INJURY CARE AT YOUR FINGERTIPS

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The techniques you will learn today may seem bizarre and unorthodox but please try to be open-minded. All are based on the teachings of William Garner Sutherland, a noted Osteopath, who practiced in my hometown of St. Peter, Minnesota from 1900-1950. I become interested in these techniques when I become a patient of two local PT’s, David Sirota and Michael Healy. I had suffered from chronic back pain for about seven years. MRI, CAT scans, x-rays were all pretty normal yet I would experience nearly monthly episodes of severe back pain which made it painful to even walk. (I would be on the sidelines at Wheaton, hoping and praying that no one would go down because I wasn’t sure I could get out there!) The treatment I received relieved my symptoms immediately. I was amazed, especially since all of the techniques were so gentle. I was determined to learn this myself. So when my first venture after Wheaton was a flop, I spent six months interning with David. What he taught me has changed the way I treat nearly all the persons I see these days and the results have been unbelievable. I have been able to help persons return to work rather than have surgery and some had had intensive PT for over six months prior to my care. Athletes who have had shin splints and done all kinds of therapies often are “cured” with one or two treatments.

Once I began using these techniques, I developed severe carpal tunnel syndrome due to the constant use of my hands. For one month I suffered with all the classic signs: numbness, tingling, night pain, flexion contracture and loss of pronation and supination. David treated my hands ONCE and within three days ALL of my symptoms were gone!!

How does this work?

1- The **ligaments** of a joint are normally on a balanced reciprocal tension, i.e., the tension of one side is offset by the tension on the other side. The tension is dynamic and changes throughout one’s ROM. Seldom if ever are the ligaments completely relaxed throughout the normal ROM. When movement is carried beyond the normal ROM, tension is unbalanced and the ligaments tend to retain the position. This allows normal ROM in the direction of the problem and limited ROM in the opposite direction.
Since it is the ligaments that are primarily involved in the maintenance of the lesion or injury, it is they, NOT muscular leverage that is used as a means of reduction of the lesion.
In other words, one should not be using much force with any of these techniques! As one becomes more skilled in utilizing these techniques, the less pressure one will need to determine what the problem is and to be able to release the ligaments to allow the joint to return to normal functioning.

2- The basic rule for all “strains” (how Dr. Sutherland refers to injuries in his book, not a muscle strain as you and I know it) is to **go in the direction of ease**. When the joint is moved in this direction, tension within the joint causes it to “rebalance” itself.
If the lesion is from the spine, one’s respirations assist with the release of the “strain”.
If the lesion is from the appendicular skeleton, one’s muscles assist with the release of the “strain”.
**Do not press too hard.** You must allow your hands to move with the release in order for it to be effective. You are not moving the joint but rather allowing the athlete’s body to make adjustments because of the pressure you apply.

3- **The skeleton has a memory and it continuously strives to be properly aligned.**
The longer one has had a particular problem, the shorter the proper memory will be, so one may need to treat two to three times per week at first, then stretch the treatments out to once or twice a week.
If one catches a lesion when it has just occurred, sometimes all that is needed is one treatment. The ligaments will be realigned and the correct memory is still strong, so one may proceed immediately to stabilization and other strengthening exercise to prevent re-injury.

4- **Structure affects function, but function does not always enhance structure.**
People are often performing functions that put them at risk for injuries because the movements are so repetitive and posture is poor. If we treat the symptoms but do not fix the structure, the problem will not go away.

**PRECAUTIONS:**
1- At the end of the treatment one may feel great but a few hours later and through the next day one may experience muscle soreness as one’s muscles adapt to the changes. This is normal. Use ICE and NSAIDs as needed to relieve the pain. **BE SURE YOU TELL THE PERSON YOU ARE TREATING TO EXPECT THIS!!**
2- During the course of treatment, one must avoid lifting and other strenuous activities until the problem is nearly resolved or the treatment will have little value. If this is not possible, wait at least 24 hours after treatment to resume
strenuous activities. So it is best to treat athletes after practice/games so that
have at least some rest before resuming activity again
3- Do not do the techniques daily, as the body needs time to make adjustments.
Leave at least one or two days between treatments. Failure to do this may result
in an acute inflammation in an already painful area.
4- The only contraindication for use of these techniques would be the presence
of a fracture (although a skilled practitioner could ensure that a fracture would be
reduced perfectly!)

IMPORTANT POINTS TO REMEMBER:
1- **Use good posture at all times.** Try to avoid elevating your shoulders and
ranging your back, as you will be holding some postures for extended periods of time.
2- **Keep your hands flat.** Pretend there are not any joints between your elbows
and your DIP joints. (Failure to do so will result in CTS!!)
3- **Use the pads of your fingers,** not the very tips to palpate for all landmarks
and to apply the gentle traction most releases involve.
4- **Do not dig your fingers in,** press firmly yet gently, wait patiently and you will
be amazed at what happens.
5- **As the release occurs, you will feel:**
a “melting” sensation (I often refer to it as the “chocolate bar effect”)
a pulsing at a regular rate (do not stop until the pulsing stops)
an increase in temperature (your fingertips may feel like they are on hot coals
but you will not get burned!)
a sudden movement of the bone or bones in the area you are working (try to
just “go” with the movement, the skeleton is trying to balance itself again)

DEFINITION OF TERMS;
Near hand= hand closest to the person’s head when seated at the side
Far hand= hand closest to the person’s feet (farthest from one’s head) when
seated at their side
Release= muscle relaxation that allows one’s skeleton to realign itself; often feels
like a chocolate bar “melts” in your hands
Lesion/Strain= Dr. Sutherland’s terminology for injury to a particular joint that
has caused it to become “unbalanced”
Myofascial Joint Mobilization (MFJM)= my term for these techniques
KNEE AND LOWER LEG TECHNIQUES:

I have used these techniques very effectively for a variety of lower extremity problems, from shin splints to patellofemoral syndrome to plantar fascilitis and patellar tendonitis. I use these in conjunction with other modalities and exercise so the hands on treatment is done last unless the modality is of a passive variety. The techniques should be performed in the order given for the best effects as each release facilitates the next.

FIBULA RELEASE: (this is especially important for shin splints, if the fibula is not able to move freely all the muscles in the lower leg must work harder and they get cramped up… isn’t that the pain most athletes describe with medial tibial stress syndrome?)

Grasp posterior aspect of the head of fibula with same hand (i.e., R to R), thumb pointing down (this may be very tender but do not let that deter you-the pain will go away once the fibula is released). Grasp lateral malleolus with other hand so the thenar eminence is along its anterior surface and your fingers encircle the lateral posterior border of the calcaneus. Gently pull forward on the head of the fibula while simultaneously pushing backward on the distal fibula. Hold until a release is felt (it usually feels like a gentle shifting of the head of the fibula which most athletes notice and find relaxing)

Alternate Method One (for stubborn fibulas)
Have the person lie supine with knee bent as if you were to perform an anterior drawer test. Grasp the head of the fibula with one hand, the lateral malleolus with the other. Pull forward on the head of the fibula and push backward on the distal end. One should be able swing the fibula about one inch forward and backward at both ends. Go in the direction of ease and hold until a release is felt. Re-check motion of the fibula to see that it has been restored. If not, repeat.

Self Release (In chronic cases, have the athlete do this daily!)
Have the person place his/her foot on a stool and lean forward so the knee is over the foot and the heel is in contact with the stool at all times. Instruct the athlete to slip his thumb behind the head of the fibula and push (or pull) forward and out (laterally) to get the fibula to release while at the same time leaning forward to put the knee in front of the foot.

CALCANEUS RELEASE:
From the fibula release, use your near hand to stabilize the leg. Keep your far hand in the same position.
Pull forward and upward with your fingers along the lateral posterior border of the calcaneus (as if you were pulling the calcaneus through the front of the ankle joint)
Hold until a release is felt (oftentimes you will feel the calcaneus rotate toward the midline in a “C” pattern)

**TALUS RELEASE:**
Person is facing you with legs dangling over the edge of the table.
Grasp hindfoot with far hand cupping the heel as if doing an anterior drawer.
Place web formed by thumb and index finger of near hand over the anterior ankle joint.
Gently pull forward on the calcaneus while stabilizing the joint with your near hand.
The talus will “balance” or settle into its proper location on its own.
If you prefer, you may use your thumb and index finger of the near hand to palpate the talus rather than web space of those digits.

**HINDFOOT AND FOREFOOT RELEASE:**
Person is facing you with legs dangling over the edge of the table.
Grasp hindfoot with thumb and index finger going across anterior ankle joint
Grasp forefoot with your far hand in a similar fashion so your thumb and index finger go across top of tarsals. (Your hands should be side by side with thumbs and index fingers almost touching.)
Pivot the joint with your far hand, nothing how far if moves into inversion and eversion.
Compact the joint and move it in the direction of ease.
Hold until a release is felt (oftentimes the foot will rotate back to a neutral position; go with it)
Recheck motion in all directions, it should be increased.
Move your hands out so they are now at the tarsometatarsal joints and repeat the procedure.

**SPRING LIGAMENT RELEASE:**
From the forefoot release, rotate your body position so that you are toward the midline of the person being treated. Move your hands so that your thumbs are at each end of the spring ligament on the medial aspect of the foot, and your fingers over the dorsum of the foot and ankle.
Grasping the foot as lightly as possible with your fingers, press your thumbs into the attachments of the spring ligament and try to spread it apart.
Hold until a release id felt (this often results in the foot pronating or supinrating to find a neutral position)

**CUBOVID RELEASE:**
Sit to the midline of the person being treated so that their leg rests on your thigh
From the spring ligament release, move your hands so that your thumb are over the dorsum of the base of the 4th and 5th metatarsals and the cuboid, with index fingers on the plantar aspect of the same. Grasp the cuboid with the far hand and the 4th – 5th metatarsal with the near hand and compress the joint. Hold until a release is felt (this often results in the foot supinating) If it does not release, try less pressure or distract the joints.

**NAVICULAR RELEASE:**
Sit to the affected side of the person being treated so that their leg rests on your thigh. From the cuboid release, switch hands to a similar position on the medial aspect of the foot. Grasp the navicular with the thumb and index finger of the near hand and the base of the first metatarsal with thumb and index finger of the far hand. Compress the joint Hold until a release is felt (this often results in the foot supinating) If it does not release, try less pressure or distract the joints.

**CUNEIFORM RELEASE:**
From the seated, leg dangling position, grasp the person’s foot so that your hands encircle the proximal forefoot, with thumbs on the dorsal aspect. Press your 2nd, 3rd and 4th digits into the plantar aspect of the foot Try to “peel” the foot open with the thumbs on the top and pushing with the fingers from below. Warn them that this may hurt but the pain will go away. Push hard and hold until a release is felt (the foot literally “melts” into your hands).

**TARSAL TUNNEL RELEASE:**
From the seated, leg dangling position grasp the person’s foot so that your hands encircle the proximal forefoot, with thumbs on the plantar aspect. Lift their foot so that their knee is extended (it is very important that you do the work and that they remain relaxed or muscle contraction will inhibit the release.) Cross your thumbs so that one pushes up on base of the cuboid and the other on the plantar aspect of the navicular. Try to spread the foot by pushing your thumbs apart while at the same time not restricting any motion with your fingers on the dorsum of the foot. Hold until you note a release (the foot will seemingly melt and rotate into a supinated position usually)

**FOREFOOT RELEASE:**
Person is facing you with legs dangling over edge of table Grasp hindfoot with thumb and index finger going across anterior ankle joint Grasp forefoot with other hand in similar fashion so thumb and index finger go across top of tarsals. Pivot the joint nothing how far it goes into inversion and eversion.
Compact the joint and move it to the position of ease.
Hold until a release is felt.

**TIBIA RELEASE:**
Person is facing you with legs dangling over the edge of the table.
Encircle knee so thumbs are on the tibia tuberosity and fingers are on the posterior aspect of the tibia/fibula. (Much like performing an Anterior Drawer Test but be sure your hands are below the knee joint.)
Lift up to take all the weight of the leg in your hands and to ensure that the person is relaxed.
Apply some gentle anterior and medial rotation traction
Hold until a release is felt (the tibia will rotate internally most of the time; don’t force it, let it happen!)
If you lost your grip, do not be afraid to try this again as it often takes two or three times to get it to release fully.

**PATELLA RELEASE:**
Person is seated with legs dangling over the edge of the table.
Sit to their affected leg’s side and place their calcaneus on the lateral aspect of your far knee so that their knee is at –15’ extension.
Use an abduction motion with your knee to extend their knee as you perform this release.
Grasp their patella with your fingertips (use one or both hands depending upon your strength and how “stuck” their patella is.)
Lift the patella up towards the ceiling and hold while at the same time providing some gentle traction with your knee pulling their leg into more extension. If it does not respond, use your far hand to apply longitudinal traction to the knee joint.
As you hold the patella, it will gradually move into the proper poison (which is usually a medial movement and/or some rotation)
Hold until it seems to be “balanced”
If you lost your finger grip, do not be afraid to try this again as it often takes two or three times to get it to release fully.