Use in Structural Integration of An Original Andrew Taylor Still, MD Technique

As Reconstructed by Richard L. Van Buskirk D.O.

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and others.

HISTORY

On the way to developing her work, Ida Rolf, Ph.D., studied extensively with osteopaths including prominent osteopaths Kenneth Little, and Amy Cochrane. For an excellent description of the origins of Osteopathy, see John Lewis' Book, A.T. Still, From the Dry Bone to the Living Man. In developing her work, Dr. Rolf brought the relationship of the body to gravity to the foreground, whereas this relationship is a minor and sometimes forgotten element of osteopathy. Dr. Rolf made original contributions in developing the ten series recipe and the creation of some forceful, and often painful, treatment methods.

In the succeeding decades, many Structural Integrators (including some SI faculty members) have studied with osteopaths, effectively bringing more osteopathic assessment and treatment methods into SI practice. For example, many SI trainings now commonly include discussions of 'direct and indirect treatment techniques,' an example of osteopathic terminology. Advanced Rolfing training now specifically includes mention of cranial, visceral, nerve and vascular treatment, all of which are of osteopathic origin. The creator of Osteopathy, Andrew Taylor Still, M.D., developed many techniques, but taught none of them. He taught anatomy extensively, but only discussed principles of treatment, choosing instead to direct his students to create their own treatment methods. Osteopath Richard L. Van Buskirk combined information from several sources to reconstruct one of A.T. Still's treatment techniques, seen in the only video recording we have of Still working: a ten second film clip. It took van Buskirk 20 years of work to reconstruct the technique, culminating in a 1999 publication: *Still Technique Manual: Applications of a Rediscovered Technique of Richard L van Buskirk*

This technique is quick and effective at releasing shortened, thickened tissue, and is gaining rapid popularity among osteopaths and other manual therapists. While originally designed for joint mobilization, this technique works well on a wide range of other tissues.

In this article, I will give a description of the general form of this technique and will then describe specific use of this technique on three diverse tissues. My experience shows the use of this technique is frequently very effective in achieving the goals of Structural Integration. The Van Buskirk / Still technique has become one of the most used techniques in my practice. It won't accomplish everything, but it quickly cleans up a lot of problems, with little effort, leaving less to do with other techniques, and often clarifying exactly where other efforts can be most effectively utilized. I use many other osteopathic soft tissue treatment methods in my practice. While these techniques are diverse, they all to make change fairly quickly with minimal effort, allowing me to get more done for my client in a treatment session while taking good care of my body. Some of these techniques work better for some people or in some situations than others, which it why it is useful to know and use several of these methods. The Van Buskirk /Still Technique is broadly applicable. Some practitioners including Van Buskirk do all or most of their work with this technique. While I continue to use other osteopathic methods I now do about half of my work with the Van Buskirk/Still technique due to its efficiency in a wide range of situations.

THE TECHNIQUE, AS RECONSTRUCTED BY RICHARD VAN BUSKIRK

Step 1

Pretest tissue mobility locally and globally in ways relevant to that area. It is essential to know the state of the tissue before treatment, to compare with the post treatment state. Most tissues can be gently stretched, compressed, bent or twisted to assess their mechanical properties and compliance.

The importance of testing tissue mobility before and after each treatment is taught by some Structural Integration teachers and its use is becoming more widespread in Structural Integration practice. I strongly support this trend as it provides highly valuable information for both the practitioner and the clients. Given the diversity of anatomic structures, mobility testing is a large subject. Several book references are given in the end notes to this article.

Step 2

Begin to compress the tissue at a moderate pace. If it is a joint, compress along the central or long axis of the joint. Other tissues can be compressed in a shortening direction, or compacted toward bone. Compress toward end feel, which is the point at which increasing effort produces little or no change in tissue span, and beyond which there is risk of tissue damage. Maintain this compression throughout steps 3 & 4, slowly release the compression during step 5. This compression should be comfortable for the client. If there is any discomfort, stop.

Step 3

As the tissue is compressed, notice any tendency the tissue has to pull in a particular direction. Gently encourage the tissue to go further in this direction. If the tissue changes its direction of movement during the slow compaction, follow this succession of directions. Mechanically load the tissue to near end feel in these directions, all the while maintaining the compression. Again, only apply forces that are comfortable for the client. 'Comfortable' is different than 'willing to tolerate'. In this situation, mechanically loading the tissue means to push into it following the direction it is naturally going. Pace of the push is also important, listen to the tissue as you push into it, use a pace where you and the tissue cooperate. Pushing too fast or hard will cause the tissue to balk, push too slow and the tissue may wander in new directions in an 'unwinding' phenomenon which is useful in other treatment techniques, but defeats this one. This phase of the treatment is a dance in which the tissue leads and the therapist follows strongly but respectfully.

Step 4

While fully maintaining the compression, and at a moderate pace, reverse the direction of tissue loading. Make the reversal at a moderate pace, allowing time for the tissue to release. Gradually load tissue in this opposite direction to near end feel. Now the therapist is leading the dance, but must lead respectfully at a pace and force which not only allows, but encourages, the client's tissue to change.

Step 5

When you arrive at end feel in Step 4, begin to slack the compaction at a moderate pace, and concurrent with slacking the compression, move the joint or other tissue in a circumduction, timing the decompaction to coincide with the conclusion of one full circle of circumduction.

Step 6

Repeat the mobility tests used in Step 1 to evaluate how much change has occurred.

Note: *This technique may be repeated several times. One to several repetitions will clear many, but often not all, portions of a restriction. After three or so applications, it is often useful to make more discriminate mobility testing of the area and either re-focus this technique on remaining focal restrictions or shift to another technique for those areas.*

Note: *As usual, be alert to the first signs of inflammation as a signal to stop treating this area for this day. The first sign of inflammation is usually a subtle sense of fluid filling, the beginning of edema. This usually precedes heat, and always precedes redness. If the tissue is inflamed by the treatment, it may seem more free in the short run, but the body will likely produce new fibrosity in the long run.*

Caution: The part of this technique that cannot be taught in text alone is the felt sense of the sequence of forces used. This requires closely supervised instruction and practice. The reader is emphatically encouraged to take training in the method.

For a more complete description of this technique, along with a history of its reconstruction and various application examples, see: Van Buskirk, Richard L, The Still Technique Manual, second edition, 2006 American Academy of Osteopathy.

FUNCTIONAL METHODS: SIX FACTOR MODEL DESCRIPTION

As applies to Richard Van Buskirk's Reconstruction of the Still Technique

Comparing the similarities and differences of many osteopathic treatment methods, I developed a six-factor model: ***Force, Speed, Directiveness, Constraint, Tissue Engagement, and Relationship to Effort Barriers.*** Below is a description of the Van Buskirk / Still technique using this model.

Force

Force applied in this technique varies from moderate to fairly high.

- In Step 2, the compaction is made at a moderated pace increasing through the range of compression up to near end feel.
- In Step 3, force used following the natural pull in the tissue is initially moderate and increases at the end to near end feel. The compaction of the tissue in this step continues near end feel throughout.
- In Step 4, force initially backs off from near end feel to moderate, then at the other end of the range of movement, approaches end feel again. The compaction of the tissue in this step continues to near end feel throughout.
- In Step 5, the compaction into the tissue is slacked at a moderate pace ending at zero force. Concurrent with the slacking of the compaction, a circumduction is performed.

Force for this circumduction starts moderately, as needed, to work through the load of the compaction, and then lightens to near zero at the end.

Speed

Speed is moderate throughout application. During all phases of the treatment, stay alert to the release happening in the tissue. Movement that is too fast would not allow the tissue to change. Movement that is too slow could allow unwinding to occur, which is undesirable when using this technique.

Directiveness

This is a highly directive technique throughout, in the sense that in all steps, the therapist directs tissue movement.

Constraint

In this technique, the levels of directiveness, speed and levels of force are high enough that there isn't much possibility of the client initiating or directing movement. The only client directed activity is the tissue pull as noted and utilized in Step #3. While unwinding is specifically forbidden, it is unlikely. In the event unwinding is noted, offer just enough back pressure to each attempted unwinding movement to prevent it.

Tissue Engagement

Tissue engagement is made by the therapist in most phases of this method; however, in Step #2, the client's tissue will pull in a particular direction which the therapist then exaggerates. This is different than unwinding techniques where the client's tissue moves the therapists hand.

Relationship to Effort Barriers

Effort barriers, such as first barrier, are not directly considered in this technique. End feel is approached but not usually reached. Forces used vary from moderate through near end feel. When tissue is loaded slowly, the amount of displacement in response to increasing force is not a smooth curve but exhibits 'steps'. The first of these step ups in force required to achieve further tissue deformation is known as the first barrier.

When we load tissue, the amount of tissue displacement varies with the load applied, generally more load more elongation or compaction, however if load and displacement are plotted it is not a smooth curve. Instead the curve has a stair step shape, meaning that initially as force increases, lengthening or shortening increases in a regular way, then at a certain level of force the tissue stops changing in length until the force is stepped up somewhat higher. There are usually several of these steps along the course of increased force on tissue. Each of these step-ups in force to produce the next increment of change is referred to as an 'effort barrier'. The succession of these may be noted as first barrier, second barrier, etc. on the way to end feel which is a final barrier.

APPLICATION OF THE TECHNIQUE TO SPECIFIC TISSUES

For each of the following examples, observe the client's standing alignment and movement in gait before and after treatment, noting changes.

Ankle Joint

Mobility testing

The distal tibia and fibula are held together by a syndesmosis joint which has very little mobility. Together, the distal tibia and fibula form a mortise, in which the dome of the talus bone sits and moves. Normal mobility at the ankle (talocrural) joint is dorsiflexion –plantarflexion, and a small amount of anterioposterior glide. There are no other active movements at this joint. Other, tiny amounts of passive ROM in other dimensions may be available. Other apparent active movements in a normal ankle happen more distally in the foot, notably at the talonavicular joint.

Reduced range of motion (ROM) in the ankle joint

is a frequently observed condition. This can be due to a variety of factors both locally and at a distance. For example, either adhesion of tendons at the ankle, or fibrosity in the inter-muscular septum between the gastrocnemius and soleus muscles will reduce apparent talocrural joint range of motion.

To test the mobility of an ankle joint, have the client lie supine on the table with the heels just off the end of the table. With one hand, the therapist holds the distal tibia and fibula and the other hand holds the talus and also controls the midfoot. The talus is moved on the mortise first in dorsiflexion, then in plantarflexion. Returning the joint to neutral, anterior and posterior glide of the talus in the mortise is then explored. For each motion, notice both range and effort required to move through the joint.

Treatment

Use the same contact on the distal tibia and fibula with one hand, as for mobility testing. Shift the other hand so that in addition to lateral and anterioposterior control of the talus, pressure can be applied toward the talus from the sole of the foot. Controlling the bones, (not gliding skin or other superficial tissue) compact the talus superiorly into the mortise at a moderate rate of speed.

As you compact the joint along its central axis, notice any natural tendency of the talus to deviate from a straight superior path. Whatever movement the talus makes, follow and then exaggerate that movement to near end feel. There may be a single leg of deviation or a succession of two or more directions of movement. Follow and exaggerate each of these.

Then, maintaining the compaction, slowly reverse the movement or succession of movements followed in the previous step eventually approaching the opposite end of range of motion. Pace the reversal to allow tissue release. Too slow and too fast are both, at minimum, less effective.

Once the opposite end of the ranges of motion is reached, release the decompaction of the joint at a moderate pace, making a passive circumduction of the joint. For the ankle, a circumduction is a combination of the A-P glide of the joint, dorsiflexion- plantarflexion, and an attempt to make a lateral and medial shear motion of the talus in the mortise.

Apply the same mobility tests applied at the beginning and compare the result with the initial test results.

An Element of the Quadriceps Femoris Muscle Group

The four muscles of the quadriceps group act to extend the knee via the insertion of their common tendon on the tibial tubercle. The origin of three members of this group: vastus lateralis, vastus intermedius, and vastus medialis, is on the anterior and anteriolateral femur. The fourth member of this group, the rectus femoris, originates at the anterior superior iliac spine of the pelvis, and in addition to being an extensor of the knee, this muscle belly alone is also a hip flexor. Since the hip joint may be either flexed or extended, a greater amount of counter movement is required between the rectus femoris and the underlying vastus intermedius than is required between the three adjacent vastus elements. It is a frequent finding in my work that the intermuscular septum between the rectus femoris muscle and the vastus intermedius muscle has become fibrosed, limiting counter movement between these two muscle bellies, and thereby limiting knee and or hip range of motion, or at least making those movements more effortful.

Mobility between the rectus femoris and vastus intermedius muscles can be assessed with a succession of three tests.

1. Begin with the client supine on the table. Stand beside the table near the thigh. With

the thumb and forefinger of one hand grasp a relatively superior portion of the rectus femoris. With the thumb and forefinger of the other hand, surround this portion more broadly and deeply to contact the vastus intermedius. With these two hand holds, make lateral and medial counter movements to assess the distensibility of the intermuscular septum between these two muscle bellies. Do this just once or twice. If you test is several times, you will begin to mobilize it. Now move your hands to the next most inferior section of these muscles and repeat. Continue this process inferiorly along the anterior thigh to about 4 inches above the patella. Note any differences in flexibility between various portions of this intermuscular septum. It may all be free, all be stiff, or may vary in availability along its length.

2. Begin again with the client supine on the table. Stand beside the table centered toward the client's thigh. Put one hand on the distal thigh just superior to the patella. Place the other hand on the anterior superior spine of the iliac crest. With the proximal hand, attempt to rock the ilium posteriorly, while using the other hand to prevent the distal thigh from lifting from the table. This creates a passive extension of the hip.

3. Have the client side lying on the table, with the leg to be tested on top of the other leg which is in contact with the table. The client's back is near the edge of the table. Stand behind the client's thighs. Place one hand on the iliac crest, and the other hand under the knee so that the leg can be moved on the hip while the knee joint position is stabilized.
   a. First, flex and then extend the hip while the knee is held in extension.
   b. Then flex and extend the hip, with the knee held at about 90 degrees of flexion.

Note differences in apparent hip range and ease of movement in these two conditions. There should be some difference; however, this difference will likely be reduced after treatment.

For treatment, return the client to a supine position. Select a portion of the thigh where the intermuscular septum between the rectus femoris and vastus intermedius has been demonstrated to have less distensibility. Place one hand broadly between the thigh and the table posterior to the portion of the intermuscular septum to be treated, palm cradling the posterior aspect of the thigh. Place a portion of the other hand on the anterior surface of the thigh overlying just the portion of intermuscular septum to be treated. Avoid extra contact medial and lateral to this area.

With the anterior hand, begin to compress into the anterior thigh, supporting with the posterior hand. As you compress, notice any tendency of tissue in the region of the intermuscular septum to pull in a particular direction. Actively follow the tissue in this direction and when it gets as far as it goes on its own then actively move it further in that direction toward end range. If in the course of this loading of the tissue a second or subsequent direction(s) of tissue develops, similarly follow each element of this succession of pulls toward end feel.

When the end of this path has been fully exaggerated, and while fully maintaining the anterioposterior compaction, actively reverse the path followed in exaggerating the tissue pull(s). Pass neutral and continue to near the opposite end feel. Throughout this, maintain a pace which allows the tissue to change most easily.

Once the opposite end feel is reached, gradually slack the compaction of the tissue while making a circular motion with the tissue under the anterior hand toward the end of that tissues' available range.

Post-mobility test this portion of the

intermuscular septum. Re-treat as needed. Once it is either sufficiently mobile, or starting to demonstrate a hint of inflammation, move on to the next most inferior portion of the intermuscular septum which had demonstrated fibrosity, and repeat this process.

Once all fibrosed areas of this intermuscular septum have been treated, post assess mobility in the same three ways as before treatment.

Radial Nerve

Each nerve contains many neurons. Each neuron is like a single wire in a multi-conductor cable. Like any multi-conductor cable, nerves have additional material for insulation and structural support. This additional material is connective tissue. Nerves can become inflamed, and as they heal, the composition of their connective tissue can become less elastic, and may form adhesions to neighboring structures. Reduced stretch and glide in nerves limits mobility in surrounding tissue, and can affect alignment. Assessing for, and releasing, fibrosity in nerves often improves mobility and alignment.

CAUTION: Before attempting work with nerves, the reader is strongly cautioned to receive training in neural manipulation. Nerves are vulnerable and damaging them can have severe and lasting results.

While it is possible to contact a nerve body and work directly on it, I view this as risky. I prefer to take a long lever approach that I call the 'source and target approach'. For peripheral nerves emanating from the spine, this means using the vertebrae that a nerve root comes from as a handle on one end of the nerve and the tissue the nerve innervates as a handle on the other end.

The radial nerve arises from C5, C6, C7, C8 and T1 nerve roots. At its distal end, the radial nerve innervates several parts of the hand, including the whole of the tissue surrounding the first carpo-metacarpal joint. Therefore, a way to use the source and target treatment method on the radial nerve is to use that part of the hand and the relevant vertebral segments as handles.

Have the client supine on the table, with their arms at their sides. Sit at the side of the table with the client's arm in front of you. If you are working on the right upper limb, place the fingers of the left hand under the neck to monitor the spinous processes of all vertebrae C4 - T1. (Recall that the 5th cervical nerve issues between C4 & C5.) With your right hand, grasp tissue surrounding the right first carpometacarpal (CMC) joint. Slowly begin to traction the 1st CMC area distally. Eventually, as you take up slack on the nerve, one or more of the vertebrae this nerve's roots issue from should displace inferio-laterally. However, if the nerve is strung too tight the vertebrae will begin to move almost immediately. It is possible for all segments C4-T1 to move in this fashion, however, typically only an adjacent pair moves, reflecting the tightest root into this nerve.
Note which vertebrae move first. Note how much distensibility there is between these two ends.

It is often useful to also mobility test the neck, shoulder, elbow and wrist, as well as the CMC joint since restoring the stretch and glide of the nerve passing through these areas will frequently improve their apparent mobility.

Once you have discovered the cervical level where the greatest neural tension is expressed, slack your tension to zero. Up to now, your cervical hand has been used to monitor only. Shift your contact to the lateral aspect of the tip of the spinous processes. Now begin to again slowly moving the CMC joint distally, but this time, also slowly increase a lateral load on the spinous processes of the vertebrae which were shown to first move in response to a pull from the CMC joint, thus applying a stretch between these two ends. As you gently begin to stretch load the nerve, note any deviations in movement of the

tissue at either end. As with the earlier examples, follow and exaggerate these movements. Since nerve tissue is vulnerable, be less aggressive in taking this toward end range, 2/3 of the way will do nicely. N. B. With nerves, the directive to stay within the client's comfort is supremely emphasized.

Once the tissue deviation movement path has been followed and exaggerated, then fully maintaining the gentle stretch, reverse the direction of the deviation movements and then exaggerate in the opposite direction.

Then as you release the tension on the nerve at a moderate pace make a gentle circumduction at each end.

Post mobility test. Note how far the nerve will stretch before one ore more vertebrae move. Is it the same vertebrae as before or are other segments now demonstrating the tightest remaining root? Re-treat as needed, staying extra alert for any signs of inflammation. Once the nerve is satisfactorily treated, or the treatment is stopped due to noting first hint of inflammation, then post mobility test the same joints and areas as before treatment.

RESOURCES

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