

Myofascial Release



with Sean Riehl
www.realbodywork.com

Lesson 1

Anatomy & physiology of fascia

Time to complete: 30 minutes

Learning outcomes:

3 types of connective tissue
Properties of fascia
Collagen
Elastin
Ground substance
Cross-linkages
Adhesions
4 rules of myofascial techniques

To do and notice:

Watch lesson 1, read the text below

Text:

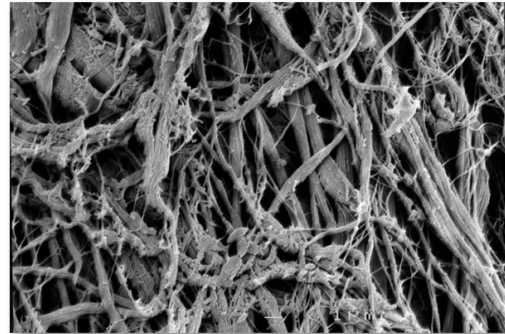
Anatomy of fascia- what its made of

There are 4 types of tissue: muscle, nervous, epithelial and connective tissue. These 4 types of tissue make up every structure in our body. Connective tissue is the most pervasive, and has three basic ingredients. These are collagen, elastin, and Ground substance.

Collagen

Collagen fibers are the longest molecules ever found. If one were as thick as a pen, it would be a yard long.

Collagen is a protein consisting of three polypeptide chains that line up to form white fibrils. They are stronger than steel and can hold ten thousand times their own weight. Collagen fibers give tissues their tensile strength, resiliency and structural integrity.



Elastin

Elastin fibers are much like rubber bands. Elastin fibers allow the tissue to stretch, thereby helping to absorb shock. Fascia, tendons and ligaments contain both collagen and elastin fibers.

Ground substance

Ground substance is a viscous, transparent fluid, like raw egg whites. It surrounds all the cells in the body, and is part of our internal ocean. Chemically the ground substance is a mucopolysaccharide. Its main components are hyaluronic acid and proteoglycans. Hyaluronic acid is viscous and lubricates the collagen, elastin, and muscle fibers, allowing them to slide over each other. Proteoglycans form the gel of the ground substance. This gel is excellent at dispersing shock and holding tissues in place. One of the most amazing properties of the ground substance is its ability to go from a jelly-like state to a completely liquid state. This is called thixotropy. Just like Jell-O- when its cool, it's a jelly, and when its warm, it's a liquid.

In areas of injury or little use- or in old age, the ground substance in fascia is less of a liquid, and becomes a harder gel. Unfortunately, if the ground substance become too hard it begins to restrict motion and dry up. In bodywork the mechanical stretch, body heat and bio-electric energy all contribute to taking the ground substance from a gel to a liquid. In its liquid state it allows movement, stretch and for the exchange of nutrients and cellular wastes to occur more efficiently.

Fascia as the great organizer

Fascia is a type of connective tissue. Fascial sheaths surround and penetrate almost every structure in our bodies. Fascial sheaths surround individual nerve fibers, and also bundle those fibers into larger trunks. Loose fascial networks hold our adipose tissue in place as it pads and protects other structures. Fascia also surrounds arteries and veins as well as interleaving itself through every muscle. There are three layers of fascia in every muscle, the endomysium, the perimysium and the epimysium. These three layers of fascia within the muscle merge at the ends of the muscle to form a tendon. Still the same components- ground substance, collagen and elastin, but now the fibers arrange themselves in parallel to be able to transmit the pull of the muscle without breaking. This fascial

network does not stop there. Not only does this tendon embed itself into the bone, it also fans out, surrounding the entire bone- literally becoming the periosteum of the bone. Then from the periostium to another tendon, into another muscle to another tendon surrounding another bone and so on until the fascia in your toes has connected through this network to the fascia in your head and fingertips- uniting your body in one continuous fascial network. Add to that all the other tissues- nerves, arteries, veins, fat and organs all suspended and penetrated by this fascial network- it's no wonder it's called connective tissue.

Crosslinkages and myofascial release

Unfortunately, due to the way they are formed, collagen fibers tend to pack closer together and form more connections as we age, become injured or develop scar tissue. These connections within the fascia are called cross linkages and they limit motion and distort posture. Here is a diagram of cross-linkages. On the right the fibers are able to elongate, on the left the cross linkages restrict elongation. Cross linkages that develop between different fascial sheets are called adhesions.

If there is not much movement in an area, the collagen fibers will begin to bond in adjacent sheets of fascia. Adhesions cause the muscles to lose independent movement, dragging their neighbors along with every contraction. This is energy intensive and can result in pain.

Myofascial Release breaks up cross-linkages, removes adhesions, and softens the tissue. This helps to balance postural distortions, increase range of motion and increase fluid movement patterns.

How to perform myofascial release

Ground substance, by its very nature, is designed to resist force. The gelatinous nature of the ground substance and the rubber-like elastin fibers will effectively disperse shock that comes through the body. For this reason, quick strokes have no effect on the fascia. Quick strokes indeed will create heat in the area, but only engage the elastic barrier of the fascia. In a few moments it returns to its original length. If our goal is to lengthen the fascia at the level of the collagen matrix, we must apply a different type of manipulation than Swedish massage.

Studies have shown the initial 90 seconds of stretch only effect the elastin fibers. During this initial stage we are feeling the elastic barrier release. Once the elastin fibers have reached their full length, only then do the collagen fibers begin to unwind. Not only does it take time to engage the collagen, it also takes time for the ground substance to go from a gel to a liquid. In its gel state, it holds the collagen fibers in place, but in a liquid state, the collagen fibers can begin to lengthen. As this lengthening occurs, cross-linkages within the fascia begin to break. As the cross-linkages break, the strain pattern in the fascial sheet will change. If the practitioner is sensitive to this strain pattern, they can follow the body change the direction of their stroke. This is called unwinding. This takes patience, sensitivity and skill. By quieting the mind and bringing the awareness into our hands, we can follow the body's unwinding.

Myofascial release is a gentle technique. Since collagen is made to resist force, the most effective way to release the fascia is gentle sustained pressure. In fact too much pressure will decrease the practitioners sensitivity, and the body may resist the work. Usually only a few ounces of force is enough to start the fascia moving. Sometimes practitioners who have studied bodywork styles that uses more force have a hard time trusting that the lighter pressures are effective.

Here are the 4 rules that we will follow for almost all myofascial stretches-

Rule #1

Stretch for 2-5 minutes. Performing these techniques for a shorter duration will only stretch the elastin component, providing temporary or no results.

Rule #2

Maintain a continuous stretch. As soon as you let up, the elastin fibers bring the tissue back. It will take another 90 seconds to engage the collagen.

Rule #3

Use light pressure. Collagen fibers have a tensile strength of 2000 lbs per square inch. They are designed to resist force. Yet they lengthen under gentle, sustained pressure.

Rule #4

Flow with the tissue. As the tissue unwinds, the direction of force changes, follow the unwinding to be most effective.

Lesson 2

Experiencing the fascia

Time to complete: 30 minutes

Learning outcomes:

- Feel the difference between muscle stretch and fascial stretch*
- Feel collagen barrier*
- Experience the quality of skin in different areas of the body*
- Feel the effects of restricted fascia*
- Experience how far restricted fascia can reach*

To do and notice:

Watch lesson 2 in the Beginning Myofascial Release video and perform the exercises.. Make sure to spend time with each stretch and really feel it in your own body.

Lesson 3

Releasing the superficial fascia

Time to complete: 2 hours

Learning outcomes:

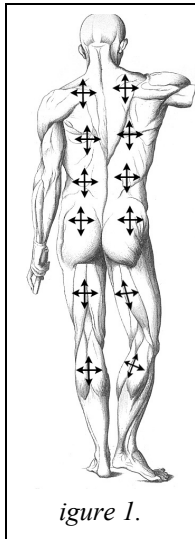
- The importance of the skin*
- In allowing joint mobility*
- Basic skin evaluation*
- Understanding of a proper end feel*
- Skin rolling techniques including*
 - Rolling*
 - Squeezing*
 - Rotating*
 - Lifting (especially for sciatic pain)*
- Flat handed myofascial stretch if skin rolling isn't effective.*
- Re-testing to see if the techniques worked*

To do and notice:

Watch the lesson 3 on the Beginning Myofascial Release video. Get 2 friends or clients, and evaluate the skin over their entire body. After evaluating the skin over every aspect, perform skin rolling techniques over all areas of restriction. Then test the skin again. Take your time with each person and spend at least 45 minutes each. Mark the areas of initial restriction on the figures provided on the worksheet.

Text:

The superficial fascia of the skin covers our entire body. The skin tends to tighten around areas of injury or contraction. When it tightens, this means that some parts of this bag are stretched, and some are bunched up. Tension in one area can easily be transmitted to another, more distant area. Skin rolling and skin techniques aim at having the skin bag evenly distributed over the entire body. In this way each part has the mobility that it needs. By loosening the skin we can free up movement in the deeper fascial layers. Even a small restriction in the skin can influence our postural distortions and add to the cycle of pain.

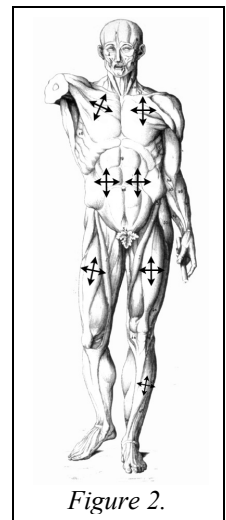


We have found that the skin contracts over tight muscle groups, and because these muscles are pulling from the joints, the skin over the joints tends to be stretched. So usually we'll push the skin back into the joints. This feels really good as well. When the skin is restricted, it pulls on the surrounding skin, moving it just a little from where it should be. This migration is what causes restricted motion and the hard end feel in the evaluation that we do.

Evaluation

To evaluate the skin, we'll pull the skin in 4 directions: up, down, medially and laterally. In each direction the skin should have some movement, with an end feel that is springy. This is the most important part- because some areas of the body have more give than others. For example the back may move an inch or more, where the skin around the ankle may move less than half an inch. If the ending feels sudden, or hard, that indicates restriction.

You can test the skin all over the body. Figure 1 shows the general areas to test on the back. Figure 2 shows the main testing spots on the anterior torso.



Skin rolling

The technique for skin rolling is to pick up the skin between your fingers and thumb, squeeze and roll. A common mistake is to go too fast. This can be painful, so check in with your client. When you get the end of the area, move backward through it. In areas that are restricted, or intense, hold without moving. If you have a hard time getting a good grip, take more tissue between your fingers, and don't try to roll as much as just holding. Retest the area to see if the mobility has increased.



Alternate release

If skin rolling doesn't create a softer end feel, push the skin in the direction of the barrier. This is gentle pressure, full hand contact with no gliding on the skin for 90 seconds or more. After doing this, retest to see if the end feel has become soft and springy.

Feeding the tissue into the joints

For clients with posterior knee pain due to hyperextension, place a hand on each side of the joint, then push into the knee. This will help to move the fascia back towards the joint. This technique should feel really good to the client, because the constant strain on the area is being relieved. Do this technique along with some deep tissue work to give your client a complete treatment.

This work is also great for the elbow. Place a hand on each side of the lateral elbow, pushing gently towards the joint. This will help tennis elbow, where the fascial connection between the flexor carpi radialis muscles and the humerus has become strained. This will help to ease the strain on the area. Use this technique along with cross fiber friction.



Lesson 4

Scar Releases

Time to complete: 2 hours, spaced over 4 sessions

Learning outcomes:

Learn 4 scar release techniques

To do and notice:

Watch lesson 4 in the Beginning Myofascial Release video and read the text.

Find a friend or client with a scar. Evaluate the fascia around the scar, then perform the four scar tissue release techniques around the scar. The session should last about 15-20 minutes. Over the space of 2 weeks, perform 3 more sessions on the same person, spaced 2-3 days apart (example Monday, Thursday, Sunday, Wednesday). Write your session info on the sheet provided.

Text:

Myofascial release is one of the best techniques to release scar tissue due to surgery or accident. It is important not to work on a fresh scar, due to the fear of tearing the tissue. Wait until the scar is well healed before performing these techniques. For a surgery scar, wait until the medical doctor has said that it is ok. For scars due to injury, the amount of time varies depending on the depth of the injury.

The goal of the scar release technique is to mobilize the scar tissue, freeing fascial restrictions that may be fanning out from the scar. This work will also make the scar more pliable and strengthen the scar by encouraging proper scar tissue formation. Scar work can be painful due to the amount of adhesions that cross many levels of tissue. Always be in verbal contact with the client while doing these techniques, and remember that it usually takes a series of sessions to fully release a scar.

Scar release technique #1: skin rolling

Starting off the scar, skin roll across the scar in 8 directions: up and down, back and forth, diagonally one way and then the other. Keep rolling until all the restrictions are released. Skin rolling may be difficult if the scar is adhered to the deeper structures, or there is not enough give in the skin.

Scar release technique #2: pincer grip

Grip the scar between your finger, and your thumb. Lift the tissue away from the body. Then angle your pull in all the directions, waiting for a release in each direction. Apply stretch for at least 90 seconds to 5 minutes.



Scar release technique #3: the cross-hand stretch.

Cross your hands over the scar, and stretch for 2-5 minutes, waiting until a release occurs. Perform the technique in various directions around the scar.

Scar release technique #4: direct scar release

Take the tip of your finger, and glide down the scar, asking your client to tell you when you reach the most sensitive spot. Then apply direct pressure into the scar. Once you sink into the tissues, rotate your pressure in 4 directions, and ask your client again to tell you when you find the most sensitive direction. Once you have found the spot, apply static pressure until a release is felt. Clients may experience burning, heat or pain, and the area may flush with hyperemia. This is normal as the adhesions are released, just remember to honor your clients wishes if they ask you to stop or lighten up. Remember that it will take several sessions to completely release a scar, and that it's ok to do it in stages.

Lesson 5

Kinesthetic evaluation- Leg and arm pulls

Time to complete: 1 hour 30 minutes

Learning outcomes:

Learn kinesthetic evaluation for the Ankle, knee, hip and spine.

Learn leg pulls to release the hip and back

Learn arm pulls to release frozen shoulders, neck and upper back pain.

To do and notice:

Watch lesson 5 in the Beginning Myofascial Release video, read the text below. Evaluate the kinetic chain, perform leg and arm pulls on at least 3 people. Session time- 20 minutes each. Write down the most restricted joint on each person.

Text:

The myofascial connection goes from the toes to the top of the head, winding through muscle, tendon and joint capsule. Each joint is a link in the kinetic chain. If one joint is restricted, others will have to compensate. Kinesthetic evaluation is a simple way to evaluate restriction in each joint.



Kinesthetic evaluation

Start by evaluating the ankles. Have your client lay face up on the treatment table. Kneel or sit at their feet. Place both hands underneath the heels. Grasp the calcaneus, close your eyes and apply a very slight pull towards yourself. Tug on one side and then the other to compare the two. This pull is so slight that only the fascia around the ankles is affected. If the knee or the hip moves you are pulling too hard. Extend your awareness up into the ankles, noticing where there's restriction. Be patient as you do this, it will take a few tries for you to begin to feel the differences in the tissue. With practice you'll know when an area is restricted.

Now grasp above the ankle joint and increase your pull to the level of the knees. Gently tug both sides, and extend your awareness into the knees. If you see the hips or even the whole body move toward you, you are pulling way too hard. We are pulling just to where we are engaging the knees. Notice if one side feels restricted.

To evaluate the hip joint, keep the same hand position, but apply more pull, reaching up into the hip joints. Tug each side and notice if there is restriction

From here we could actually pull a little harder and feel into the level of the spine. If you can become quiet enough you'll be able to sense restriction on either side of the spine. It's all a matter of extending your awareness through the body, and applying the appropriate pull to engage the fascia at that level.

Leg pull

To release the ankle, grasp the foot and move it into supination, pronation, plantar flexion and dorsi flexion. Then pull into the direction that felt most restricted. As the fascia unwinds, the direction of pull will change. Follow it as it unwinds. Continue this pull for 2-5 minutes. Recheck to see if the joint has increased mobility.

To release the knee, position your hands above the ankle joint, and apply a gentle pull to the level of the knee. Wait for 2-5 minutes until the tissue is completely released. Don't do this on a knee that has strained ligaments or a loose joint capsule, we don't want to increase any ligament laxity that may be there. Only perform these stretches on areas of restriction.

To release the hip stand and grasp the foot and gently lean back, pulling to the level of the hips. If the client slides on the table, or their upper body moves, you are pulling too hard. The client's foot is in slight external rotation. Wait here at least two minutes. Then move to the side of the table and bring the hip into flexion. Keep the traction continuous, if you let up, you'll have to start all over again and re-stretch the elastin fibers. Feel into the tissues. As they release, increase hip flexion. Change hand positions to keep yourself comfortable, but always maintain steady traction. Gently flow with the tissues as they unwind. Again, stay here for at least two minutes. This leg pull is great for lower back pain as well as hip dysfunction.

Evaluation

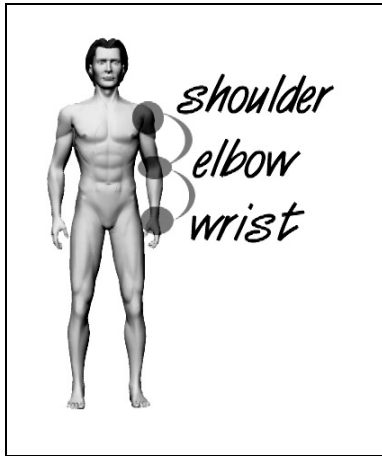
Grasp ankles then:

Pull to the level of the ankle joint
Pull to the level of the knee
Pull to the level of the hips
Pull to the level spine

Tug at each level to feel the joint play.

Extend your awareness into the joint that you are evaluating.

Now continue traction and move around to the other side of the table, bringing the leg with you. On this side internally rotate the leg as you pull it across the body. To complete, move the leg back down to the starting position. Then retest to see if the mobility has increased. To get a more accurate picture of these positions, watch the video.



Arm pull

With the leg, the force travels up through the body from the ankle to the knees, hips and spine. For this reason, dysfunction in the lower joints can affect the joints above. This means that with clients who have back pain, evaluating all the way up the chain from the feet to the hips is important. The arm, however is a different story. Because the arm usually doesn't bear weight, the chain of energy comes from the shoulder down into the wrist and hand. For this reason shoulder restriction can cause elbow and wrist pain, whereas wrist and elbow pain rarely cause shoulder dysfunction. For these reasons I usually don't evaluate wrist or elbow mobility, unless the wrist or elbow is hurting.

The arm pull consists of releasing the fascia in a radius around the shoulder. There are 5 main positions. Each position releases a different myofascial pull. The arm pull can affect fascia all the way up into the neck, and all the way down into the back and hip.

To perform the arm pull, stand at the side of the table, one hand grasps above the wrist, the other just inferior to the elbow. Pull to level of the shoulder and wait for a release. To loosen the fascia up into the neck, pull even more until the shoulder depresses, and the head rotates slightly. Stay here for at least two minutes to release the lateral neck. Next move out to the side of the table and continue traction. Don't perform this arm pull if your client has a loose joint capsule or if their shoulder easily dislocates. Keep moving up releasing the various lines of fascia at each point. If you feel resistance, just stop and pull until the resistance dissipates. This technique is great for frozen shoulders, or conditions where the joint capsule or fascia is restricted. This position will pull all the way down the side of the torso and into the hip.

Caution

Don't perform the arm pull out to the side or over the head if the client's shoulder dislocated easily or if they have a loose joint capsule.

Continue to traction as you bring the arm across the body. Place your other hand over the scapula. Use your fingertips to grab the vertebral border of the scapula. From there you can vary the pull from the scapula to the arm. Wait here at least 2 minutes as the fascia over the back softens and releases. This is a great technique for clients who have tension in the upper back and neck. Sometimes this position is uncomfortable if the arm is higher than the shoulder either towards the ceiling or by the client's head. Notice here that the ending position is with the wrist at the level of the hip, and closer to the floor than the shoulder.

To complete the release, move the arm back through all the planes of motion, while keeping traction. Release when the arm is back at the side of the table. Watch the video to clarify these positions in your mind.



Lesson 6

Cross handed stretches

Time to complete: 1 hour

Learning outcomes:

The location of 3 facial lines:

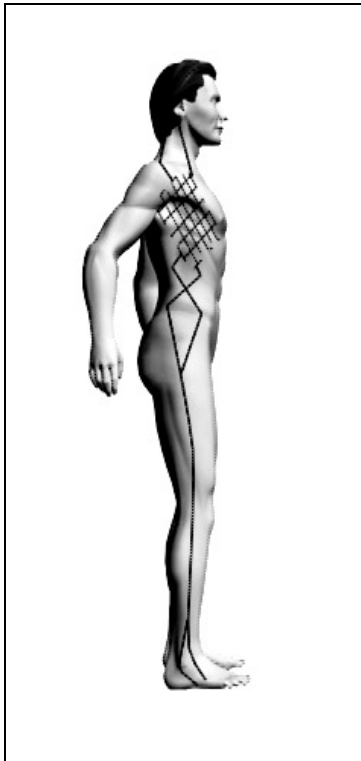
Cross handed stretches for each line

To do and notice:

Watch lesson 6 in the Beginning Myofascial video. Read the text below and practice the cross-handed stretches on 1 friend or client.

Text:

Fascia is a continuous network though-out the body. There are however, specific lines of pull that the fascia stabilizes as it moves though muscles, tendons, joints and ligaments. We will now look at 3 basic lines of force- the lateral , anterior and superficial fascial lines.



The lateral fascial line

The lateral fascia controls movement from side to side all the way up our bodies. The lateral fascial line starts at the 1st and 5th metatarsals and moves up the side of the body though the peroneal muscle, then over the head of the fibula, through the iliotibial tract and through the tensor fascial latae and gluteus maximus in the iliac crest. From there it moves through the internal and external obliques to the lower ribs. A deeper portion of this fascia runs through and next to the quadratus lumborum muscle. Next the fascia crisscrosses through each level of inter-costals and ribs until it reaches the splenius cervicis posteriorly and the sternocleidomastoid anteriorly, which end up at the mastoid process. There is also a pull that runs from the ribs up the scalenes, ending at the side of the neck. Restriction in one part of the line can effect other structures along the line.

Release the leg

To release the lower part of the lateral line, position your client face up. Use rhythmic compression with your thumbs to soften and prepare the tissue. This will flush the tissue with fresh blood and increase the heat in the tissues so that the ground substance will begin to liquefy. Then rest one palm over the head of the fibula, while the other palm rest over the lower leg. Stretch the hands away from each other for 2-5 minutes. Let the tissues unwind through each barrier and flow with the release. Don't slide on the skin. This technique can also be performed with the client in side posture. A trick to this technique is to position your client so that their foot is off the table. As you perform the technique the foot is allowed to invert more and more. If this lateral line is tight, it can slightly evert the foot. Rebalancing the lateral line can help fallen arches or dysfunctional walking

patterns.

Release the thigh

To work this lateral line further up, keep your client in side posture, straighten their leg. One hand rests below the knee over the head of the fibula, the other over the lateral thigh. Gently stretch and wait for the release and unwinding to occur. Tension in this part of the lateral thigh is often called iliotibial band syndrome. Myofascial release can help to soften the tissue, taking pressure off the lateral knee.

Next use your fingertips to apply pressure on the anterior edge of the iliotibial band, push posterior and wait for a release. Usually the distal 1/3 of the iliotibial band is the tightest, so focus on this area.

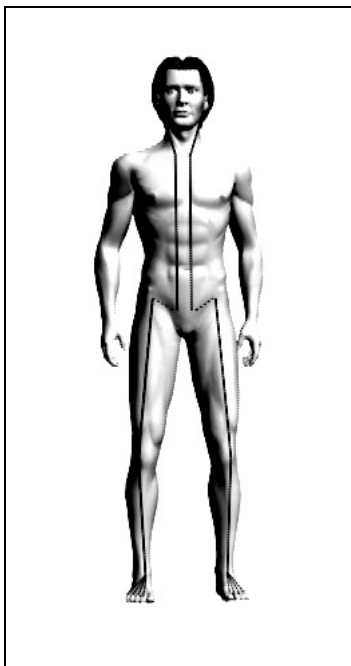
Release the hip

To release further up the hip, place one hand over the iliac crest, and the other near the greater trochanter. Stretch and wait as the tissue releases. This area can be tight if the ilium on this side is slipped down, or if the leg on this side is short. Clients with tight hips will benefit from this technique. This can also be performed with the client laying prone.

The tissue between the ilium and the rib cage can be stretches by having you client put their top hand over their head, and then straighten the top leg. Place on hand on the crest of the ilium and the other over the rib cage. Stretch. This technique is useful if the ilium is slipped up, or if the shoulder on this side is low. Although it's not quite as effective, you can also perform this technique with the client laying supine. Again one hand is on the crest

of the ilium, and the other over the lower rib cage. From this position you can also pinch the fascia between your fingers and thumb. Squeeze and pull toward yourself. This is an excellent technique that will help to free any restrictions in this area.

The arm pull technique in this plane of movement is also an excellent way to release down the lateral fascial line.



The anterior fascial line

The anterior fascial line starts on the dorsal aspect of the toes, travels through the anterior compartment and periosteum of the tibia into the rectus femoris muscle where it reaches into the Anterior inferior iliac spine. From here, however, the force is transmitted to the pubic bone and up through the rectus abdominis. This makes sense because these two muscles counter balance each other in relationship to the position of the ilium (either anterior or posteriorly rotated). From the rectus abdominis this line of fascia reaches up through the pectoral and sternalis fascia to the manubrium. From here this anterior line travels up through the sternocleidomastoid to the mastoid process. You may think it should move into the neck, but the infrahyoid fascia originates from a deeper fascial line.

Notice that both the lateral line and the anterior line end by moving through the sternocleidomastoid and into the mastoid process. This is one of the reasons that a forward head posture is so common- these two lines of fascial force both tend to pull the neck into extension and move the head forward.

Release lower leg

To release through the anterior line, start with your client supine, apply rhythmic compression to the tibialis anterior muscle using your thumbs. Then kneel at the side of the table and place one hand just below the kneecap and a little laterally, and the other over the lower part of the anterior leg. Stretch and wait for a release to occur.

Release the thigh

To release the anterior line as it moves up the thigh, first use compression to soften and warm the tissues. Now place one hand just below the Anterior superior iliac spine, and the other just above the patella. Follow the tissues as they unwind. Remember to wait at least 2-5 minutes. This is one of the techniques for an anteriorly rotated pelvis.

Release the belly

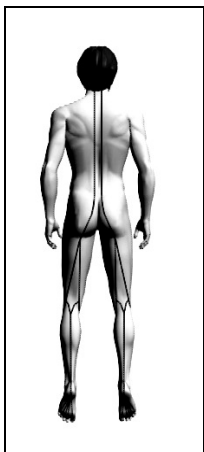
Now the anterior line jogs to the center and runs up through the rectus abdominis. Place one hand just above the pubic bone, and the other palm rests inferior to the xyphoid process. If this part of the anterior line is tight, the pelvis may be posteriorly rotated, or the client may exhibit a hunching posture. For a hunching posture release this lateral line all the way up.

Release the solar plexus

The next position is to place one hand over the manubrium, and the other inferior to the xiphoid process. Then stretch. This will loosen the anterior fascia just in the center of the torso. With this technique you are releasing right over the solar plexus. As mentioned earlier, clients with a slumping posture will be tight in this area. Also, the solar plexus is the seat of held emotions. As you perform this release be sensitive of emotions that may be released from your client. Long held grief or sadness are not uncommon emotions to be released as the fascia unwinds in this spot.

Release the anterior neck

Finally, sit or kneel at the head of the table. Place one hand behind the head at the level of the occipital ridge- this hand applies gently traction towards the cranium. The other hand rests on the sternum and applies pressure towards the feet. Remember that the pressure into the body is slight, just enough to keep the hand from slipping on the skin. Maintain even pressure and gently follow the tissue as it unwinds. This technique is a modified version of a more intense release that we will learn in the advanced tape. This release is excellent for helping clients with a forward head position.



Posterior fascial line

The posterior fascial line starts on the plantar surface of the toes, moves into the plantar fascia then through the periosteum of the calcaneus up into the gastrocnemius. From here this line of pull is picked up by the two hamstring attachments, up through the ischial tuberosity into the sacrotuberous ligament and sacrum. From the sacrum the fascia travels up the lumbosacral fascia,

erector spinae muscles and into the nuchal ligament. From the nuchal ligament, the fascia blends into occiput then the scalp fascia- ending at the brow ridge.

Release the lower leg

To release the posterior line, we'll start by applying gentle compression to the back of the leg. Once the tissue is softening, then take your hands behind the gastrocnemius, fingertips together just between each heel, and then slowly stretch laterally. Keep the pressure constant, wait for fascia to unwind.

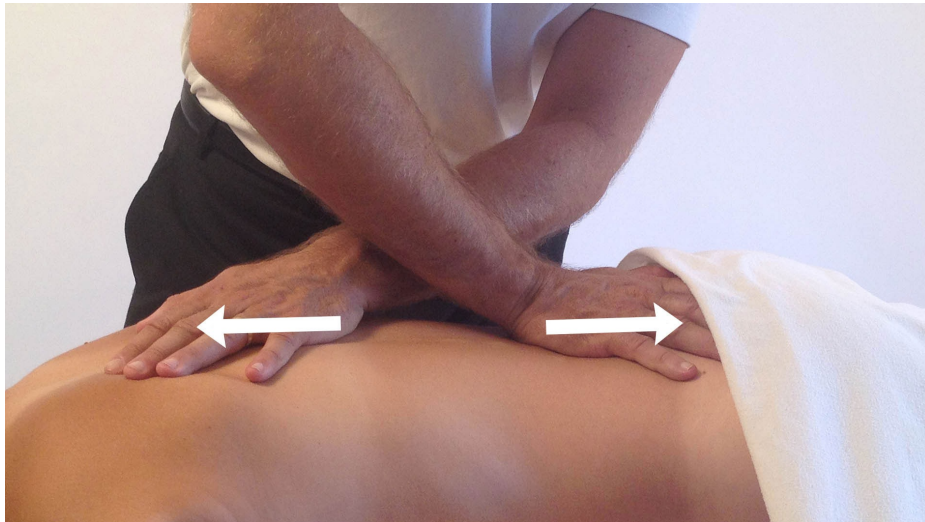
Release the posterior thigh

Next apply some compression to the posterior thigh. Make sure that this doesn't bother the client's knee, and stay away from pressure on the popliteal space. Now find the ischial tuberosity, place one palm right over this landmark. The other palm rests on the inside of the hamstring group. Stretch here for 2-5 minutes and let the fascia release. Then move your lower hand to the other side, the lateral hamstring area. Release here. These techniques take an enormous amount of patience. Be willing to wait for the body and trust the process.

Release the back

To free the posterior line that goes up the back, first use compression to soften the tissues. This work should be rhythmic and slow. There are a few varieties of x-handed stretches for the back. The first is the centerline stretch. One hand rests over the sacrum, the other over the midback. Sink into the tissue and stretch. This is a great technique for people with excessive lordosis in the lumbar spine, or who have any kind of back pain.

You can also apply this stretch on either side of the spine. Do this in conditions where the client experiences tension more on one side than the other.



Lesson 7

Transverse plane releases

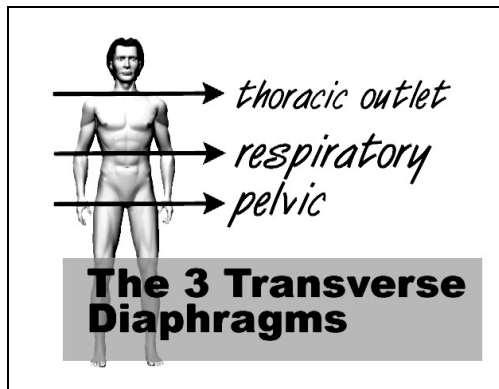
Time to complete: 1 hour

Learning outcomes:

3 transverse diaphragms
Technique to release each one

To do and notice:

Watch lesson 7 in the *Beginning Myofascial Release* video. Read the text below. Practice the 3 diaphragm releases on at least 2 clients. Write the names of the clients in the space provided and answer the question.



Text:

There is a continuous fascial network that surrounds the abdomen up the back, through the diaphragm, down through the rectus abdominis and then across the pelvic floor. The diaphragm and the pelvic floor are called transverse planes because the fascia and muscles are horizontal. Proper balance in these fascial sheets is imperative to proper organ function.

Tension in the diaphragm places pressure on the organs below the diaphragm. This increased downward pressure in the abdominal balloon may be a factor in heartburn, hemorrhoids, and hernias as well as diminished breathing capacity.

The other transverse plane is the thoracic inlet or outlet. This is the space within the 1st ribs. Through this area, vital nerves and

vessels flow. Restriction in this area due to forward head posture or other reasons can cause a variety of symptoms including headaches and arm pain.

Transverse diaphragm techniques

One of the most sensitive and profound myofascial release techniques are the transverse plane releases. These are subtle and gentle techniques that help to balance the transverse planes. These techniques should be done at the end of the session, after other techniques have released the more superficial fascial lines.

Some authors say that the fascia is the conduit for subtle bio-electric energy. Fritz Smith, the founder of zero balancing talks about a place in bodywork where we can contact both the physical and energetic bodies. Push too hard and you lose the energetic quality, too light, or off the body entirely and you lose the physical connection. There is a place between that is the meeting ground between those two worlds. This is the place that we are looking for with this technique, as well as following the inherent motion of the tissues.

Pelvic diaphragm

We'll first start on the pelvic diaphragm. Sit at your client's right side, place your left hand just under the sacrum, and your right hand just next to the pubic bone. Gently let the top hand sink into the tissues, applying a slight compressive force. Then begin to follow the inherent tissue motion that may have a rotational, torsional or shearing movement. The hands do not slide on the skin. Wait here and follow the release for 2-5 minutes.



Respirator diaphragm

To release the respiratory diaphragm, place the left hand under the spine at the level of T12/L1. The other hand rests on top on the angle of the ribs. Let your hands sink into the tissue, following the breath. Then apply gentle compressive pressure and follow the tissue for 2 minutes or more while it releases. Your upper hand may want to rotate one direction or the other, or may want to move away or toward you. Follow the tissue and let you have move with it. This gentle pressure on the ribs and the pressure on the back will place a new level of force into the diaphragm, which will begin to unwind in response. Wait for 2-5 minutes or until a release is felt.

Thoracic inlet

To release the thoracic inlet, place one hand under the upper back, and the other just below the clavicles, over the sternum. The top hand applies a gentle compressive force, and then begins to follow the tissue's inherent

motion. Release for 2-5 minutes as the tissue unwinds. Although this technique is not a lymphatic drainage technique, it can help to increase lymph flow down the neck, which can reduce headaches. Again, these techniques are a nice way to end a myofascial session. They help to integrate the other work, and help to quiet and soothe the nervous system.

Also, don't forget about the energetic component of this work. The energy exchange between your two hands can have powerful effect upon the body. To intensify the energy flow, imagine that your hands are melting into your clients body, or that your hands are actually touching one another. A quiet mind and a relaxed body will also help the energy begin to move. As the energy begins to flow, you may feel heat begin to build up in the area. That's a good sign.

Pelvic floor exercise

Restriction in the pelvic floor can cause menstrual cramps and dysfunction as well as pelvic pain and lower back pain. Tension in the pelvic floor can also inhibit breathing. To test this sit in a chair in a relaxed position, take a full and relaxed breath. Notice what that feels like. Now tighten the pelvic floor and anus, and breathe in again. Notice how diminished your ability to inhale becomes. The tension in the pelvic floor increases the pressure of the abdominal balloon, and the diaphragm cannot depress fully.

Lesson 8

Postural evaluation

Time to complete: 30 minutes

Learning outcomes:

Notice feet- internally rotated or externally rotated, supinated or pronated.

Knee- pointing straight, tight quad

Torso rotation

Shoulders- level, forward

Head- level, tilted, extended

Hips- high, low, anterior or posterior rotation

Test for SI joint mobility

To do and notice:

Watch lesson 8 & 9 in the Advanced Myofascial video, read the text.

Text:

In preparation for the standing evaluation, pin a string to the ceiling so that you have a straight line to compare to. Then run a piece of masking tape on the floor, just behind the string. Your client will align their toes to this line. You can buy fancy charts for the background that have numerous horizontal lines, but we'll be looking for obvious differences from side to side, so we'll get along fine without that.

First ask your client to stand naturally- you know as soon as you say- just act naturally, they're going to become very self-conscious, so often times I will look at their natural foot position when they enter the office, when we're talking about their body- before the "formal" evaluation. This way you can see how they stand normally. When you get them behind the string, don't give them much direction- let their stance be as natural as possible. You can have them take a few steps in place without looking down to get a sense of what feels like neutral. At this point we want to be conscious of one foot being externally rotated or internally rotated. This can indicate tension in the hips. After you see where they stand naturally, you'll have them line their big toes up to the tape, with their feet no further than shoulder width apart. The closer their feet are to one another, the more exaggerated any leg or hip imbalance will become. This will make it easier for you to perform an accurate evaluation. When we look at posture from the front, we want both sides to be equal, and the centerline of the body should coincide with the plumb line.

We'll look at 6 different areas. Feet, knees, navel, shoulders, hands and head. Then we'll palpate the hips and watch while our client side bends.

Area #1 Feet position

Understand that 4 lines of muscle and fascial support control the positions of the feet. On the very bottom, the plantar fascia supports the main arch of the foot. Laterally the peroneus longus supports the foot on the outside, increasing the pronation in the foot. The tibialis anterior and posterior leg compartment support the foot medially and control the amount of supinating that the foot will do. The tighter this fascia is, the more likely the client will be to stand on the outside of their foot. Finally the pull of the superficial fascia of the soleus tendon that goes into the Achilles' tendon, around the calcaneus, then becomes the plantar fascia controls the plantar flexion motion, limiting dorsi-flexion.

First notice if one foot is more externally or internally rotated than the other. Now look to see if one or both feet are pronated or supinated. In a pronated foot with a collapsed arch, there will be tension in the lateral line of fascia, meaning the peroneus longus, and iliotibial band. There might even be some internal rotation in that hip, which can cause the knee to point inward. This collapsed arch takes some length out of the leg, so the hip on that side may be a lower. If the hips are even, and your client is really pronating on one side, it may be that their leg is anatomically long, and this is the way that they are compensating.

People with a supinated foot on one side have the opposite imbalance, the knee goes out. Sometimes the hip may be high on this same side, because the supinated foot gives the leg a little more length. With a supinated foot, a high arch, you'll find tension in the fascia of the anterior compartment, the tibialis anterior as well as in the deep posterior fascia that is the posterior compartment surrounding the tibialis posterior. This is because of the fascial attachments and lines of pull from the medial part of the bottom of the foot.

Area #2 knees

Notice the knees. Are they both straight? Does one knee point inward more than the other. How does this relate to the foot on that side. Remember that a pronated/flat foot on one side will often cause the corresponding knee to turn inward, as well as the hip to internally rotate. You must deal with this imbalance all the way up the line to effect a change. Also notice if the quadriceps above one knee look tighter than the other knee. A hyper extended knee will often have a tightened quadriceps on the same side.

Area #3 belly button to collar bone

Now we want to discover if the torso is twisted. One way to do this is to examine the relationship between the navel and the sternal notch.

Area #4 Shoulders level

Look the top of both acromion. Note if both sides are even. Note if one shoulder is forward. You can tell if this is the case because the same arm will be closer to the body, or the hand will be over the thigh more.

Area #5 Head over the midline

Notice is the head is level, extended or flexed or off center. Take into account distortions happening lower down, they can affect neck position and should be cleared in addition to working on the neck.

Area #6 the hips

Now move forward, cup your hands on top of the ilium. Get your eyes level with the navel and as far back as you can. Notice if one hip is higher than the other. A high hip on one side will have tight fascia above that hip through the lateral torso- the obliques, transverse abdominus and quadratus lumborum muscle and fascia. The other side, the low side will have tight fascia below it through the gluteus medius and down the iliotibial band.

Next palpate the anterior superior iliac spines by pushing your thumbs just under the bony landmark- into the soft stuff, just where the sartorius attaches. Then push your thumbs superior until they hit the lower portion of the anterior superior iliac spine. Make your thumbs exactly horizontal, notice which one is higher, and which is lower. If the hip that is high also has a high ASIS, then the hip is just high. If the hip is high- or the hips are equal, and the ASIS on that side is low, then that hip is anteriorly rotated (or the other hip is posteriorly rotated). In an anteriorly rotated hip, the iliopsoas and related fascia through that muscle and the fascial line extending below the ASIS will probably be restricted, as well as the posterior line of fascia coming off the sacrum. Both these areas will need to be released in an anteriorly rotated hip.

In a posteriorly rotated hip, the fascial lines extending off the ischial tuberosity through the hamstrings will need to be released, as well as the superficial abdominal fascia running through and near the rectus abdominis.

The next part of the hip evaluation is to discover what side is dysfunctional. The dysfunctional side will be the side with limited movement in the SI joint. To test the motion of the SI joint, have your client sit on the table, place your thumbs just under the psis. Have your client bend forward and follow the psis up with your thumbs. The side that starts moving first is the side that is more stuck because the hip is getting dragged along with the sacrum. Now that you know what side is restricted, perform techniques to bring the hips back into balance- in other words- if the hip that is stuck is low- then bring it up- if it is anteriorly rotated, help it to move posteriorly.

Now have your client stand and bend to one side, then the other. This will give us clues to the mobility of the lumbar spine.

The ability to side bend can be restricted by fascia on the side that is stretching, but also the position of the hips and lumbar vertebrae can have a big effect. If the client's right ilium is high, this may have caused the sacral base to slant to the left, like this. This makes it very easy for the client to bend to the left. One clue to this distortion is to watch the amount of bend in the lumbar spine. It should be equal on both sides. If one side is especially curved, you must release the fascial compression on that side of the spine. This will also help to bring the hip down, balancing the sacral base, making side bending more even for the client. That concludes the evaluation of the lateral line. Later we'll learn to release each area in more detail.

Lesson 9

Postural evaluation of the anterior & posterior lines

Time to complete: 1 hour

Learning outcomes:

*The location of the deep anterior line
Evaluation of
Ankle to knee
Knee to hip
Hip to shoulder
Shoulder to ear/head*

To do and notice:

You should watch both lesson 8 and 9, and read the text. Now evaluate at least 3 people from the front and side. Write down what you find on each person in the space provided.

Text:

In this lesson, we'll evaluate the tension pattern of the superficial anterior and posterior lines as well as the deep anterior line. You can feel the posterior line by just doing a forward fold and feeling the line of pull from your heel to your neck. To feel the anterior line you'll have to extend everything as much as you can to feel the stretch. In lesson 5 we looked at both these lines.

Deep Anterior fascial line.

This line starts at the deep medial arch, makes its way through the posterior compartment, medial joint capsule of the knee, into the adductor compartment. Then it moves through the femoral triangle and inguinal opening, into the psoas. From here it moves up the anterior longitudinal ligament of the spine, crossing through the diaphragm, pericardium and then up through the neck through the longus capitis and longus colli. Another branch of this line moves through the posterior manubrium to the infrahyoid muscles, hyoid bone, suprahyoid muscles, to the mandible, jaw muscles and cranium.

Gravity line and the lateral evaluation

Have your client turn to the side. The plum line should cross the foot just anterior to the lateral malleolus. Ask your client to shimmy forward or back until the line is in the right position. From the side view, we'll get a really good sense of how the body is resisting gravity.

#1 ankle to knee

The first area we'll look at is the relationship between the knees and the ankles. The knees may be extended, or flexed.

#2 hip

The hip can move into an anterior rotation, increasing the lumbar lordosis, or the hip can be posteriorly rotated, causing the lumbar spine to be flat, or more kyphotic. This is fairly uncommon, it's more common for an excessive lordosis. Correct posture is somewhere in between these two positions. Technically, the ASIS and the PSIS should be close to even on men, and the ASIS about a half inch inferior on women. Notice if the hip is anterior or posterior to the gravity line, and if the spine looks especially lordotic.

#3 hip to shoulder

Notice if the shoulders are in neutral, or if they are forward. If the shoulders are forward, it can mean that the shoulders themselves are caved in on the front (the slumping posture) or that the whole torso is forward (leaning). If the whole torso is forward, it may be because of some lordosis or anterior rotation in the hip area. In this case, it's not so much a shoulder issue as it is about balancing the foundation.

#4 shoulder to head

Now taking all that we have seen into account, we'll look at the relationship between the shoulder and the external meatus (the ear). The ear should be just over the head of the humerus. If it is forward, it may indicate a forward head position, which is sometimes called upper crossed syndrome. Also realize that both the shoulder and the head may be forward, which means that the head of the humerus and ear line up, but are both forward of the gravity line. In this common condition, the movement of the head forward off the midline causes excessive strain on the posterior neck musculature. The anterior pectoral myofascia is also tight, although clients usually don't feel it much because gravity does so much of the work pulling everything forward. Clients with this condition will often complain of upper or mid back pain, because of the eccentrically contracted muscles that are stretched here.

Lesson 10

Expanding the breath

Time to complete: 1 hour 30 minutes

Learning outcomes:

How to handle emotional release during a session
Evaluation for pump handle and bucket handle motion
Rebound technique
Myofascial stretches for the various motions of the rib cage
Diaphragm releases
Accessory muscles of breathing

To do and notice:

Read the text and watch lesson 10 in the Advanced Myofascial videotape. Write half a page on an experience that you have had with a client who released emotions during a session. If you have not experienced this, explore why this may be. Evaluate and release at least 1 client's ribcage.

Text:

One of the first kinesthetic evaluations that we will do with our client is to evaluate rib cage mobility, is the client getting enough breath? In order to make a postural shift in the torso the ribcage will have to be adaptive. Some authors also believe that a fully functional breathing apparatus is necessary before any long term structural change can take place- that the lack of a full breath actually stifles the organism- restricting change. From this perspective, shallow breathing will help to maintain the current dysfunctional patterns, and full breathing will support postural shifts.

This also relates to the emotional shifts that happen during myofascial release. Our posture is a reflection of our unconscious attitude towards life- shifting how we stand in our bodies will shift our emotional stance as well.

Having an open ribcage/breath capacity will allow these emotional changes to take place. Without both the physical shifts and emotional shifts, structural changes will not hold. It is because this connection between our minds and bodies that we recommend counseling in conjunction with the physical work. Often times, however, this approach is not necessary, because the body's own wisdom takes over during the session- clients may release grief or sadness while receiving myofascial release. This emotional unwinding is good and a necessary part of the release process. Here are some guidelines for dealing with emotional releases during a session.

Handling emotional release during the session

How do you know that an emotional release is occurring? The signs can be obvious, such as crying; or subtle, such as a change in breathing pattern. (Often there may be no overt signs of an emotional release, but the practitioner might begin feeling emotional. It is important for the practitioner to be able to discern what emotions are authentic to his or her self, and what emotions are coming from the client.) If nothing overt is going on, it can be enough just to continue with the massage and allow the client to experience their feelings without any extra interaction from you. If their feelings are intense, then there is a need for greater interaction on the part of the practitioner.

The first step is to acknowledge that something is going on. The client might be feeling embarrassed for crying. By acknowledging that the client is feeling something, the practitioner stays in alignment with the truth, instead of pretending that everything is OK. Suppressed emotions are often suppressed simply because the client is trying to pretend that everything is OK. By recognizing their pain, they begin the healing process.

The second step is to ask your client what they would prefer you do. Letting the client be the guide is the safest and most responsible way to work. When we notice a client visibly crying, we should ask them, "Would you like me to continue massaging, or would you rather I just stop and hold?" Our intention is to allow the client to reach the natural conclusion of the release. Sometimes clients prefer that we continue massaging. When we continue massaging it takes the focus away from the emotions, and can help certain clients feel comfortable amidst their emotions. Sometimes clients would rather that we stop and hold two areas. This lack of movement allows them to deepen into their feelings without any distractions. Unless we are trained counselors; we should not try to counsel our clients.

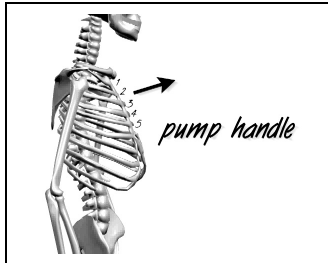
There is no way to know what each client needs. We can use our intuition, but when we verbally communicate and give the client a choice, we place the responsibility and power in the hands of the client.

The third step in handling a client's emotional release is to sense when the client needs encouragement. This requires sensitivity. It is a skill to know when to say, "let it out, it's ok" or "good." Sometimes gentle words spaced at the appropriate time can help someone deepen into their release. Other times it can distract them from their

feelings. Use words sparingly and with awareness with what the person seems to need. If they are trying to suppress their feelings because they are embarrassed, some encouragement might be helpful. If their release seems unrestrained, then few or no words might be best.

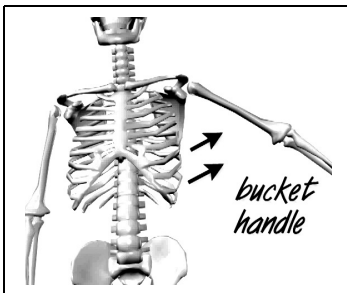
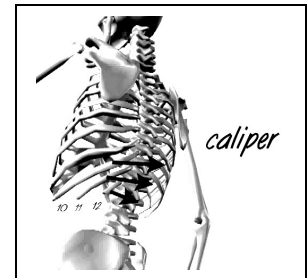
Generally a positive emotional release should end up freeing or releasing held emotion. Hopefully this is the kind of emotional release we usually encounter with our clients. Sometimes, however, there is a need for containment of emotions. This occurs when the client seems to bring up the same trauma again and again in each session, without any sense of movement. The releases tend to be dramatic, and yet at their core are hollow, and can cause the therapist to feel tired after the session. In these cases the person is not releasing and clearing emotion, but recycling traumas that they are not willing to let go of. They may be stuck in the past. They may need professional counseling. Our job as massage therapists in these cases is to contain the emotions of our clients by bringing them back to the present moment. Ask them to focus on your hands as you massage to help them be more present.

Look for these issues in your client's emotional releases. Deep emotional release that is clear will leave the client and perhaps the therapist peaceful and with an open heart. If the release is less intense, usually client and therapist will feel energized and clear after the session. When emotional release is not clear, and just a recycling, the therapist might feel fatigued after the session.



Evaluation

There are 3 main motions of the rib cage during breathing. In Pump handle motion, (mainly ribs 1-5), during the inhale the front part of the rib cage moves anterior. With the bucket handle motion the sides of the rib cage raise and move outward. During caliper motion the 10th, 11th and 12th ribs rotate posterior. For simplicity's sake, we'll evaluate for pump handle and bucket handle motions only.



Breath Evaluation

To evaluate for breathing, have your client sit on the side of the table. If they lay down they will tend to go into belly breath, and we want to get good sense of their normal breathing pattern. Place one hand on the upper back, the other hand on their chest. Quiet down, feel and watch the motion of the forward hand.

Next stand or sit behind your client, place both hands on the outside of the ribcage. Follow the breath and notice the amount of movement. If movement in one plane, or on one side is restricted, the techniques that follow will help. We'll perform one more evaluation. For this last one, have your client lay supine on the table. Test the lower rib cage flexibility by standing to one side and gently compressing the side of the ribcage with your palm. Test the other side and compare.

Rebound technique

Now that we evaluated for the movement happening in the rib cage, we'll perform 2 types of releases. The first is called the rebound technique. This technique involves compressing the structures, and then releasing suddenly. This floods the area with fresh blood, and helps to loosen the elastic component of the fascia surrounding the rib cage. We'll start with the pump handle motion. Stand at the head of the table, apply compression with your palms over the chondral/costal joints. Apply steady, deep pressure. Each time the client exhales, follow the ribcage down, and when they begin to inhale, keep the same compression- do not let the ribcage expand. After 2 inhales, tell your client you are going to release suddenly, then at the beginning of the third inhale, release suddenly. Your client will receive a rush of air into the lungs. Repeat up to 3 times in this spot. A common mistake with this technique is to apply a little more pressure before you release- to bounce down and then release. The danger here is that the extra sudden pressure may break the ribs. Be careful of the amount of pressure you place on the ribs, especially in older people whose bones are less flexible. This is one of the only techniques that can affect the transversus thoracis muscle. This muscle is on the underside/ or posterior of the sternum, and connects the sternum to the costal cartilage and ribs.



Now perform the rebound technique for the bucket handle motion of the sides of the ribs. We'll release both sides at the same time. Move to the side of the table, place your palms over the lateral ribcage, and compress medial and inferior. The pressure inferior is very important, because we are following the natural motion of the ribs. Follow the breath in until the third inhale- warn your client and then suddenly release. Be careful not to bounce in as you

release. Repeat one to three times and perform the same technique on the other side. This technique is also good for energizing the diaphragm, as we are gently easing the pressure, then increasing it suddenly.

When we tested for rib cage flexibility, you may have found that one side was tighter than the other. In this case, just perform the rebound technique of that side of the rib cage 3-5 times. Those are the rebound techniques for the various motions of the ribcage. These techniques are energizing and invigorating. You may choose to do them after the more gentle myofascial releases, or before.

Myofascial stretches

Now perform the myofascial stretches to the ribcage. First, perform the releases for the pump handle motion. Stand at the side of the table, facing the head. Place your palm on the sternum. Your other hand crosses just above the navel, and acts as the anchoring hand. Sink your upper hand into the tissue then gently push superior. Wait here for 2-5 minutes, gently following the tissue as it unwinds. This will release any fascia around and inferior to the sternum that is restricting this motion.

The release for the bucket handle motion is performed sitting at the side of the table, client's hand on their chest. Face their head. Apply gentle palm pressure into the side of the rib cage, sink into the tissues, following the breath. Your other hand is placed just above the iliac crest, and acts as the anchor. Close your eyes. When you are ready apply a gentle stretch superior with the upper hand for at least 2 minutes. Follow the tissue through each barrier until a full release is felt. Repeat on the other side of the body.

The diaphragm

All-important, the diaphragm provides the bottom of the rib cages' flexible pump, and is the main muscle of inspiration. Freeing and fulling the motion of the diaphragm will go a long way to proper respiratory function. Amazing no matter how hard you breath, the diaphragm only depresses half an inch. This is a small movement considering the great force our breath can have. Because of the small movement involved, gentle myofascial release can definitely affect the function of this muscle. The respiratory diaphragm is one of 3 transverse diaphragms that we will work with. The thoracic outlet/inlet, and the pelvic floor are the other two. These structures all have a common trait in that they all travel horizontally, and separate one area of the body from another. Freeing these transverse diaphragms is important to normalizing proper body function.

To release the respiratory diaphragm, sit at the side of the table, place on hand under the spine at the level of T12/L1. The other hand rests on top on the angle of the ribs. Let your hands sink into the tissue, following the breath. Then apply gentle compressive pressure and follow the tissue for 2 minutes or more while it releases. Your upper hand may want to rotate one direction or the other, or may want to move away or toward you. Follow the tissue and let you have move with it. This gentle pressure on the ribs and the pressure on the back will place a new level of force into the diaphragm, which will begin to unwind in response. Wait for 2-5 minutes or until a release is felt.

Here are the main muscles of respiration

Inspiratory muscles	
<i>Main</i>	<i>Secondary</i>
Diaphragm, Levator costarum External intercostals Internal intercostals on the anterior rib cage	Scaleni Sternocleidomastoid Trapezius Serratus posterior inferior & post. superior Pectoralis major and minor Latissimus dorsi Thoracic erector spinae Subclaviu
Expiratory muscles	
<i>Main</i>	<i>Secondary</i>
Internal and external obliques Rectus abdominus Transversus abdominis Transversus thoracis Internal intercostals on the posterior rib	Latissimus dorsi Serratus posterior inferior Quadratus lumborum Iliocostalis lumborum

Lesson 11

Balancing the feet

Time to complete: 30 minutes

Learning outcomes:

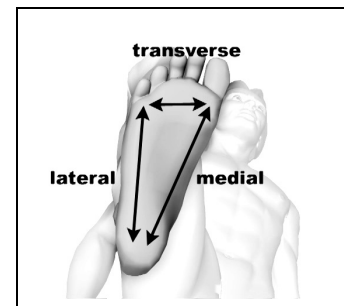
*Release the transverse arch
Balance the supinated foot
Balance the pronated foot
Address plantar fasciitis*

To do and notice:

Read the text and watch lesson 11 in the video. Look at your own feet in the mirror and notice how you stand.

Text:

The foot is made up of three arches. The medial arch, the lateral arch and the transverse arch. These arches work together to balance the foot on the earth, and these arches make it so that that you are really only contacting the earth in 3 places, heel and each side of the pad. It is on this three-pointed triangle that we walk. The medial arch is mainly for weight bearing, the lateral arch and outside of the foot is more for balancing.



Strengthening the transverse arch

Notice your client's foot. If the transverse arch has fallen, the client may have a callus in the center of their footpad. In this case we need to strengthen the fascial lines under the metatarsals. Clients can do this by gathering cloth with their toes. This will strengthen this arch. We can also help this process by making sure the fascial bands across the top of the foot have enough give to let the foot move back into balance. Position your client face-down. Bend their knee, and use the thenar-eminence of your palm on the dorsal part of the foot, while your fingers brace on the bottom of the foot. Gently spread. If the client has a fallen transverse arch, direct the pull toward the dorsal part of the foot and follow the fascia where it wants to go. Follow the tissue as it releases barrier upon barrier, for 2 to five minutes.

The Supinated foot

With a supinated foot, the bottom of the foot points slightly inward. This may result in a high arch, wear on the outside of the foot, wear on the outside of the shoe, or restriction in pronation of the foot. To help balance this posture, we'll release the muscles and fascia of the two tibialis muscles as well as the medial arch, and we may want to refer the client to someone that makes orthotics.

Position your client face up. Evaluate the fascia over the anterior compartment, noting the movement superior and inferior. Then use a cross-handed stretch to release this area. After two minutes, re-assess to see if the restriction has eased. If there is still restriction, use your elbow to glide in the opposite direction. For example, if the fascia feels restricted when you pull towards the feet, then use your forearm to glide up towards the knee.

Now retest. If there is still restriction, then use one hand to apply pressure away from the restriction. Perhaps the fascia is not releasing because it just doesn't want to go the direction you are pushing- you might try doing the techniques in the other direction. The idea is to follow the body and do what works.

With your client prone, use your thumbs to soften the tissue in the medial arch. This will get the blood moving and warm it up. Then grasp the heel with your palm, and use your other hand to grasp near the first three metatarsals. Sink in and stretch, following the fascia for at least two minutes while it releases. Watch the video to get a good sense of these techniques.

The Pronated foot

In the pronated foot, the bottom of the foot points slightly outward. This may result in a collapsed arch, wear on the inside of the clients shoes, or slightly restricted supination. To help balance this posture, we'll release the peroneal muscles and fascia as well as the lateral arch, and again we may want to refer the client to someone that makes orthotics.

Position your client in side posture. Test the lateral fascia for motion, then apply a cross-handed stretch to the peroneal fascia. Remember to sink in, then allow the fascia to guide you. Follow its motion as you apply a very gentle stretch. Retest, and then use your elbow to push the fascia where it wants to go- first try pushing the direction of ease.

Now move to the base of the table and work the lateral arch with your thumbs. Then cup your hand around the heel and grasp the lateral metatarsals with your other hand. Stretch and wait for the fascia to unwind.

Plantar fasciitis, Achilles' tendonitis, heal spurs

Plantar fasciitis and Achilles' tendonitis are two conditions that arise from tension in the posterior fascial line around the ankle. Plantar fasciitis is inflammation of the plantar fascia, and can often involve this fascia pulling away from the calcaneus. Most people with plantar fasciitis also have tight calf muscles, meaning the entire lower posterior fascial line is restricted. To effect a full recovery, we will need to release the posterior fascial line from the footpad up to the posterior knee.

Position your client so their foot is off the table, then assess the leg fascia. Next place one hand on the calf, the other on the lower leg, perform a cross handed stretch and wait for a release. Be patient and allow the fascia to unwind in it's own time. Now retest to see if the fascia has loosened. Then if it hasn't use your elbow to glide away from the barrier- in other words if the fascia didn't move up very well, you should glide down. Then retest, and if it is still tight, use the flat of your hand to push the fascia where it guides you

Now use your elbow to glide from the foot pad to the heal. This will help the fascia migrate back up against the calcaneus. When there is tension in the arch of the foot, the fascia has a tendency to migrate towards the toes. When this happens, and the periosteum around the calcaneus begins to pull forward, bone grows to fill in the space resulting in a heal spur. Getting the periosteum snug up against the heel can go a long way to preventing this.

Now use your thumbs to apply cross fiber friction just next to the calcaneus. This will help to stimulate the healing response in patients with plantar fasciitis. Patients with this condition may also need an orthotic or heal lift.

Grasp the ankle with your palm, and rotate it to help increase mobility and range of motion.



Lesson 12

Balancing the hips and back

Time to complete: 3 hours

Learning outcomes:

*Balance an internal or externally rotated femur,
Myofascial techniques for a high/low hip,
How to address an anterior or posteriorly rotated pelvis
How to perform the squish test,
How to perform a leg length measurements*

To do and notice:

Watch lesson 12 in the Advanced Myofascial video and read the text below. Practice evaluating and balancing the hips on at least 3 clients. Answer the questions on the worksheet.

Text:

Internally rotated femur

If you notice that one of the clients legs is externally rotated, stand at the side of the table, one hand reaches under the leg, the other on top, twist the leg into internal rotation and wait for a release. This is a great way to release all the appropriate fascia without having to know detailed anatomy.

Externally rotated femur

For clients with an internally rotated femur again place one hand on top and the other underneath and twist into external rotation. Hold here until a release occurs.

Squish test

In order to balance the hips, you'll have to know what side to work on. This is done by performing the seated bend test. It can also be done by performing the squish test. To perform the squish test, find the asis on each side, then stabilize one side with one hand, and use your other hand to shear the ilium posterior. Note the quality of spring. Then switch, the other hand stabilizes while the first hand shears. The side that feels hard, or has less spring is the side that is stuck.

High ilium

To balance an ilium that is stuck higher, usually called an upslip- stand at the feet and use a leg pull to pull to the level of the hip and bring the hip down. Wait for two to five minutes for the fascia to fully release. Then perform a x handed stretch to the lateral torso. The client should be in side posture, with their top leg straight, their arm is over their head. Place one hand on the ilium, the other on the rib cage and stretch.

Low ilium

If the stuck hip was low- then instead of pulling the leg- push the hip up by putting the heel against your sternum and leaning into the body. Stay here for 2-5 minutes as the fascia unwinds and the hip moves up. This technique can offer almost immediate relief to a client with an inflamed SI joint, or strained iliolumbar ligament.

If you are unsure as to what side is stuck, you can always perform both of these techniques- in other words, pull the high hip down and push the low hip up.

Anterior rotation, lordosis

If an ilium is anteriorly rotated, or the client generally has an excessive lordosis in the lumbar spine, first release the psoas area. First find the ASIS, place one hand just inferior to this landmark, the other over the belly. Sink in and stretch. Usually the client will feel a burning in the area because of the sensitive skin here, and the fact that most of us are restricted through this area. Make sure to communicate with the client and lighten up if it's too intense.

Then release the rectus femoris by placing one hand just below the ASIS, and the other just superior to the knee cap. Stretch for 2-5 minutes until a softening is felt.

Next turn the client over and evaluate the back fascia. Loosen this fascia by performing skin rolling. For SI joint pain, skin roll just lateral and inferior in the upper gluteal fascia to help free this area

Now use your fingertips to perform strumming across the erector muscles to release the tissue. For chronic low back pain, release any restriction in this area.

Now stand at the head, put your palm over the sacrum and push inferior. This is called lumbar decompression and will increase the space between L5 and S1. This is a good technique for any kind of back pain. Next we can use cross handed stretches in a variety of directions. Finally, place your hands on each side of the spine at the level of the dorsal hinge. Your hands stretch laterally while they rotate outward. In cases of lordosis we'll want to push the fascia out away from the spine, helping to coax the lumbar spine posterior. In a spine that is

excessively kyphotic in the thoracic vertebrae, we want to push the fascia towards the spine to help coax the vertebrae anterior.

If you're still having trouble balancing an anteriorly rotated hip, try this simplified Muscle Energy technique. Take the clients' hip into flexion, then internal rotation, then slight adduction. Lock it in. Then the client pushes their knee towards the ceiling for 15 seconds with only about 20 percent of their strength. After they relax, increase hip flexion, internal rotation, and adduction. Client resists again. After each resistance, don't let the leg move back, always increase the stretch. Go through this twice more. Then bring the clients leg down and check the ASIS. It should have moved up.

Posterior rotation, flat lumbar spin

Now we will move onto balancing the more uncommon flat lumbar spine or posterior rotated pelvis. First release the hamstrings by finding the ischial tuberosity. Place one hand just inferior to it, the other just above the knee. Stretch and wait for a release. Now with your client supine, perform a cross handed stretch over the rectus abdominis. Wait here for at least 2 minutes to give the fascia a chance to lengthen.

If this doesn't do it use this simplified muscle energy technique to get the ilium to rotate down. Move the client's hip to the edge of the table. Have them flex their opposite hip and hold their knee with their hands, this will stabilize the opposite ilium. Now let their leg off the table. Put your other hand on their knee. The client will push their knee towards the ceiling with 20% of their strength for 15 seconds. Then they relax for 3 seconds while you let the leg drop towards the floor. Then the client should resist again. If they experience pain during this technique due to the lumbar spine pressure, have them push their lower back into the table, or ease up with the stretch. Repeat this sequence 3 or 4 times. When you are done, lift their leg back onto the table for them so they don't strain their psoas.

Measure for an anatomically long leg

If the client is in chronic pain and is not responding to massage, they may have an anatomically long leg- meaning that one leg is actually longer than the other. To measure this, first make sure the ilium are even and the ASIS are level. Check this with the client on the table, by placing your dominant eye over the center of the body, feel the top of the ilium and compare. Then place your thumbs just below the ASIS, and push superior until you find the notch. Compare both sides. Then pull and push those ilium until they are even and use the simplified muscle energy technique procedures to get the ASIS even. You may have to go back and forth between the various techniques to get them even in all planes. Once the hips are even, find the belly button and take a tape measure to the medial malleolus. Note the length. Then take a measurement on the other side. More than an eighth of an inch means that they might have a leg length imbalance, and you should refer them to someone who can perform a more accurate measurement and get them an orthotic. Leg length difference is more common in chronic pain cases than you may think.

Lesson 13

Balancing the shoulders and arms

Time to complete: 1 hour

Learning outcomes:

Learn myofascial release techniques to address-
High shoulder position
Low shoulder position
Restricted joint capsule
Forward shoulder position
Wrist and hand pain
Tennis elbow

To do and notice:

Watch lesson 13 in the advanced myofascial release video. Find a client or fellow massage therapist, and perform the myofascial techniques shown in this lesson to their arms.

Text:

High shoulder

For a shoulder that is anatomically high on one side, perform an arm pull standing at their side and pulling the shoulder down. For tense clients who tend to have their shoulders up around their ears, perform this pull on both sides to help release tension and increase the space between the shoulders and ears.

Low shoulder

For a low shoulder, perform the arm pull above the client's head. This will release the fascia all the way down the side of the body. If the shoulder is low in conjunction with a high hip on the same side, remember to perform the release for lateral torso as part of your treatment. Don't perform arm pulls on clients with a loose joint capsule. If a client experiences pain with this position, move their arm to the side and use other techniques to release the area. This may include working below the shoulder into the rib cage and torso to release restricted fascia.

Restricted joint capsule

For clients with a restricted joint capsule, perform the arm pull technique out to the side of the body. Indications of a restricted joint capsule are limited external rotation, since usually the anterior part of the capsule thickens and becomes fibrotic. This release will help to unwind the fascia and increase range of motion. If the client experiences pain with this technique, you may want to perform other techniques that effect the joint capsule. These may include direct pressure, frictioning, or rhythmic stretching.

Forward shoulder

For clients with a forward shoulder position, first make sure that the solar plexus area is released- a hunching posture often accompanies a forward shoulder and head. One hand rest on the upper chest, the other an inch below the xyphoid process. Stretch for 2-4 minutes and allow the anterior line to lengthen.

Now move onto releasing the shoulders directly by externally rotating your client's arms, then place one hand on each shoulder. Sink in and start to stretch laterally. This will release the fascia on the anterior chest, and help to get the shoulders back. As you do this, the client's arms may roll out to the side even more, let this happen, as it will help to release the shoulders even more.

To intensify the stretch over the pectoralis major sit at the side of the table, bring the client's arm out to their side, palm up. Place your other hand over the deltoid and pectoral muscles. As you gently pull the arm towards the floor, your top hand pushes towards the sternum. Wait here for at least 2 minutes and follow the fascia as it unwinds.

To further help the shoulder back, stand behind your client positioned on their side. Place the edge of your index finger next to the scapula. Your client will raise and lower their arm as your push posteriorly, helping to separate the serratus anterior and the subscapularis. When the client raises their arm, they should slightly internally rotate it. Tell them to point their elbow toward the ceiling. Your fingers will try to slide deeper and deeper between the body and the scapula. Be careful not to push superior into the armpit because of the sensitive vessels there. Your main force is pushing posterior.

After the session, have your client sit on the edge of the table. Place your fingers just below the armpit. Then together with your client, push your fingers posterior while your client pulls their scapula together. Work this a few times to help activate the posterior muscles while lengthening the anterior fascia.

The client can passively stretch the anterior fascia by performing the doorway stretch. The client should stretch gently for at least 2 minutes in each position. A client with forward shoulder position should perform this stretch daily to help correct their posture.

Wrist and hand pain

Wrist and hand pain may be caused by tight fascia in the forearms. To soften this tissue, position your clients palm face up. Cross your hands over the forearm and stretch. Tension here can contribute to carpal tunnel syndrome by stressing the tendons, causing them to swell. If you are in a hand intensive occupation, you should have this work done regularly to keep your forearms soft and liquid.

Now turn the palm over and perform the same technique on the other side. It is important to release both sides as these muscles oppose each other. If you only release one side, it will quickly tighten up to counter balance its opposing neighbor.

Tennis elbow

For clients with tennis elbow, move the fascia towards the attachment point of the extensor carpi radialis longus and brevis. Place one hand below the elbow, the other above and push towards the joint. This will help to relieve any pressure on the fascia. After this, perform the appropriate neuromuscular, deep tissue, or sports massage techniques to help the area.

Lesson 14

Balancing the neck and torso

Time to complete: 1 hour

Learning outcomes:

*The vertebral artery test
Myofascial release techniques for
Forward head posture
Anterior neck fascia
Infrahyoid and suprahyoid fascia
Occipital base*

To do and notice

Watch lesson 14 in the Advanced Myofascial video. Perform the techniques on a client or friend.

Text:

Vertebral artery test

Before performing any exaggerated movements on the neck, on older clients it is important to perform some sort of a vertebral artery test to make sure the vertebral artery isn't impinged during extension. If it is, it can have serious consequences for the client, and you should perform no massage to the neck.

One way to test for vertebral artery impingement is to have your client move so that their shoulders are near the edge of the table. Then extend their head back while watching the pupils and note if they dilate. Then ask your client a simple question or two. If their pupils did not dilate and they could answer your questions easily, blood flow to the brain is probably adequate. If you are going to perform deep myofascial releases with the neck in extension and rotation, then perform this test with add a bit of rotation as well.

Anterior neck release

Now that we know that our clients are safe, we'll perform one of the most effective myofascial releases for the anterior neck. Use this technique to help balance a forward head posture. Client is positioned with their head off the table, as in the test. Cup the occiput with one hand and let the neck move into hyper extension. Pull the occiput towards yourself to keep the occiput and C1 from being hyper extended and taking too much force. The extension should be in the lower neck. Now put one hand on the sternum and apply a gently stretch towards the feet. This will release the anterior fascial line. To release each side of the neck, rotate the neck to one side, and place the upper hand on the opposite shoulder. If the neck moves to the side of the centerline as viewed from ahead, releasing the side of the neck will help it straighten out. If your client experiences pain or discomfort, reduce the amount of extension, by bringing the head toward the ceiling.



An optional, less intense way to release the anterior line in this region is to perform the same technique on the table. Cup one hand under the occiput, the other rests on the sternum. The hand on the sternum stretches towards the feet while the hand under the occiput pulls the head towards the therapist. Follow the tissue as it unwinds.

Hyoid fascia

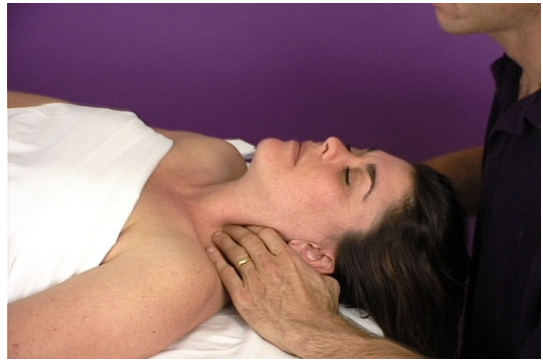
To release the infrahyoid fascia, place your fingers lightly on both sides of the trachea just inferior to the hyoid bone, with your other hand over the clavicles. Stretch for 2-4 minutes. This is excellent for forward head position, and for whiplash patients.

To release the suprahyoid fascia, hook your fingers under the chin, place your other fingers just inferior to the hyoid bone. Stretch. This is a useful technique as part of a TMJ routine.

Anterior neck muscles

For whiplash sufferers and forward head position, place your fingers just posterior to the SCM, right on the cervical transverse processes. Fingertips down. Don't push on the SCM, or you'll press on the carotid artery and other important vessels. Be aware that you are close to these vessels as you do this technique- and if you feel a strong pulse, or soft, mushy tissue, you are pushing on the wrong tissue. You should be feeling the cervical transverse processes.

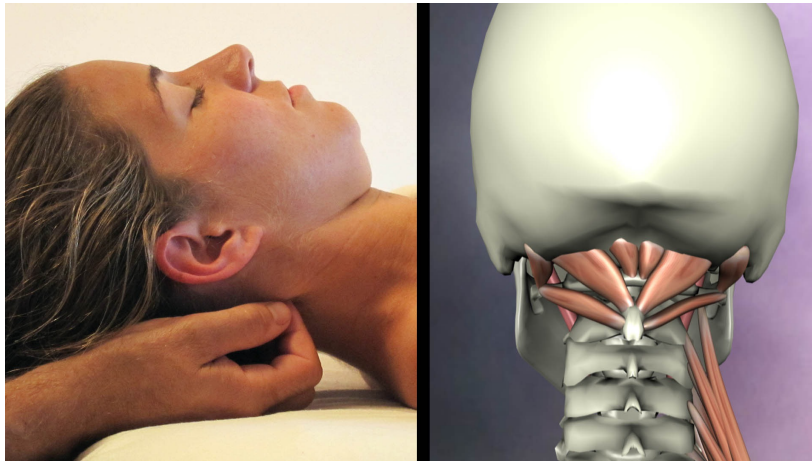
As you push inward and posterior, have your client push the back of their neck into the table. This will activate the longus colli and capitis muscles, helping to lengthen the posterior neck and strengthen the anterior neck while bringing awareness into the anterior neck. Repeat the contraction 3-5 times.



Occipital base release

As well as having tension in the anterior neck, people with a forward head position will also have tension in the suboccipital region- due to the fact that the atlanto-occipital joint is in a chronic state of extension. To perform the suboccipital base release, place your fingertips half an inch inferior to the occipital ridge. Fingers should be straight- it helps if your thumb braces from the side. Let the head rock back onto your palms as your fingers gently melt into the sub-occipital space. Wait here until all the tension in this area has released. Next keep good contact on the sub-occipital area, let your fingers bend, and apply gentle traction to the occiput. Wait here for at least 2 minutes. This is a great technique for just about anybody with neck tension. Releasing this area will often cause the other neck and back muscles to soften and relax. Perform this technique before applying deeper massage techniques to the neck and back.

The client with a forward head position should perform chin tucks each day to assist in bringing the head into a more balanced position.



Lesson 15

Balancing the head

Time to complete: 30 minutes

Learning outcomes:

Evaluate the TMJ

Release the masseter, temporalis and medial pterigoid.

The ear pull and hair pulling techniques

To do and notice:

Watch lesson 15 in the Advanced Myofascial Release video.

Text:

Evaluation

To release the temporal mandibular joint, first evaluate for motion on both sides. The client opens their mouth with your hand just anterior to the external meatus. You should feel the head of the mandible move laterally and anterior. Compare both sides, they should both move together. The side that moves second is the side that is more stuck.

Release the muscles

To release the masseter, apply fingertip pressure over the masseter in an anterior direction for 2-5 minutes. Wait for a softening to occur. To release the temporalis attachment to the coronoid process, client opens their mouth while you use your fingertips to friction laterally just under the zygomatic arch. To release the muscle belly, fingertips pull the temples superior while the client opens and closes their mouth. This will stretch the muscle belly.

The only place that we can contact the medial pterigoid muscle is where it attaches to the inside of the angle of the mandible. Hook your fingers around, pressing laterally, then friction anterior to posterior. Next release the fascia surrounding the TMJ and ear by performing an ear pull. Use your thumb to grasp the inner portion of the ear. Pull laterally and posterior. Follow the tissue as it unwinds, changing the direction as your intuition guides you.

Retest for the motion of the TMJ.

Hair pulling technique

For headache sufferers and people with tension in the upper quadrant, release the scalp fascia. First, use your fingertips to apply pressure in tiny circles in a line across the scalp. Have your client tell you when you find the point of maximum tenderness. When you find that spot, apply gentle, slow circles over the area and let the fascia unwind. After it has softened, grasp the hair close to the roots with your fingers. Clench your fist and gently pull the scalp away from the cranium. This hair pulling technique is a wonderful way to release the scalp. There are many causes of headaches, one of which is tight cranial fascia. Releasing this fascia can go a long way to helping restore proper movement in the cranial sutures, and is a valuable asset in addition to any cranial sacral therapy you might practice. Now release and retest for areas of tenderness. All the sore spots should be gone.

Thank you! We hope you enjoyed the course.

This completes the Myofascial Release course.