

Dāo NEEDLE[®]
THERAPY

Restoring Function - Stopping Pain

Foundation Course



Dao Needle Therapy Foundations Course teaches you the core foundation, principles, techniques and protocols of Dao Needle Therapy. The purpose of this course is to build confidence in treating specific musculoskeletal conditions via interactive lectures, hands-on practice and live demonstrations.

In this course, you will learn how to use a completely new technique and needle to more effectively treat pain and scar tissue. You will see and learn a variety of treatments, protocols and needling techniques that can immediately be implemented.

This course bridges the gap between an east/west paradigm on the anatomy of an Ashi point/Trigger point and dives deep into understanding how Ashi points can be used as a diagnostic guide and therapeutic meter. You will be taught proper palpation skills to more accurately identify active versus passive Ashi points and why it is critical for proper diagnosis. Additionally, you will be taught differentiation techniques to determine dysfunction versus compensation while developing your understanding of the mechanisms of pain as it relates to Qi and blood stagnation and how needling can influence and change this process.

- Learn how to use a completely new technique and needle
- Know the difference between dry needling versus Dao Needle therapy
- Gain a deeper understanding of the anatomy of an Ashi point
- Discover how an Ashi point can be used as a guide and therapeutic meter
- Be able to identify dysfunction versus compensation
- See a variety of treatments, protocols and needling techniques



Course Outline

Saturday

- 9:00-9:30 a.m. Intro and Course Overview of the Dǎo Needle
- 9:30-10:30 a.m. Indications Contraindications and Safety
- 10:30-11:00 a.m. Anatomy of the Dao Needle, Conditions and Individuals Amenable to Dao Needle Therapy
- 11:00-11:30 a.m. Understanding the Mechanisms of Pain
- 11:30-12:00 a.m. Physiology and Science of Needling
- 12:00-1:00 p.m. Lunch
- 1:00-2:00p.m. Mapping and Grading Ashi Points
- 2:00-3:00 p.m. Needling Techniques and Practice (Pads)
- 3:00-4:00 p.m. Palpation Diagnosis and Differentiation
- 4:00-5:00 p.m. Needling Demonstration and Practical
- 5:00-6:00 p.m. Palpation & Needling (Student Practice)

Sunday

- 9:00-10:00 a.m. Overview of day 1 and Q&A
- 10:00-11:00 a.m. Patient Positioning/Mapping
- 11:00-12:00 a.m. Treatment Demonstration (Patients)
- 12:00-1:00 p.m. Lunch
- 1:00-3:00 p.m. Treatment Demonstrations (Patients)
- 3:00-4:00 p.m. Treatment Practical (Students)
- 4:00-5:00 p.m. Q&A, Student Porthole, Evaluations



DAO NEEDLE THERAPY VS. DRY NEEDLE THERAPY

DAO NEEDLE THERAPY	DRY NEEDLE THERAPY
Special filiform needle with beveled, chiseled edge	Common filiform acupuncture needle
Needle insertion is a rapid in-and-out	Needle insertion slower with heavy stimulation
Trigger/Ashi points are mapped and graded	Trigger points are based on targeted muscle
Targets trigger/Ashi points, muscle, fascia and scar tissue. (contractile and inert tissue)	Targets trigger point and muscle (contractile tissue)
Goal is to break muscle energy crisis, adhesions and restrictions; normalize cellular threshold and change muscle length/tension relationship.	Goal is to obtain a muscle twitch response to change muscle-lengthened tension.
Tissue response is immediate and measurable to clinician and patient	Tissue response can be immediate and measurable to clinician
MSK goal is to create global change in the kinetic chain	MSK goal is to create localized change
Pain sensations: none to occasional slight burning that is relieved quickly with brisk rubbing	Pain sensations: electric shock with a deep ache that is slower to reside
TX Condition is good for acute pain and excels at treating chronic pain	TX Condition is good for acute pain and diminishes effects of chronic pain



What Is Pain?

Pain is the most powerful protective device we have. Simply, if there is no pain, it means that changes in tissues are not perceived by your brain as a threat.

Throughout your entire nervous system, there are millions of sensors. They are constantly surveying the area for activity. These sensors sit on walls and at the ends of neurons, and they give neurons the ability to convey information.

There are specialized sensors that respond to:

- Mechanical forces
- Temperature changes
- Chemical changes (from within or outside the body).

Pressure sensors reacting to a chemical such as acid or pressure open so that positively charged particles from outside the neuron rush into the neuron. This sets up an electrical impulse to the neuron. If enough sensors are open, positive ions flow into the neuron and send a danger message to the spinal cord.

- A mechanical sensor can be opened or shut by particular chemicals.
- The life of a sensor is short—they only live for a few days and then are replaced by fresh sensors. This means that your sensitivity is continually changing.
- Sensors are made inside your neurons under the direction of the DNA.
- Sensor production can change based on the body's needs.
- Activity of this type in these nerves is called “nociception,” which means “danger reception.”
- The brain receives the danger reception signal but does not see it as pain until it has been analyzed.
- The brain can also make positively charged particles leave the neuron, which makes it less excited, which in turn makes it less likely to send a message.

NO matter what tissues you have injured, a similar healing process occurs. Healing of the gut or skin follows the same processes as the healing of the muscles and joints. Tissues become inflamed, which brings the body's immune cells and rebuilding cells to the area. A scar is formed, then the tissue is remodeled to make it as good a match to the original as possible. The two things that determine the speed of healing are blood

supply and tissue requirements. Tissues with poorer blood supply take longer to heal than those with better blood supply. Once the healing time has passed, they do not get another chance. (Or do they?)

- When an injury occurs, all kinds of specialized cells are sent to the area for repair; this is called “inflammatory soup.”
- Neurons backfire. Especially if they are injured. Injured neurons can actually cause inflammation in the peripheral tissues.
- If backfiring persists, sustained inflammation may result; therefore, the problem can worsen, because sustained inflammation makes for poor tissue health.
- Most peripheral nerve problems occur when neurons are just doing the wrong thing and, in many cases, they are responding to signals from your brain that tell them to increase sensitivity. Better warnings are required.
- When alarm impulses keep arriving at the dorsal horn, or when neurons from the brain release excitatory chemicals, the spinal danger messenger neuron in the spinal cord adapts to meet demand.
- This adaptation begins within seconds and increases pain signals; this causes hyperalgesia and allodynia. Things that hurt then hurt more things that did not hurt.
- Persistent long-term alarm signals in the brain can alter the brain, causing it to manufacture more sensors in the pain ignition nodes, more chemicals in the body to activate sensors, and smudging.
- Smudging causes compensation in body movements and sensitization of other body parts.
- Sensitization of the brain and spinal cord is called central sensitization.
- Thought viruses are real.



Physiology of an Ashi Point

In a normal homeostatic environment, sensory neurons respond to specific stimuli and relay sensory signals to the central nervous system. This electrical signal is called an action potential. After the action potential reaches the central nervous system, it will trigger an appropriate physiological response in the body. In order to create an action potential, the intracellular chemical environment of a neuron must change and allow the cell to reach physiological state called threshold. Establishing a threshold state will ensure that an action potential will be generated and will stimulate the central nervous system. The intracellular environment is changed by movement of ions across the neuron cell membrane. In a healthy tissue, the chemical concentration inside and outside of the cell is maintained through homeostasis which establishes appropriate sensitivity of the cell. In the presence of an acute or chronic stress, the chemical environment of the cell will change and affect the neuron's sensitivity to a stimulus.

When muscle tissue is disturbed by a mechanical stress, the fibers often develop a state of sustained contraction. If this state of contraction persists, the blood supply to the tissue will become restricted depriving the cells of oxygen and nutrients. Without the appropriate nutrient and chemical factors to maintain a proper homeostatic environment, the neurons reach a state hypersensitivity. While in a hypersensitive state, the neuron can more readily reach a state of threshold (lower mechanical threshold). Pain stimuli that would normally be too weak to be perceived by the central nervous system, will now trigger action potentials that will create conscious pain signals in the body. This area of hypersensitivity in the tissue termed an ashi point.

As the ashi point becomes more chronic, the sensitivity of the area will increase, and the specificity of the pain will decrease. Introducing lesions into the sensitized tissue through the use of a filiform needle will reduce restrictions and facilitate more blood flow into the area. In response to the increased blood flow, the tissue will be able to begin the process of normalizing the chemical environment. The presence of the lesion will also lead to the synthesis of growth factors, vasoactive substances, and enzymes that will facilitate tissue repair and reduced inflammation. As the chemical environment reaches a state of homeostasis, the sensitivity of the tissue will begin to normalize and the frequency of pain signals to the central nervous system will reduce.



Physiology and Science of Needling

Three dynamic phases of acupuncture points:

- Latent
- Passive
- Active

Latent—Points are not tender or sensitive and represent normal issues; they have a higher mechanical threshold.

Passive—Points are more tender, have a lower mechanical threshold, and start to fire impulses to the brain and spinal cord under normal pressure.

Active—Points have the lowest mechanical threshold and may continuously fire impulses to the brain even without the application of external mechanical pressure. Finally, they may sensitize the neurons in the brain and spinal cord.

As the phases of transformation from latent to passive and passive to active persist, the mechanical threshold decreases. As the threshold decreases, the physical size of a sensitized acupoint increases.

Physical properties of acupuncture refer to the physical representation points and include three parameters:

- Sensitivity
- Specificity
- Sequence

Sensitivity—The level of sensitivity is a direct correlation and proportion to how severe or chronic the patient's condition is; therefore, the patient will need more treatment.

Specificity—Refers to the size and precise location of a point. Higher specificity means the point is harder to find and most likely in its latent phase. Lower specificity means the surface of the acupuncture point is larger, more sensitive, and easier to find. The lower the specificity, the later the phase the point is in.

Sequence—Acupoints appear in the human body according to two models: systemic or symptomatic. Systemic points, also called homeostatic points, are predictable, symmetrical, and will begin to appear all over when chronic problems begin to

develop. Local tender points from an acute injury are called symptomatic points and reflect the nature of the acute injury or disease.

There is an abnormal energy metabolism actively involved in the formation of passive and active acupoints related to soft tissue metabolism. This imbalance creates and continues the muscle energy crisis.

ACTION POTENTIAL FROM MOTOR NEURON = MUSCLE FIBER=RELEASE OF CALCIUM INTO CYTOPLASM FROM SARCOPLASMIC RETICULUM=TRIGGER CELLULAR CONTRACTILE.

Acupuncture needling creates a tiny lesion and bleeding in the contractile muscle and surrounding tissue. As a result, tight contracted muscles begin to relax and blood circulation improves. Acupuncture needling breaks the vicious energy crisis cycle in sensitized points.

When a needle is inserted, a small lesion is created at the needling site. At this site a cutaneous micro-current circuit is built that stimulates tissue growth.

Needling stimulates the neurovascular immune function of the skin and the four following skin tissues:

1. Afferent somatic neuron fibers and sympathetic neuron fibers for controlling sweat glands and fine blood vessels.
2. Fine arterial and venous blood vessels for nutrition supply and temperature regulation.
3. Lymphatic tissue, mast cells for immune function.
4. Connective tissues for structural and functional support.

Mechanical stimulation from the needle deforms the connective collagen and elastic fibers, which transduces signals for tissue healing and gene transcriptions. When a needle is first inserted, there is an initial coupling between the metal needle shaft and the elastic collagen fibers, which is caused by both surface tension and electrical attraction between the metal needle and the connective tissue charges. The needle grasp process deforms the extracellular matrix, fibroblasts attach to the collagen fibers, and possibly capillary endothelial cells.

In response to this mechanistic deformation, cells generate cascades of cellular and molecular events, including:

- Intracellular cytoskeletal reorganization
 - Cell contraction and migration
 - Autocrine release of growth factors
 - Activation of intracellular signaling pathways
 - Activation of nuclear binding proteins that promote gene transcription
- These effects lead to the synthesis and local release of growth factors, cytokines, vasoactive substances, degradative enzymes, and structural matrix elements. Release

of these substances changes the extracellular milieu surrounding needled tissues and finally promotes local healing.

The needling and its lesion also induce a local anti-inflammatory reaction against the intrusive lesion. Endogenous muscle contracture creates an energy crisis in shortened muscles, which can be relaxed in corresponding ashi points to restore muscle physiology.

Mechanisms from both segmental and non-segmental points enhance one another to activate descending control systems, which includes the secretion of chemicals and hormones into the blood and cerebrospinal fluid to restore homeostasis and neural modulation of pain relief.

The central effects of acupuncture stimulation activate the four front lines of homeostasis:

1. The nervous system
2. The immune system
3. The endocrine system
4. The cardiovascular system

These two definitions are worth noting:

- Qi
- Biomagnetic field

Both of these are defined as being found in every living thing in every part of our bodies but measured separately from other biological processes. Kind of amazing when you think about it: 4000-ish years ago people discovered Qi without any scientific equipment or fancy gadgets and now science has discovered, and can measure the biomagnetic field of you and the earth.



Mapping and Marking Ashi Points

Ashi points are not one dimensional points that tell us that there is a problem in a local area. Ashi points are three dimensional points that are rich with information. These points can lead us to the root of the mechanical dysfunction and differentiate the lines of compensation. Ashi points speak to us in different tones that we need to learn how to understand, and learn how to treat. Understanding their language can give us not only an objective tool and guide, but also a therapeutic meter to response to treatment. We will begin by assigning the patient to the most appropriate position to access the tissue before we begin to needle and after we have tested and identified primary fascial line. It is important to note that we want to bring the tissue to us and not have to dive deep into the tissue. It is very important that we choose a position that allows us the best access. Sometimes we might have to use a variety of positions to treat effectively. Once we are ready for the needling portion of our treatment we clean the entire area that we will be palpating then glove up. Before we begin palpating the tissue we are going to be giving our patient very specific directions in order to have clear communication and an understanding of the information the ashi points are giving us. When pushing into the tissue the patient will be telling you "O" for a mild to moderate tender points "X" for a severe tender points or points that referred to another part of the body, if a point has a referral it will be marked with an "X" and then circled. If there is no tenderness the patient should be instructed to remain silent, this will help the flow of your treatment. Essentially we are to identify latent, passive, and active points. Latent points = silence= no mark, Passive points = "O's" marked with a dot, Active points = "X's" marked by x or x with a circle around it. Marking areas of hyper tone tissue with straight lines, and scar tissue with squiggly lines will be done post initial needling. These points become as beacons telling us which tissue has more disfunction and the path on which it traveled, enter the fascial lines that will be discussed later in this work book. When identifying O's and X's we want to follow the path of X's. The O's still tell us there is a problem in the tissue because they are passive points on the way to active points but the X's have a greater problem and have been there longer relative to the O's therefore they are active points. By treating an active point, the X's, you are also preventing the development of passive points or the O's, while restoring function to the fascial line. While palpating, mapping and needling the patient you might have to change direction or even move the patients body around a bit in order to find the right line of ashi points. Always remember to bring the tissue to you and always needle the point in the position in which you palpated in. When

palpating always use the same finger and same pressure when initially palpating and on your recheck. It is very important that when you apply the pressure with your palpating finger that you do not wiggle your finger back and forth and press and hold for no longer than 3 seconds. Holding pressure and wiggling around will create a false tenderness which can be misleading and disruptive to the treatment progress. If you are going to map bilaterally, map one side of the patients body first then do the initial needling and recheck. After the recheck clean the area just needled and move to the next position and area to map. We want to avoid any confusion possible. Additionally this keeps the process clean, helps manage a good sterile field, and allows the client a break. Once you are ready for the initial needling instruct the patient to tell you if they need a break or that they can stop any time they want, it is imperative to empower the patient and give them full control. It is also very important to find the pace and tempo in which the patient feels comfortable, some people need to pause after three points are needled, and some are fine to move through a whole body area with out pause. Find and work with the things that give your patient the most comfort at all times the results are worth the mild discomfort that might occur for some patients. When needling areas that are more hyper tone you will hear a crisper sound from the tissue when needled, sometimes this, as well as a disruption in a vascular bed can cause a burning zingy effect. If this sensation occurs rub the area quickly and briskly for a couple of seconds and this will eliminate the effect. I always instruct my clients before we begin that this might occur and to make sure they let me know so that I can rub it quickly. After your initial needling you are ready for your recheck. You are going to instruct your client to be honest with you and tell you which points are still tender. On average 90% of points will be dramatically less tender and 10% will still be tender. Points that are still tender are the ones usually marked with an X and now feel more like an O. These points need to be needled one more time near the existing point needled but not in the exact location just slightly off set and and a slightly different angle. Only do one recheck and needle one more time. Excessive needling on the same point can create tenderness in general, and the diagnostic information can become skewed.



Mapping and Marking Ashi Points Overview

- It is imperative to always and consistently empower the patient and give them full control. Always bring the tissue to you.
- Choose a position that allows us the best access.
- Clean the entire area that we will be palpating then glove up.
- Giving your patient very specific directions in order to have clear communication.
- Patient will be telling you "O" for a mild to moderate tender point.
- Patient will be telling you "X" for a severe tender point or points that make them jump or scream inside.
- Patient will be telling you "R" for a point that refers to some where else on the body, it will be marked with an "X" with a circle around it circled.
- If there is no tenderness the patient should be instructed to remain silent.
- Mark areas of hyper tone tissue with straight lines.
- Mark scar tissue with squiggly lines.
- While palpating, mapping and needling the patient you might have to change direction or even move the patients body around a bit in order to find the right line of ashi points.
- Always needle the point in the position in which you palpated in.
- When palpating always use the same finger and same pressure when initially palpating and on your recheck.
- Do not wiggle your finger back and forth and press and hold for no longer than 3 seconds.
- Map one side of the patients body first then do the initial needling and recheck. After the recheck clean the area just needled and move to the next position and area to map.

- Its very important to find the pace and tempo in which the patient feels comfortable
- If the patient gets a zingy they should yell zinger to you. If this sensation occurs rub the area quickly and briskly for a couple of seconds
- After your initial needling you are ready for your recheck and needle the points that are still very tender
- Needled ONLY one more time near the existing point needled but not in the exact location just slightly off set and and a slightly different angle
- CONGRATULATE YOUR PATIENT ON WHAT A WONDERFUL JOB THEY DID!



The Human Body

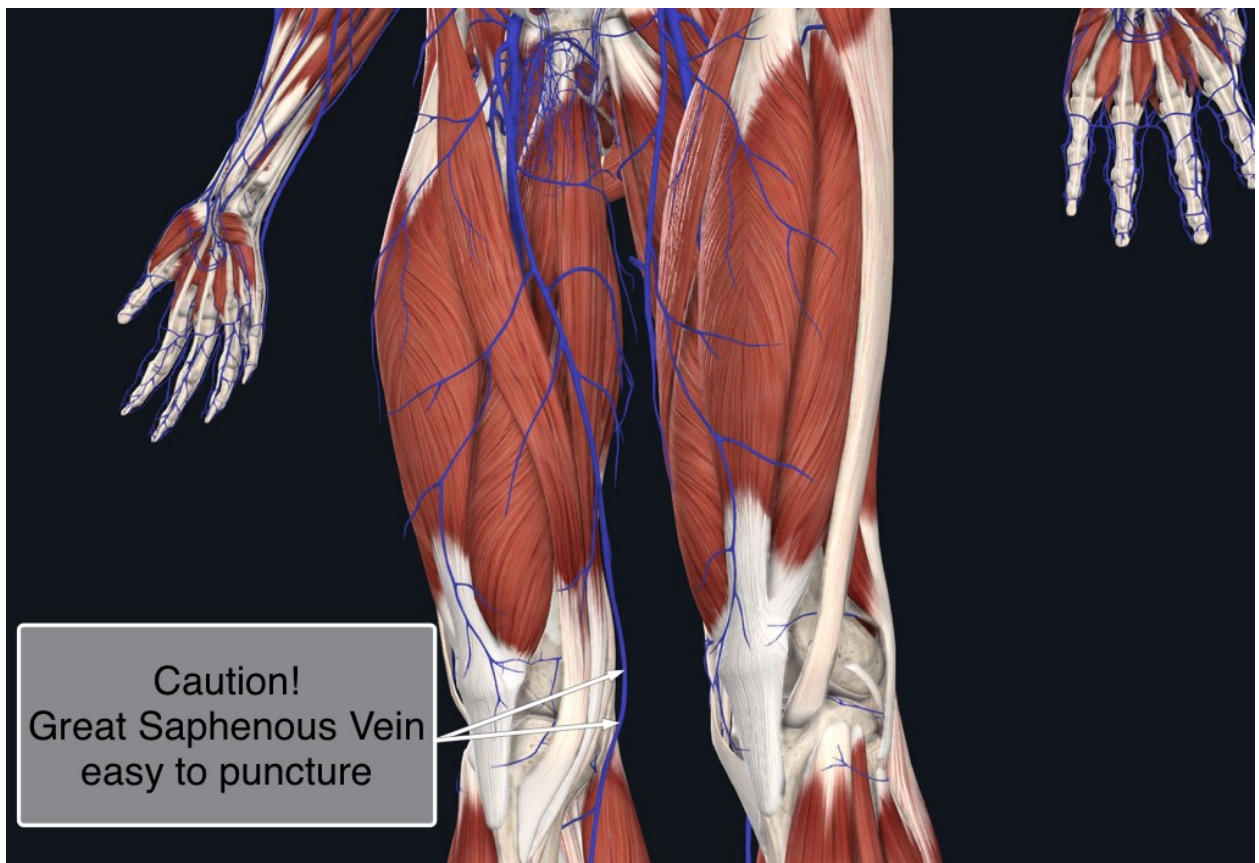
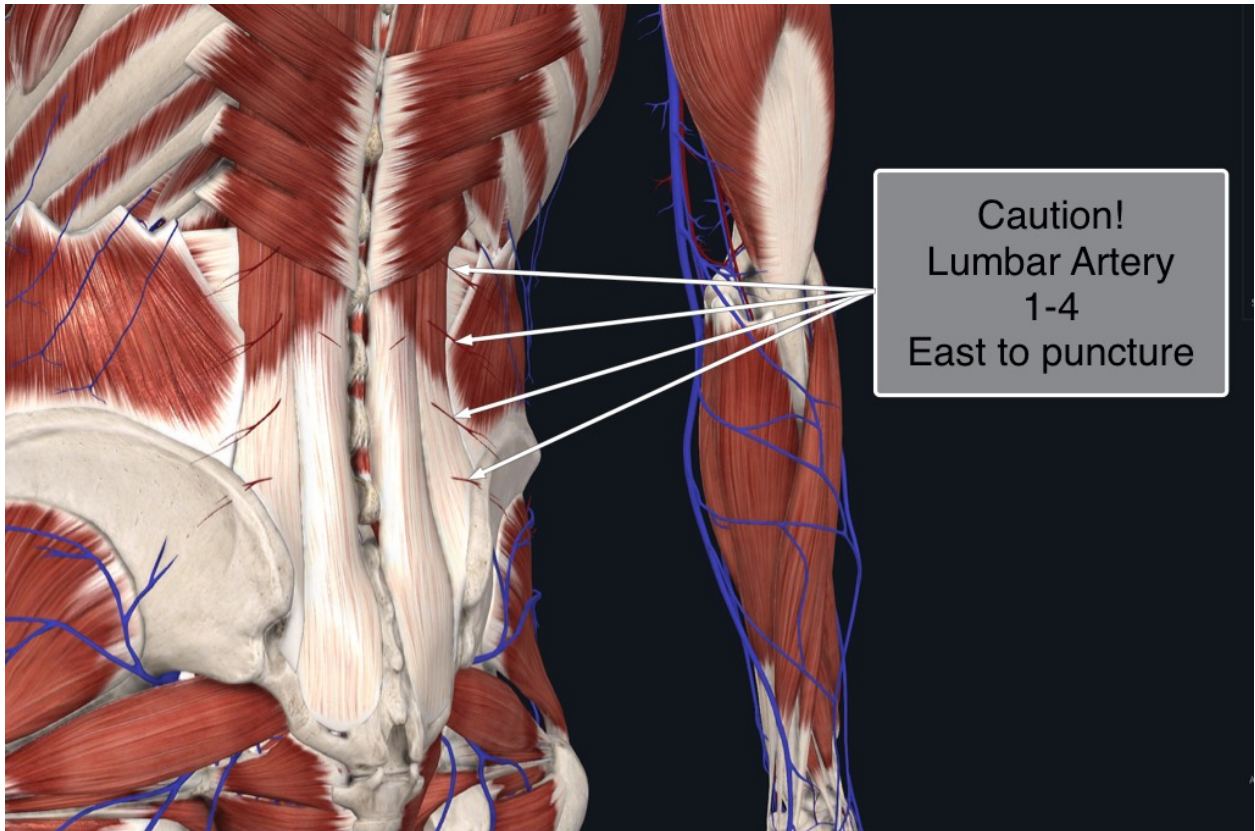
The human body is designed to develop itself through motion. Bone, muscle and connective tissue respond to stress. Stress, specifically the body's response to gravity and work, is what initiates the growth and maintenance of tissues, and whether they function properly or improperly. The amount and quality of the motion we experience as we grow is directly linked to the development of our musculoskeletal system.

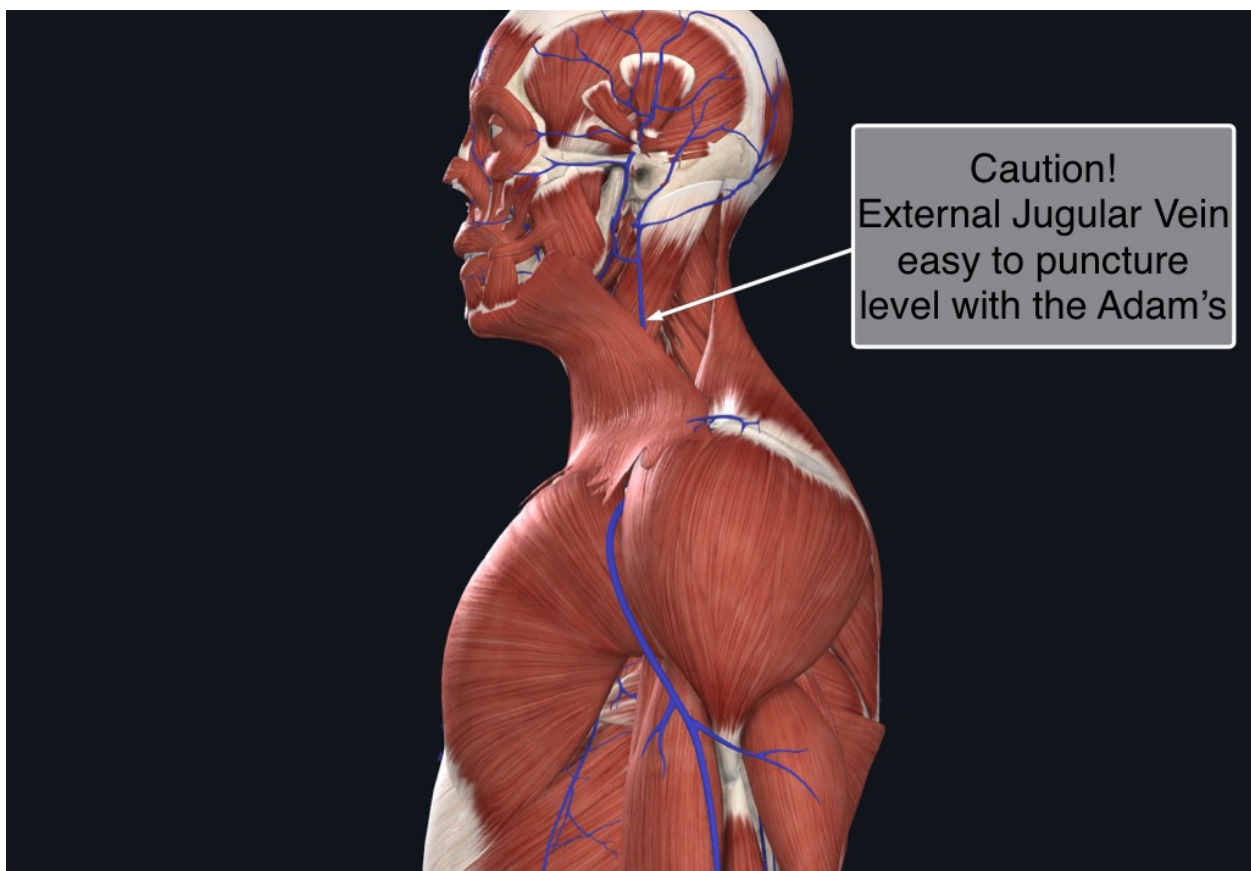
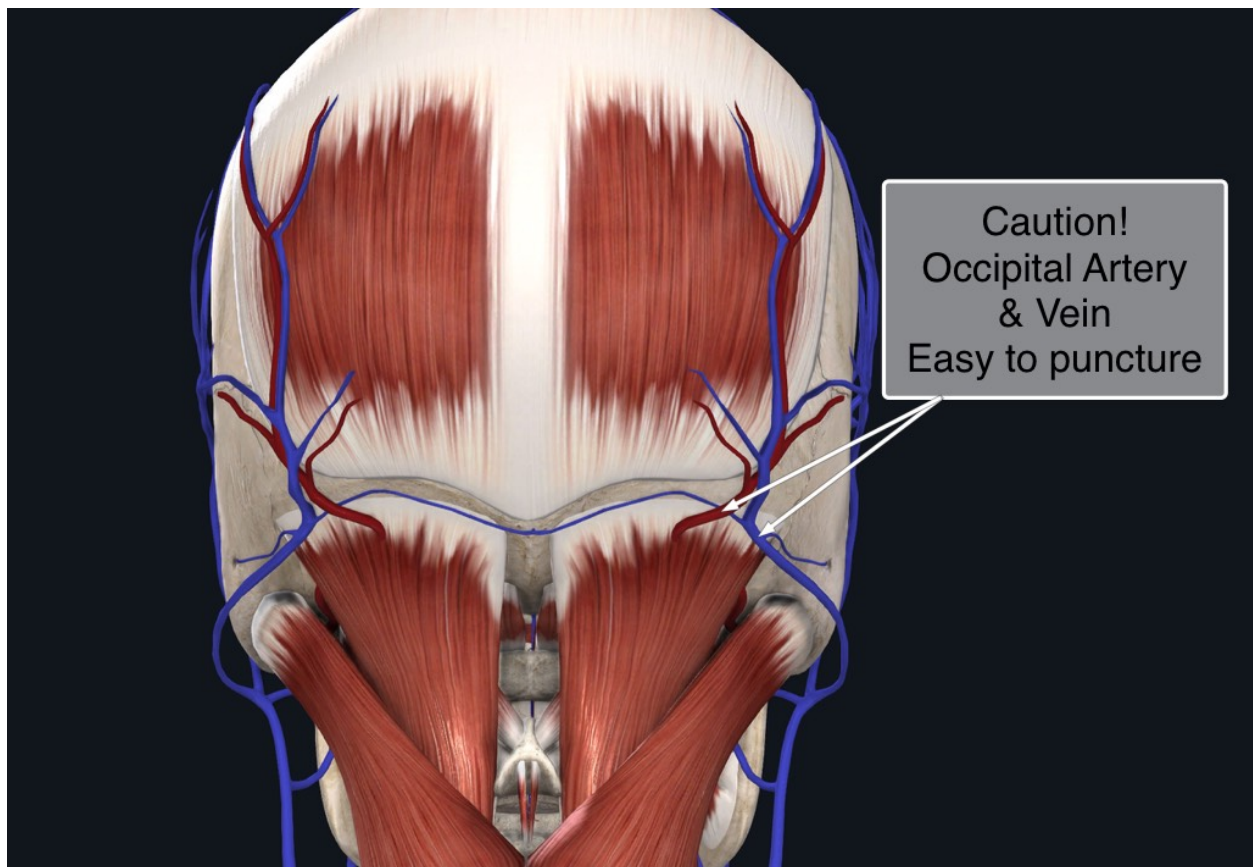
We have become increasingly dependent upon modern transportation, Technology, and automation to facilitate our tasks. Consequently, we are no longer developing and maintaining the skeleton and the postural, structural muscles that naturally support ourselves through the physical demands of daily chores. For others, we tend to concentrate on specific athletic endeavors as opposed to a balanced variety of activities. As a result, our musculoskeletal system is unable to mature according to design, and we develop compensated structures and motor skills. Each generation shows progressive signs of deterioration at increasingly younger ages.

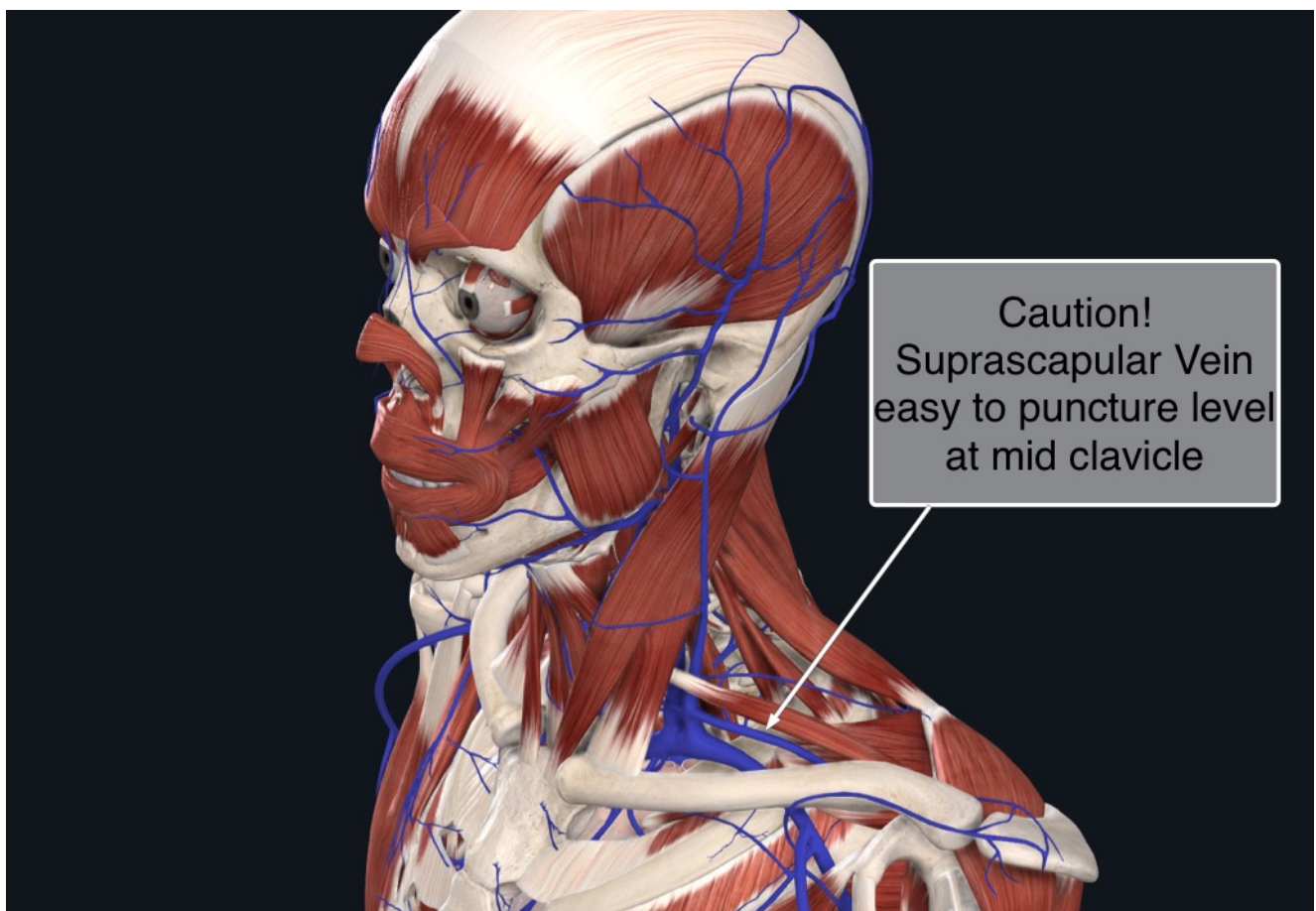
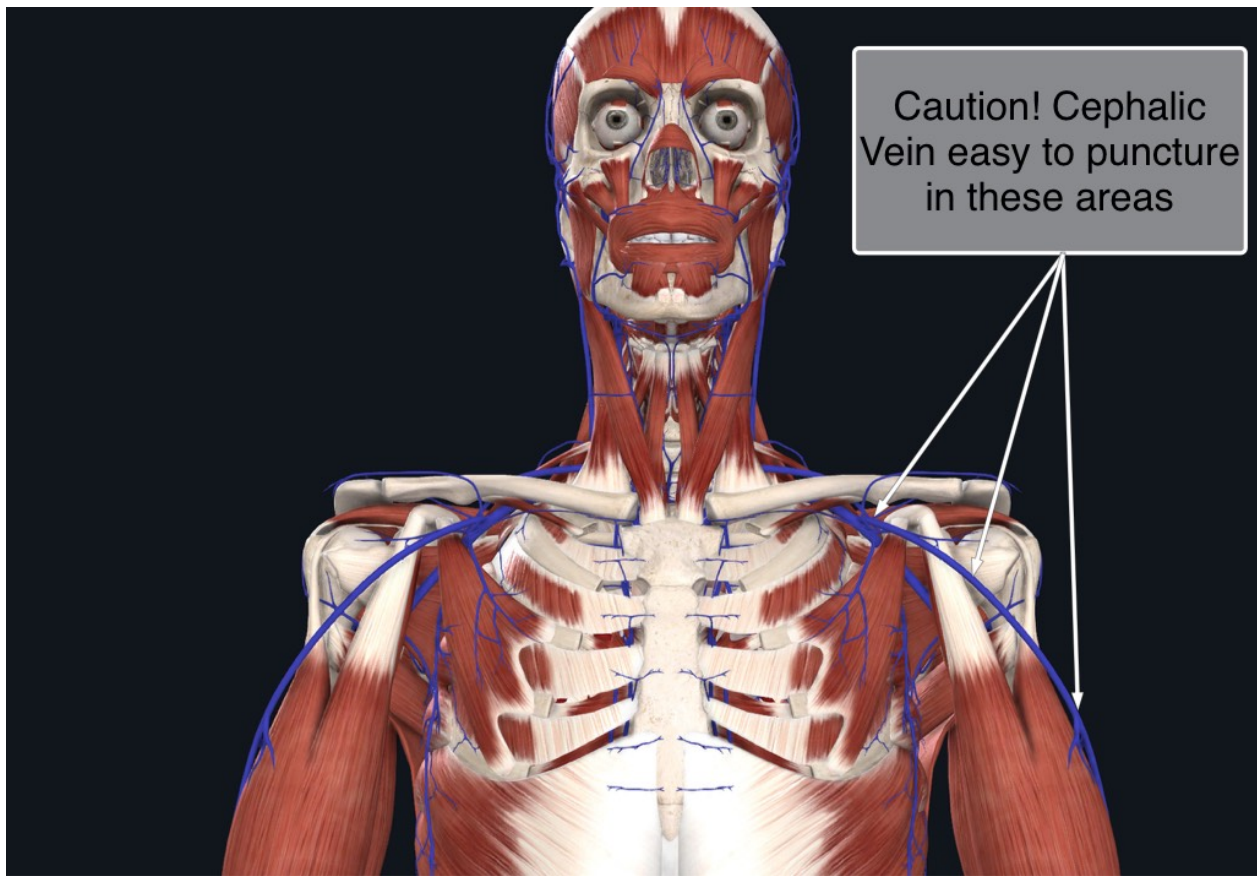
These changes lead to anatomical dysfunction, defined as any condition in which the musculoskeletal system has not developed normally and, therefore, alters the body's ability to function correctly. Anatomical dysfunction can interfere with the body's ability to perform both physical and mental tasks. When the integrity of structural or postural muscles is compromised, the whole skeletal system is affected. The hip girdle changes its tilt, the back changes its curve, and the whole body begins to compensate—creating misalignments. These misalignments lead to abnormal wear and tear in the joints. After a time, misalignment can cause musculoskeletal breakdowns, injury, and pain.

Misalignments also affect the performance of other body systems, including the cardiovascular, digestive, and respiratory systems. Our bodies are designed very specifically, each system complementing another. The internal organs are held and positioned within the body by proper alignment and movement of the musculoskeletal system. Anatomical dysfunction can change the position of these essential systems in relation to each other and in relation to gravity, thus altering their ability to do their job properly.

These systems are dependent on motion. They function and interact best when we are off the couch and in a motion-enriched environment. The Egoscue Method therapy utilizes the muscles of our body through a series of individually designed repositioning, strengthening, stretching, or functional exercises to treat anatomical dysfunction. Each exercise makes specific demands on the body. The exercises are designed to facilitate normal muscle function and interaction.







Muscle Associated to the Fascial Meridians, Patient Positioning, Average Needle Depth, and Needle Technique

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Platar Fascia	Superficial Back Line	Can be very uncomfortable	Prone	1/8 in - 1/4in	Rapid Needle Always map your points then ice if necessary
Achilles Tendon	Superficial Back Line	Do not needle perpendicular	Prone	1/8 in - 1/4in	Rapid Needle NEVER needle perpendicular into the tendon. Angle the needle into the tendon at a 45 degrees entering from the side of the tendon.
Gastrocnemius	Superficial Back Line	Avoid the tibial and peroneal nerves and popliteal vessels.	Prone position, with the knee slightly flexed and the leg supported by a pillow.	1/4in-1/2in	Rapid Needle Needle perpendicular and oblique
Hamstrings	Superficial Back Line	Can cause spasms	Prone position with a pillow or bolster under the ankles or Side lying for upper portion.	1/4in-1/2in	Rapid Needle Needle perpendicular and oblique
Longissimus	Superficial Back Line	Avoid penetration of the lungs and L1-L4 lumbar artery	Prone with the arm at the side, sitting flexed position, or side lying with arm in front.	1/4in-1/2in	Rapid Needle Needle perpendicular and oblique
Iliocostalis	Superficial Back Line	Avoid penetration of the lungs	Prone with the arm at the side, sitting flexed position, or side lying with arm in front.	1/2in-3/4in	Rapid Needle Needle perpendicular and oblique

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Spinalis	Superficial Back Line	Avoid penetration of the lungs	Prone with the arm at the side, sitting flexed position, or side lying with arm in front.	1/2in-3/4in	Rapid Needle Needle perpendicular and oblique
Semispinalis	Superficial Back Line	Avoid penetration of the lungs	Prone with the arm at the side, sitting flexed position, or side lying with arm in front.	1/2in-3/4in	Rapid Needle Needle perpendicular and oblique
Multifidus	Superficial Back Line	Avoid penetration of the lungs. safe needling zone is approximately one finger width lateral to the spinous processes on each side of the spine.	Prone	1/2in-1in	Tap Step Needling Needle perpendicular then angled in a medial caudal direction towards the lamina of the vertebral body.
Transversospinalis	Superficial Back Line	Avoid penetration of the lungs. safe needling zone is approximately one finger width lateral to the spinous processes on each side of the spine.	Prone	1/2in-3/4in	Tap Step Needling Needle perpendicular then angled in a medial caudal direction towards the lamina of the vertebral body.
Rectus Capitis Posterior Major	Superficial Back Line	Avoid going into the spinal column	Prone with head flexed, side lying with head flexed, or sitting with head flexed and practitioner in front of patient.	1/4in-1/2in	Rapid Needle, Tap Step Needle Needle at an upward angle towards the occipital bone
Rectus Capitis Posterior Minor	Superficial Back Line	Avoid going into the spinal column	Prone with head flexed, side lying with head flexed, or sitting with head flexed and practitioner in front of patient.	1/4in-1/2in	Rapid Needle, Tap Step Needle Needle at an upward angle towards the occipital bone

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Obliquus Capitis inferior	Superficial Back Line	Needle in the safe zone between the spines process and the transverse process to avoid hitting the deep curve. Vein and artery more lateral.	Prone with head flexed, side lying with head flexed, or sitting with head flexed and practitioner in front of patient.	1/4in-1/2in	Rapid Needle, Tap Step Needle in a point mid-way between the transverse process of C1 and the spinous process of C2. The needle is inserted perpendicular to the skin directly in the medial half of the muscle toward the patient's opposite eye in a slightly cranial-medial direction
Frontalis	Superficial Back Line	Avoid any arteries	Supine	1/16in-1/8in	Rapid Needle, Tap Step Needle Oblique angle

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Tibialis Anterior	Superficial Front Line	Avoid the anterior tibial artery, vein, and the deep peroneal nerve	Supine	1/4in-1/2in	Rapid Needle Needle slightly medial direction toward the tibia
Extensor Digitorum Longus	Superficial Front Line	Avoid the deep peroneal nerve	Supine	1/4in-1/2in	Rapid Needle Needle close to the border of the tibialis anterior muscle in an anteroposterior direction toward the fibula
Extensor Hallucis Longus	Superficial Front Line	Avoid the anterior tibial artery, vein, and the deep peroneal nerve	Supine	1/2in-1in	Rapid Needle Needle laterally towards the fibula helps to avoid contact with the neurovascular bundle.

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Rectus Femoris	Superficial Front Line	No special precautions	Supine or side Lying	1/4in-1/2in	Rapid Needle Check patellar tracking and treat accordingly
Rectus Abdominis	Superficial Front Line	Avoid entering the abdominal cavity, maintain a shallow angle	Supine with the clinician positioned contralateral to the side to be needled	1/4in-1/2in	Rapid Needle Needle medially toward the <i>linea alba</i> , tangential to the abdominal wall. For upper rectus abdominis the needle parallel to the lowest ribs. For lower portion the needle is directed toward the pubic bone.
Sternalis	Superficial Front Line	Avoid hitting Vein	Supine	1/4in	Rapid Peck Superficial needling
Sternocleido-mastoid	Superficial Front Line	Avoid the carotid artery	Supine with head rotated to the ipsilateral side, prone for mastoid attachment.	1/4in	Rapid Needle Pin the muscle between your fingers and needle perpendicular

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Fibularis longus	Lateral Line	No special precautions	Supine or side lying	1/4in-1/2in	Rapid Needle
Fibularis Brevis	Lateral Line	No special precautions	Supine or side lying	1/4in-1/2in	Rapid Needle
Illiotal Tract	Lateral Line	More burning sensation can occur	Side lying	1/4in-1/2in	Rapid Needle
Tensor Fasciae Latae	Lateral Line	No special precautions	Supine or side lying position	1/2in-3/4in	Rapid Needle, Tap Step Needle

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Gluteus Maximus	Lateral Line	No special precautions	Prone with a pillow under the abdomen or side lying	1/2in-1in	Rapid Needle, Tap Step Needle & Probe Needling Strong depression of the subcutaneous tissue is required to reduce the distance from the skin to the muscle
Gluteus Medius	Lateral Line	No special precautions	Prone with a pillow under the abdomen or side lying	1/2in-1in	Rapid Needle, Tap Step Needle & Probe Needling Strong depression of the subcutaneous tissue is required to reduce the distance from the skin to the muscle
Obliques Internal/ External	Lateral Line	Avoid entering the abdominal cavity.	Supine or side-lying.	1/4in-1/2in	Rapid Needle Grasp the abdominal wall between your fingers to ensure that the abdominal contents remain medial. Only the muscle tissue between your fingers is needled
Intercostals Internal/ External	Lateral Line	Avoid penetration of the lungs	Supine, side lying, or prone	1/4in-1/2in	Rapid Needle, Tap Step Needle Needle is directed towards the rib alternating back and forth
Splenius Capitis	Lateral Line	No special precautions	Prone, Side lying	1/4in-1/2in	Rapid Needle, Tap Step Needle Needling above C2, towards the mastoid process. Needling posterior to the transverse processes in a caudal-medial direction.

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Sternocleidomastoid	Lateral Line	Avoid the carotid artery	Supine with head rotated to the ipsilateral side, prone for mastoid attachment.	1/4in-1/2in	Rapid Needle Pin the muscle between your fingers and needle perpendicular

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Splenius Capitis	Spiral Line	No special precautions	Prone, Side lying	1/4in-1/2in	Rapid Needle, Tap Step Needle Needling above C2, towards the mastoid process. Needling posterior to the transverse processes in a caudal-medial direction.
Splenius Cervicis	Spiral Line	No special precautions	Prone, Side lying, sitting	1/4in-1/2in	Rapid Needle
Rhomboids Minor/Major	Spiral Line	No special precautions	Prone, Side lying, sitting flexed with shoulder adduction	1/4in-1/2in	Rapid Needle
Serratus Anterior	Spiral Line	Avoid penetration of the lung	Side lying, with the side to be treated facing up and the arm resting in front.	1/4in - 1/2in	Rapid Needle Rib block- then needle perpendicular and angle it toward the rib.
Oblique External/Internal	Spiral Line	Avoid entering the abdominal cavity.	Supine or side-lying.	1/4in-1/2in	Rapid Needle Grasp the abdominal wall between your fingers to ensure that the abdominal contents remain medial. Only the muscle tissue between your fingers is needled

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Tensor Fasciae Latae	Spiral Line	No special precautions	Supine or side lying position	1/2in-3/4in	Rapid Needle, Tap Step Needle
Iliotibial Tract	Spiral Line	More burning sensation can occur	Supine or side lying position	1/4in-1/2in	Rapid Needle, Tap Step Needle
Tibialis Anterior	Spiral Line	Avoid the anterior tibial artery, vein, and the deep peroneal nerve	Supine	1/4in-1/2in	Rapid Needle Needle slightly medial direction toward the tibia
Fibularis Longus	Spiral Line	No special precautions	Supine or side lying	1/4in-1/2in	Rapid Needle
Biceps Femoris	Spiral Line	Can cause spasms	Prone position with a pillow or bolster under the ankles or Side lying for upper portion.	1/4in-1/2in	Rapid Needle Needle perpendicular and oblique
Adductor Magnus	Spiral Line	Femoral nerve, artery and vein as well as the sciatic nerve.	Supine with knee flexion and hip external rotation or in a side lying position with the effected side down and top leg in hip flexion.	1/2in-1in	Rapid Needle
Longissimus	Spiral Line	Avoid penetration of the lungs and L1-L4 lumbar artery	Prone with the arm at the side, sitting flexed position, or side lying with arm in front.	1/4in-1/2in	Rapid Needle Needle perpendicular and oblique
Iliocostalis	Spiral Line	Avoid penetration of the lungs	Prone with the arm at the side, sitting flexed position, or side lying with arm in front.	1/2in-3/4in	Rapid Needle Needle perpendicular and oblique
Spinalis	Spiral Line	Avoid penetration of the lung	Prone with the arm at the side, sitting flexed position, or side lying with arm in front.	1/2in-3/4in	Rapid Needle Needle perpendicular and oblique

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Semispinalis	Spiral Line	Avoid penetration of the lung	Prone with the arm at the side, sitting flexed position, or side lying with arm in front.	1/2in-3/4in	Rapid Needle Needle perpendicular and oblique
Multifidus	Spiral Line	Avoid penetration of the lungs. safe needling zone is approximately one finger width lateral to the spinous processes on each side of the spine.	Prone	1/2in-1in	Needle perpendicular and oblique

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Tibialis Posterior	Deep Front Line	Avoid touching the neurovascular bundles, including the posterior tibial vessels and tibial nerve.	lying on the involved side, hip and knee flexed to about 90° or prone	1/2in-1in	Rapid Needle, Tap Step Needle keep close to the tibia bone to avoid touching the neurovascular bundles
Flexor Hallucis	Deep Front Line	Avoid the peroneal vessels.	Prone	1/2in-1in	Rapid Needle, Tap Step Needle Angling the needle laterally, towards the fibula
Flexor Digitorum Longus	Deep Front Line	Avoid touching the neurovascular bundles, including the posterior tibial vessels and tibial nerve.	lying on the involved side, hip and knee flexed to about 90° or prone	1/2in-1in	Rapid Needle, Tap Step Needle needle is inserted towards the posterior surface of the tibia in a lateral direction with a slightly anterior orientation

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Popliteus	Deep Front Line	Avoid the neurovascular bundle in the midline of the leg, resting on the popliteus muscle, avoided by keeping the needle close to the posterior aspect of the tibia	side lie on the involved extremity with the hip and knee flexed to 90°.or Prone	1/2in-1 in	Rapid Needle, Tap Step Needle needle towards in a lateral direction with a slight anterior superior orientation. keep the needle close to the posterior aspect of the tibia..
Adductor Magnus	Deep Front Line	Femoral nerve, artery and vein as well as the sciatic nerve.	Supine with knee flexion and hip external rotation or in a side lying position with the effected side down and top leg in hip flexion.	1/2in-1 in	Rapid Needle needle is inserted perpendicular to muscle
Adductor Minimus	Deep Front Line	Femoral nerve, artery and vein as well as the sciatic nerve.	Supine with knee flexion and hip external rotation or in a side lying position with the effected side down and top leg in hip flexion.	1/2in-1 in	Rapid Needle Strong depression of the subcutaneous tissue is required to reduce the distance from the skin to the muscle
Obturator Internus	Deep Front Line	Avoid hitting the obturator nerve and vessels	side-lying on the involved side with hip and knee flexion or supine with hip abducted	1/2in-1 in	Rapid Needle, Tap Step Needle & Probe Needling Strong depression of the subcutaneous tissue is required to reduce the distance from the skin to the muscle
Levator Ani	Deep Front Line	Do not needle	Do not needle	Do not needle	Do not needle
Adductor Brevis	Deep Front Line	Femoral nerve, artery and vein as well as the sciatic nerve.	Supine with knee flexion and hip external rotation	1/2in-1 in	Rapid Needle Anterior to posterior fashion toward the buttock.

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Adductor Longus	Deep Front Line	Femoral nerve, artery and vein as well as the sciatic nerve.	Supine with knee flexion and hip external rotation	1/2in-1in	Rapid Needle needle anterior to posterior, perpendicular to muscle surface
Psoas	Deep Front Line	DO not needle through abdominal cavity	Prone for upper portion or supine for lower portion	1/2in-1in	Tap Step Needle Only access upper mid portion and lower portion
Iliacus	Deep Front Line	Avoid femoral artery	Supine or side lying with effected side up	1/2in-1in	Rapid Needle, Tap Step Needle Needle towards the iliac bone
Pectineus	Deep Front Line	Palpate the femoral artery for location	Supine with knee flexion and hip external rotation	1/2in-1in	Rapid Needle needle anterior to posterior, perpendicular to muscle surface
Quadratus Lumborum	Deep Front Line	Avoid the kidneys	Prone or side lying with effected side up patient can bring the ipsilateral arm overhead with a pillow placed under the torso to improve access to the muscle.	1/2in-1in	Rapid Needle, Tap Step Needle Needle below L2
Diaphragm	Deep Front Line	DO not needle through abdominal cavity	Side lying	1/4in	Rapid Needle, Tap Step Needle

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Scalene Muscles	Deep Front Line	Avoid needling level with the Adams apple, external jugular is easy to puncture.	Supine or side lying with no pillow to allow the neck to be open.	1/8in-1/4in	Rapid Peck Needle towards the transverse processes of the cervical vertebrae For the middle scalene, the needle should be inserted perpendicular , behind the brachial plexus, directed towards the posterior tubercle transverse processes of the cervical spine. For the upper portion needle around the mastoid.
Longus Colli	Deep Front Line	GO slow and refocus avoid hitting Arteries	Prone or side lying	SuperF-1/4in	Rapid Needle Needle perpendicular and oblique
Longus Capitis	Deep Front Line	GO slow and refocus avoid hitting Arteries	Prone or side lying	SuperF-1/4in	Rapid Needle Needle perpendicular and oblique
Infrahyoid Muscles	Deep Front Line	Avoid hitting Vein	Supine	SuperF-1/4in	Rapid Peck Superficial needling

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Pectoralis Major	Superficial Front Arm Line	Avoid entering the intercostal space and penetrating the lung. The neurovascular bundle to the arm lies under the pectoralis minor muscle, Cephalic Vein easy to puncture.	The patient lies in a supine position with arm abducted and slightly externally rotated.	1/8in-1/4in	Rapid Needle Needling the sternal and costal portions of the muscle, the needle is directed towards the shoulder. Angle of the needle should be shallow and the direction tangential to the chest wall
Latissimus Dorsi	Superficial Front Arm Line	No special precautions	Prone with the shoulder off the table, Sitting with hand on top head, or side lying with hand over head	1/4in-1/2in	Rapid Peck needling is performed in a pincher palpation towards the fingers Perpendicular
Flexor Carpi Radialis	Superficial Front Arm Line	Avoid antebrachial vein	Supine with the forearm supinated or prone position.	1/8in-1/4in	Rapid Peck Needle towards the radials
Flexor Pollicis Longus	Superficial Front Arm Line	Avoid radial artery and antebrachial vein	Supine with the forearm supinated or prone position.	1/8in-1/4in	Rapid Peck Needle towards the palmar aspect of the middle third of the radius
Flexor Digitorum Superficialis	Superficial Front Arm Line	Avoid antebrachial vein	Supine with the forearm supinated or prone position.	1/8in-1/4in	Rapid Peck
Flexor Carpi Ulnaris	Superficial Front Arm Line	Avoid hitting the medial, ulnar nerve, and cephalic vein	Supine with the forearm supinated or prone position.	1/8in-1/4in	Rapid Peck Needle towards the ulnar bone
Flexor Digitorum Profundus	Superficial Front Arm Line	Avoid hitting the medial nerve	Supine with the forearm supinated or prone position.	1/8in-1/4in	Rapid Peck Needle towards the interosseous membrane

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Pectoralis Minor	Deep Front Arm Line	Avoid entering the intercostal space and penetrating the lung. The neurovascular bundle to the arm lies under the pectoralis minor muscle, Cephalic Vein easy to puncture.	The patient lies in a supine position with arm abducted and slightly externally rotated.	1/4in	Rapid Needle
Subclavius	Deep Front Arm Line	void entering the intercostal space and penetrating the lung. The neurovascular bundle to the arm lies under the pectoralis minor muscle, Cephalic Vein easy to puncture.	The patient lies in a supine position with arm abducted and slightly externally rotated.	1/4in	Rapid peck insertion towards the junction of its medial and middle thirds
Coracobrachialis	Deep Front Arm Line	Avoid the neurovascular bundle, which includes the median nerve, the musculocutaneous nerve which passes through the muscle, the ulnar nerve, and the brachial artery, is located dorsally and medially to the muscle and must be avoided	Supine with lateral rotation at the shoulder	1/8in-1/4in	Rapid Needle Needle perpendicular from medial to lateral side toward the upper third of the humerus bone. The muscle can also be needled near the coracoid process just medial to the tendon of the short head of the biceps brachii
Biceps Brachii	Deep Front Arm Line	Avoid needling the neurovascular bundle at the medial side. Avoid needling the cephalic Vein.	Supine with arm slightly flexed and also extended	1/4in-1/2in	Rapid Needling
Thenar Muscles	Deep Front Arm Line	No special precautions Just a bit tender	Supine	1/8in-1/4in	Rapid Peck

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Trapezius-Upper	Superficial Back Arm Line	Avoid penetration of the lung. Supra Scapular Vein easy to puncture	Prone, side lying, or sitting	1/4in-1/2in	Rapid Needle Needled with a pincer palpation. Needle can be inserted from anterior to posterior or posterior to anterior
Trapezius-Middle	Superficial Back Arm Line	Avoid penetration of the lung	Prone or side lying	1/4in-1/2in	Rapid Needling Rib block and or spread the tissue
Trapezius-Lower	Superficial Back Arm Line	Avoid penetration of the lung	Prone or side lying	1/4in-1/2in	Rapid Needling Rib block and or spread the tissue
Deltoid	Superficial Back Arm Line	Cephalic Vein easy to puncture.	Anterior part can be needled in the supine position the posterior part in prone and the middle part can be treated in the prone, supine, or side-lying. Sitting position for all portions. In all positions the upper arm is slightly abducted	1/4in-1/2in	Rapid Needling Palpate and needle at a variety of angles and positions to be thorough.
Brachialis	Superficial Back Arm Line	Avoid hitting the neurovascular bundle	supine with the elbow relaxed and slightly flexed.	1/4 in-1/2 in	Rapid Needling Needle from the lateral aspect of the arm needle is directed medially between the biceps and triceps brachii
Extensor Pollicis Brevis	Superficial Back Arm Line	Avoid hitting the radial nerve	Supine with forearm pronated	1/4in	Rapid Peck
Extensor Carpi Radialis Brevis	Superficial Back Arm Line	Avoid hitting the radial nerve	Supine with forearm pronated	1/4in	Rapid Peck Needle towards the radius bone

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Extensor Indicis	Superficial Back Arm Line	Avoid hitting the radial nerve	Supine with forearm pronated	1/4	Rapid Peck Needle towards the dorsal aspect of the middle third of the radius
Extensor Carpi Radialis Longus	Superficial Back Arm Line	Avoid hitting the radial nerve	Supine with forearm pronated	1/4in	Rapid Peck Needle towards the radius bone
Extensor Pollicis Longus	Superficial Back Arm Line	Avoid hitting the radial nerve	Supine with forearm pronated	1/4in	Rapid Peck Needle towards the dorsal aspect of the middle third of the radius
Extensor Carpi Ulnaris	Superficial Back Arm Line	Avoid hitting the radial nerve	Supine with forearm pronated	1/4in	Rapid Peck Needle towards the ulnar bone

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Supraspinatus	Deep Back Arm Line	Avoid needling in a ventral direction.	Prone longitudinal to the frontal plane or slightly posterior towards the base of the supra- spinous fossa.	1/4in-1/2in	Rapid Needling
Levator Scapulae	Deep Back Arm Line	No special precautions	Prone, side lying, or sitting	1/4in-1/2in	Rapid Needling needle is inserted t at a shallow angle, directed toward the upper, medial border of the scapula

Muscle	Fascial Meridian	Precaution	Patient Position	Avg. Needle depth varies with position & size	Needle Technique
Rhomboids (check spiral line)	Deep Back Arm Line	No special precautions	Prone, Side lying, sitting flexed with shoulder adduction	1/4in-1/2in	Rapid Needling Rib block and or spread the tissue
Infraspinatus	Deep Back Arm Line	No special precautions	Prone, Side lying, Sitting with hand on head	1/2in-3/4in	Rapid Needling
Teres Minor	Deep Back Arm Line	When needling in front of the scapula, clinician can easily pass through the intercostal space and enter the pleura and lung.	Side-lying with arm above head, Sitting with hand on head, The patient lies prone with the upper arm 90° abducted.	1/2in-3/4in	Rapid Needling Tap Step Needle
Triceps Brachii	Deep Back Arm Line	The radial nerve runs caudal to the head of the humerus and posteriorly to the humerus under the lateral head of the triceps muscle.	Supine with hand over head and arm supported on table, Side-lying, or Prone with arm abducted and hanging off the table..	1/2in-3/4in	Rapid Needling
Hypothenar Muscles		No special precautions	Supine	1/8in-1/4in	Rapid Peck