSOAS.



The practitioner will note that forward flexion, rotation and lateral flexion will position the patient so that a long axial traction force is applied to the shortened muscle involved. This positioning will enhance the treatment effectiveness and allow the affected joints a full range of motion by the production of deep traction massage of the surrounding soft tissues.

The PTLMS™ is not to be confused with the multitudes of vibrator-type machines or electrical stimulators on the market today. It is not just a "feel good" machine designed to relax and quiet the patient. The PTLMS™ is a powerful instrument designed to facilitate corrective spinal adjustments and rehabilitate para-spinal connective tissues.

The PTLMS™ delivers a rapid, up and down force, which produces traction on ligaments, muscles and tendons. Such forces stimulate regeneration and function in line with normal stress. The stimulation produces the following benefits:

1. The Golgi tendon and righting reflexes are stimulated, which feed positional information back into the central nervous system.
2. It enhances metabolism, capillary flow and calcium sodium potassium interchanges while controlling pain and providing relief.
3. Metabolic enhancement also rids the affected area of the toxic build-up such as the catabolites that produce painful, sore and stiff joints.
4. Patients that have relief from muscle splinting, spasms and stiff, sore and painful joints are more compliant to the use of the rehabilitation and treatment protocols of the Pettibon System™ and/or other techniques.

The Pettibon System Protocols™ recommend that acute patients are seen daily for the first two weeks and receive the PTLMS™ treatment prior to seeing the doctor.

The PTLMS™ treatment, is not designed to be used every visit and/or on all patients. Once the patient has progressed to the corrective phase of care and is performing all preparatory exercises without any degree of difficulty, the use of the PTLMS™ would be discontinued. Should the patient suffer a new injury or an exacerbation of their condition it would be prudent to use the PTLMS™ for short-term soft tissue relief.

It is recommended that the patient follow home care instruction using ice after each treatment the first 14 days of care. Some offices utilize a post care room to ice the affected areas for up to 20 minutes post PTLMS™ and mobilization/adjustment.

Home care may require alternating moist heat and cold treatments. Moist heat consists of hot shower, Jacuzzi, or hot packs for 5 to 10 minutes followed by 20 minutes of ice. Ice is always used last. When you are treating a new injury, ice and only ice must be used for three days post trauma. Home application of moist heat and ice will aid in the reduction of symptoms and reaction that may be associated with correction and PTLMS™ treatments.

The soft tissues of the body have shock absorption characteristics that protect the frame and the spine from external forces. These characteristics are called the visco-elastic barriers. Unbalanced trauma that overcomes the normal visco-elastic barrier causes subluxation complexes of the spine and produces sore and stiff muscles as well as joint and muscle spasms. Such reactions to trauma raise this barrier, often it is so great that subluxation correction is, at first, impossible. Attempted spinal adjustment when the visco-elastic barrier is too great may be both counterproductive and painful. Properly used, the PTLMS™, procedures lower the visco-elastic barrier and prepares the spine to welcome the mobilization/adjusting forces.

INCORPORATING THE PTLMS™ INTO YOUR PRACTICE

The PTLMS technique is easy to learn and even easier to apply. It requires a learned “touch” which will come with continued use. It is vital that each member of the clinical team personally experience this instrument. One cannot sell or teach that which one does not own. It is recommended that the staff follow the same protocol of care that is required by the patient in the first 14 visits to understand the importance of their product. This awareness will give the team a greater empathy and sensitivity when working with the patient.

The PTLMS™ produces a traction force on the para-vertebral soft tissue via up and down movement. This action is similar to a pummeling movement and is capable of penetrating the deep tissue of the tendon and ligaments as well as the superficial musculature.

The weight of the instrument is sufficient to get the desired effect. The S.T. does **NOT** have to push on the instrument to achieve results. Never run the PTLMS™ repetitively up and down on a patient in the same visit. This is unnecessary and will result in extreme soreness and perhaps termination of care. The PTLMS is completely effective if the technician will follow the protocol as written. ***The Pettibon Institute™ and The Pettibon System, Inc™ takes no responsibility for over utilization of the PTLMS™ or deviation from protocols set in this manual.***

Soft tissue rehabilitation is essential to the long-range goal of clinical stability. The PTLMS™ was designed to facilitate this goal in conjunction with the chiropractic adjustment. The patient will appreciate its therapeutic value and the technician will find it is more efficient and less time consuming then using their hands, goading tools, micro-stimulation, galvanic or muscle stimulation.

The entire PTLMS™ procedure to include the diaphragm pump should take only seven minutes or less. The billing codes used will be according to your state, however the most commonly used codes are manual traction or myofascial release / soft tissue mobilization.

The PTLMS™ may be introduced to the new patient the first adjusting visit, which in most cases, is the second visit after the Report of Findings. It should be included in the part of the explanation, which covers "How long will it take and how much will it cost"? Ideally, the Report of Findings will include a brief explanation of connective soft tissue, which sets the stage for a more detailed description regarding use of the PTLMS™ prior to the first application and before the mobilization/adjustment.

The PTLMS™ will stimulate regeneration using controlled motion, which will remodel the tissue fibers in line with stress. Once the pain is under control and function is restored the patient will be ready to begin soft tissue rehabilitation in earnest.

THE PTLMS™ AS A REFERRAL TOOL

The PTLMS™ is unique and when used properly, affords acute patients' immediate relief from muscle spasms and splinting make function attainable. When the clinical team educates the patient the PTLMS ™ becomes a tremendous tool for referrals that will set your clinic apart from those who use time-consuming machines, which cannot provide the outcome of this instrument. Let your tools and your abilities speak loudly in your community.

PATIENT EDUCATION

Prior to the adjustment/mobilization, the spinal technician (S.T.) will explain the use of PTLMS™, the goal and the symptoms they may experience. We highly recommend having an erasable white board in each adjusting room for explanatory purposes. Refer to the treatment card with the posted x-rays and draw the angles on the white board. This will help the patient to understand where the muscles will be tight and in spasm and where they may react to the use of the PTLMS™. We suggest this explanation for those who take radiographs:

"Ms. Jones, Dr._____ has instructed me to perform deep tissue massage on the muscles that are tight and in spasm, thereby, making it easier to move the bones from the nerve which is causing your discomfort. I am going to draw what your x-rays look like from the front to back view and you will be able to see exactly where we can predict soreness. At this point draw a stick figure that the patient can recognize as a person. See FIGURE 4 on next page

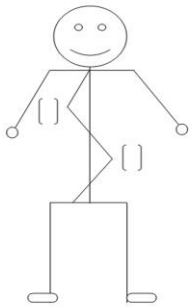


FIGURE 4

Explain that you are going to work with the entire spine, therefore we will be placing the PTLMS over the areas that are not in spasm or tight as well." Ask to see their hand and then start the PTLMS™ over the palm and then place it lightly on the hand so that they can see what it both sounds and feels like. NEVER start the PTLMS™ on tissue while it is seated on a patient. Start it BEFORE it is applied. Be sure to insist that all instruments are referred to by their correct names, not "gun" or "thumper", etc. Your professionalism will set the tone for future visits.

Advise the patient that, *"the goal is to stimulate the tissues that connect to the spine as well as muscles. We want to cause them to relax which will give pain relief as well as make your chiropractic adjustment/mobilization more effective. The PTLMS™ will also cause blood to come to the areas to help aid in healing and carry off the toxins that have collected in the tissue due to inadequate motion and blood supply. It is important that you understand what you may experience within 24-48 hours after your adjustment. If you are toxic, meaning your system has not been able to flush the toxins properly, you may note a loose bowel or may experience*

nausea or vomiting or both. This is not only normal but also favorable. If it happens to you, you may notice an energy boost within 24 hours of elimination of toxins."

It is important that the technician be sensitive to the patient and that communication guidelines are reviewed before application. Ask the patient to rate their pain/discomfort on a 1-4 scale with one being the least and four being excruciating. We are interested in 3-4 type pain and if they will hold up their fingers to indicate either one, we can chart their reaction. We will, however, not stop the protocol unless they absolutely cannot tolerate the procedure. Our collective goal is to prepare the soft tissue to receive the correction protocols. The PTLMS™ is an enhancement to the adjustment/mobilization and will help protect the doctor from being injured from working on a rigid and unmovable patient. It will also make the healing and reconstruction phases more efficient. Remember to seat the instrument flush on the patient and NOT hold either end up so that the application is ineffective and a waste of time and money. The procedure is not meant to feel like a soothing massage. It is meant to work deep and thoroughly without harm, but with results.

"Ms. Jones, please lie face down on the adjusting table over this block (using an uncovered lumbo-dorsal and 2' lifter so that the patient is in traction but comfortable). Advise me, if at any time you are extraordinarily uncomfortable. Please understand that the procedure is fast and must be done prior to the adjustment. I know you will have very sore spots and where they will be found, however, it is vital that you allow me to complete this procedure."

Post application of the PTLMS™ we recommend the use of the Diaphragm Pump to help oxygenate and release toxins by contacting at T12/L1 area with bilateral hand contact and have the patient breath in deeply as the S.T. uses a resistance with their hands to initiate a breathing response. This has proven to be extremely beneficial post PTLMS™ and pre adjustment/mobilization.

Perform the procedure and record any reactions on the treatment card. In the Pettibon System Protocols the S.T. will ask the patient to stand and then lie supine with the bench up prepared for the neurological leg check. Advise the Doctor that the patient is now prepared.

Most patients are medically oriented. You can gauge your efficiency in educating the patient by the positive comments they share about possible toxin release. You will find that the patient who understood your explanation will actually welcome the changes rather than be frightened of them.

The orthopedic/neurological examination will reveal areas of taut and tender fibers for those who do not take radiographs and may be utilized in the same manner to explain the procedure.

It is not unusual that a patient be sore, experience a loose bowel and/or vomit a few times after the first few treatments with the PTLMS™. This is not only predictable but is preferable. It is all in the EDUCATION of the patient as to how they will handle it. A patient that has been educated will take it in stride. Those who have not will assume that it is the instrument's fault or that something is wrong. It is not the PTLMS™, but the lack of education on your part that will keep the patient from returning.

Through the years the feedback we have received has been that the PTLMS™ is a professional adjunct to the goal of removal of the subluxation. Many doctors utilize it for frozen shoulders, temporal mandibular joint syndrome, for extremity adjusting preparation and even in veterinary care. If the staff is knowledgeable about soft tissue involvement and committed to the patient, they will take the time to explain what the goal is as well as the symptoms that the patient may experience.

The step by step process of the PTLMS™ protocol is designed for maximum results. It is our goal to work with the patient in such a way that the dramatic changes in their spine after 14 visits will be so evident that they will want to work with us toward optimum reconstruction.

THE PETTIBON TENDON LIGAMENT MUSCLE STIMULATOR TECHNIQUE

A REVIEW OF PATIENT EDUCATION

1. Give a brief explanation in the report of findings.
2. Draw their angles on a white board and explain the process.
3. Explain toxins elimination.
4. Explain possible symptoms and soreness. Follow with home care instructions.
5. Demonstrate the force and the sound by starting it ABOVE the patient's hand and
6. Allow them to feel the force in their palm. Start above the skin, not on it.
7. Explain the initial application may be uncomfortable, the use of the pain scale Of 1-4 and ask that they raise 3 fingers or 4 to indicate that level of discomfort for our chart notes. Note that we will not be stopping the application but will continue as an indicator of areas of most concern. It is normal for a patient to initially react to the PTLMS™ by oral notification or by tightening their musculature. It is the job of the professional to communicate the importance of the procedure and continue if possible. If you have someone who absolutely cannot tolerate the PTLMS, stop. This patient is the minority.
8. ASK IF THEY HAVE ANY QUESTIONS BEFORE YOU BEGIN TREATMENT.

PATIENT POSITIONING AND PROTOCOLS

1. Ask the patient to use the restroom prior to the application. They will need to lie prone over a lumbo-dorsal fulcrum with a 2-inch lifter underneath for this process. A full bladder may make them too uncomfortable to continue. (The fulcrum increases the traction forces on the lumbo-dorsal soft tissue.) * If swelling is palpable, heat is present and the patient is in severe pain, use ice before and after the PTLMS™ treatment.

2. It is preferable that the patient be on their knees at the end of the table and move over the supports with their buttocks in the air and into the traction position. However, the doctor must make a clinical decision as to whether the patient is in a prone or seated position, depending on the patient's mobility. Keep a towel or light blanket in the room for women who are wearing dresses or skirts. Simply cover their buttocks therefore removing any embarrassment they may have in this position.

3. Make sure that the patient can breathe easily and is as comfortable as possible. Note the lumbo-sacral angle from the treatment card. If the angle is to the left, drag the legs **away** from the angle to the right. If the angle is to the right, the legs pull to the left. For a left acute lumbo-sacral angle, place the left ankle over the right and drag the legs to the opposite direction and vice versa for the right acute angle.

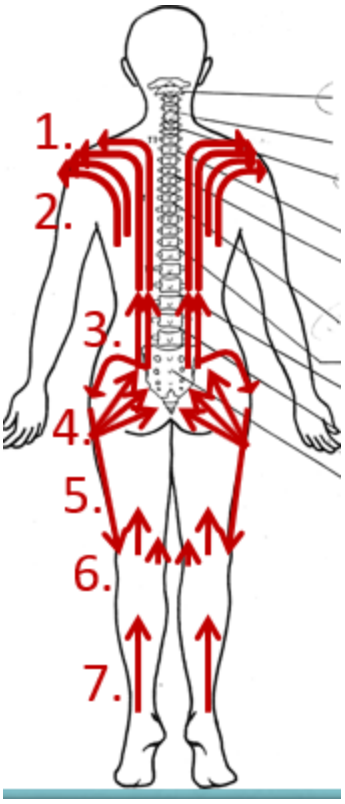
4. Ask the patient to breathe deeply and regularly. Ask them not to hold their breath, which may be a tendency until they trust the process. Proper breathing compliments the process. Read Kapanji for information on diaphragmatic breathing.

5. Start at approximately L1/T12 area of the acute lumbo-sacral angle and work slowly upward toward the heart. Stop at the T1 area. Always palpate the spinouses as you move over the patient and never allow the PTLMS to move over bone. As you approach the thoracic spine, ask the patient to bring their arm back as if to place it on the buttocks. If they cannot, do not force it back, just move on to repeat on the opposite side.

6. Work the gluteal area with approximately four upward sweeps, the iliotibial tract with one movement toward the head. Make sure to cover the gluteus maximus, tensor fasciae latae, gluteus medias, and the "silver dollar" area over the sacroiliac joint of each buttock.

7. Lightly touch the belly of the gastrocs on both legs, the popliteal fossa, and gracilis on each leg. Most patients will react so make sure you are clearly standing to one side. DO NOT hold the PTLMS™ on any of these points for any length of time, merely touch to stimulate.

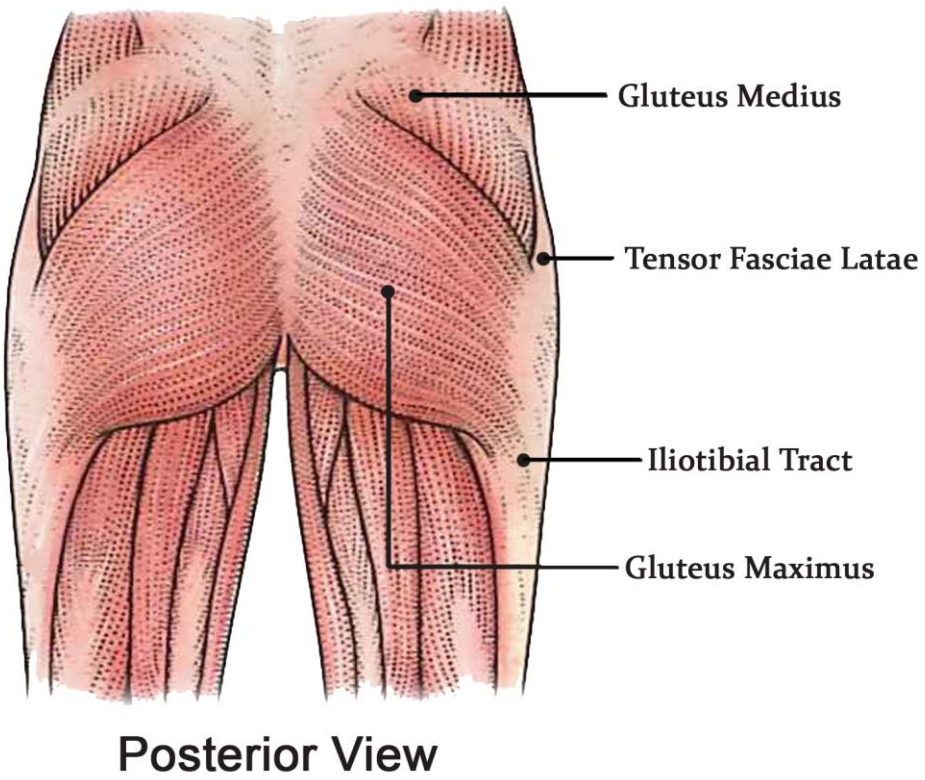
8. Placing your hands bilaterally over L1 area, with equal pressure on hands and fingers, gently perform the Diaphragm Pump. See figure 5 on next page.



PTLMS Prone Protocol:

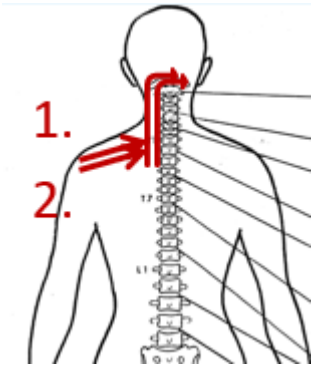
- Compromised immune system- utilize proper hygiene.
- Start in the dorsal spine to relax the muscles of the functional base of the spine.
- Be sure not to hit the spinous processes or the scapula.
- Next work the lumbar spine, gluteals, TFL, hamstrings, popliteal fossa, and the calves.
- Perform the diaphragm pump before having the patient sit up to finish PTLMS on the traps, suboccipitals, and cervical muscles.

FIGURE 5:



APPLICATION TO THE CERVICAL AREA

Have the patient rise from the prone position to their knees and help them off the bench into a seated position with their back to you. If the patient has no contraindications for the use of the instrument, gently lean them back into you, have them rotate their head to the left, with the PTLMS running, gently work toward the head from the base of the sterno-cleido mastoid to below the mastoid. Then gently move it across the tissue under the occipital bone until you reach the opposite side. Have the patient rotate their head to the other side and repeat. ALWAYS hold the instrument firmly and make sure it does not push on the patient for their comfort.



PATIENT POSITIONING POST PTLMS™

Have the patient stand and go to the end of the Pettibon Adjusting Table. Have them sit and then carefully push back until their feet hang six inches over the end in preparation for the neurological leg check. While they are doing this, the technician will raise the head piece of the Pettibon Adjusting Table to its full position.

The technician completes the chart notes for review for the Doctor and he/she is notified that the patient is prepared.

HOME CARE INSTRUCTIONS

At the completion of treatment, the technician will review home care instructions and the patient will be dismissed for the day unless the doctor has prescribed another procedure or exercise.

POSSIBLE PATIENT COMMENTS ABOUT THE PTLMS AND SUGGESTED RESPONSE

1. **"It hurts" ……..***"Ms. Jones, I know that the initial application of the PTLMS™ can be uncomfortable. We reviewed your x-rays prior to performing the procedure and you and I discussed where you could expect the most discomfort. We weren't wrong were we? Let's review the goal again and talk about your home care instruction and what you can do to help get through this initial stage of discomfort."*
2. **"I want you to use it on me each visit like you used to" ……** *"Ms. Jones, you have come a long way since your first visit. You have gone from being in pain to a greater range of movement, you are sleeping better, your life is improving and so far everything the doctor has ordered has been working according to plan. After the first 14 visits, the PTLMS™ is no longer necessary when you are following the doctor's protocols. Good job."*
3. **"I feel great right now except for my shoulders, just use it on them." …….***"Ms. Jones, we are thrilled you are progressing so quickly. Dr_____ has ordered the complete application of the PTLMS™ along with deep breathing exercises for this visit as well. It is his intention not to just get you out of pain now but to work toward the goal of keeping you out of pain in the future. Your spine is a working unit with every component as important as the others so for that reason it is vital that we give careful attention to all of you, not just the parts that are still hurting.*
4. **"Wow, I had a rough night; I was either in the bathroom or icing for soreness." ……** *"Ms. Jones, remember when we spoke about the possibilities of this type of reaction depending on how toxic your body was when we started the protocol? These evacuations are part of the cycle that your body must go through before you can start to heal and feel well again. You will notice each day you will begin to feel better and the soreness will lesson if you follow the home care instructions. Would you like to review those again now?*

DISCLAIMER AND LEGAL NOTIFICATIONS

The authors and inventor take no responsibility for actions or use of the PTLMS™ instrument that are not instructed in this manual. It is critical that all personnel utilizing this instrument read understand and practice for proficiency prior to any clinical use. Patient education is vitally important to the success of any protocol. This instrument is FDA approved. Any tampering will void any warranty.