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The Pathway to Healing The Importance of Treating the Lymphatic System (for the Orthopedic Patient)

How does the body heal after injury of trauma? As massage therapists, we tend to focus on the role muscles and other soft tissues play in musculoskeletal dysfunction. However, trauma and injury affect multiple body systems, not just the local area of complaint. Understanding how the anatomy and physiology of the whole body affects soft tissue healing and identifying those total body pathways to healing gives us a better idea of not only where to treat, but more importantly, what to treat. If we truly want to help as many patients as possible, it is important to look beyond local treatment and take a more global approach.

If a patient comes to us for treatment after a knee injury or knee surgery, where do we begin? How do we put a treatment plan together that gives your patient the best outcome and results? If we take the more global approach previously noted, we cannot only look at the muscles and lymphatics of the knee. Instead, we must first look at how the anatomy and physiology of the whole body impacts the ability of the knee to heal.

For health, homeostasis, and healing, all tissues need unobstructed inflow/supply and unobstructed outflow/return of all the vital structures (nerves, arteries, veins, and lymphatics). One key factor of healing is that tissues require a fresh blood supply to the area of injury. In Osteopathic Medicine, there is a principle in that states, “the rule of the artery is supreme.” For tissues to heal, there needs to be an unobstructed

inflow/supply of oxygenated and nutrient-rich blood to the site of injury. For the knee to heal, there needs to be an unobstructed pathway to supply fresh blood to the injured tissues of the knee. That pathway starts at the heart, travels down through the trunk to the knee, and ultimately returns to the heart. For optimal results, any potential barrier along that pathway needs to be considered in treating the knee.

Another key factor for tissue healing is that there must be balanced nerve flow or nerve conduction to/from the tissues, brain, and spinal cord. Specifically, both divisions of the autonomic nervous system play an indirect, yet important role in tissue healing by influencing the microcirculation in all tissues. Since the parasympathetic nervous system controls “rest, digest and recovery,” this system causes relaxation/vasodilation in the smooth muscles of the blood and lymphatic vessels. In contrast, the sympathetic nervous system controls “fight or flight” and causes vasoconstriction. If a patient is in sympathetic overload due to chronic stress and injury, their autonomic vascular and lymphatic control will be out of balance and impair proper blood flow to and from all tissues. For the knee to heal properly, the autonomic nervous system must be balanced and functioning efficiently.

One final key factor of healing is that tissues need an unobstructed outflow/drainage from the area of injury. Another osteopathic principle states, “drainage precedes supply.”

Fluid in the body, particularly lymph, flows along pressure gradients, generally from high to low pressure. For fresh blood and nutrients to be able to get into the tissues, fluid and metabolic waste must be removed to create a pressure gradient that allows for this vascular inflow. In other words, if an area is injured, the removal of fluid via the lymphatic system must come first before the body can heal. For fresh blood and nutrients to get to the injured knee tissues, the swelling and buildup of metabolic waste needs to be drained to allow for faster and more complete healing.

When taking the anatomy and physiology of the total body into consideration, it is not enough to only treat the local swelling and edema of an injured knee without addressing the above physiology and potential barriers to its lymphatic drainage pathway. Considering this hierarchy of healing, how can we, as massage therapists, look beyond treating the local tissues of knee and treat these potential barriers that may be affecting those tissues and improve our outcomes? How do we create a pathway to healing?

All courses offered by the D’Ambrogio Institute consider the anatomy and physiology of each patient to determine the most appropriate treatment approach, either local or total body, and improve patient outcomes. Each course is based on the D’Ambrogio Institute (DAI) Philosophy, which consists of the following three key principles: Evaluation, Principle-based Treatment, and Re-Evaluation. Evaluation includes a Total Body Screening Examination. This exam helps determine if the injury is a local event or if there may be a total body lesion or dysfunction contributing to the injury. It looks for lines of tension in the head, neck, torso, and both extremities that may be affecting the local area of complaint. It also assesses transverse diaphragms for restrictions and the ANS for imbalances that may impair healing. This eval-

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uation will ensure you are treating the source of the problem, not just the symptoms.

To address swelling locally and throughout the body, DAI offers a series of Lymphatic Balancing (LB) courses. LB is an effective manual therapy treatment to relieve congestion and remove accumulated waste and edema in the tissues to decrease pain, restore full pain-free movement, and allow for optimal tissue healing.

Each LB course considers all aspects of lymphatic anatomy and physiology before treating the local swelling and edema. Prior to any local treatment, you must first establish the pathway to healing. There can be no extraneous lines of tension or lymphatic congestion contributing to the local area of complaint and the transverse diaphragms and autonomic nervous system (ANS) must be balanced. Once the pathway to healing is open, you can then perform the appropriate principle-based Specific and Supportive Techniques to the knee for local treatment. If you treat the local swelling in an injured area without addressing these total body lesions, your outcomes may be less than successful.

Lymphatic Balancing (LB) applies specialized manual lymphatic drainage techniques, originally designed to treat lymphedema, to the orthopedic patient. LB expands on the philosophical approach to lymphedema with the addition of traditional osteopathic lymphatic pumping techniques making it more applicable to orthopedic injuries. LB can be used as a stand-alone treatment for the total body or integrated locally with other manual therapy techniques making them more effective and longer lasting. LB also includes an Active Lymphatic Pump Exercise Program to be used during treatment and given as a Home Exercise Program to further extend the treatment effects.

Lymphatic Balancing techniques expand on the work and teachings of Dr. Emil Vodder (Vodder Method), Bruno Chickly MD (Lymphatic Drainage Technique), Dr. Albert Leduc PT, PhD (Leduc method) and osteopathic lymphatic pumping techniques. These techniques can be applied to a wide range of clientele within the orthopedic community. Some of the conditions that Lymphatic Balancing is helpful with are;

- Sprained ankles after a sport injury
- Post-operative swelling and edema after a knee or hip surgery
- Any swelling along the spine or cervical region after a car accident
- Clearing a treatment area after other modalities are completed
- General Immune system health and wellness

The DAI Lymphatic Balancing Curriculum includes three courses (Total Body Approach and a Local Approach for the Upper & Lower Quadrant). Courses can be taken in any order.

Lymphatic Balancing; Total Body Approach (LBTB): This course teaches you how to perform a Total Body Evaluation (ARTS), and treat excess fluid or swelling in the body. This class teaches you a total body approach to lymphatic balancing. LB is a useful place to start for new patients before performing specific LB on local regions of the body, or as maintenance for the patient. The Total Body Approach is an effective protocol for prevention of illness and the maintenance of health. This is a protocol that can be performed as a standalone technique and is very useful for general detoxification, immune support and digestive health.

Lymphatic Balancing; Local Approach - Upper Quadrant (LBUQ): This course teaches you how to perform a local evaluation (ARTS), and treat excessive body fluid or swelling in the cranium, cervical spine, thoracic spine, thorax,

upper abdomen (viscera), and upper extremities (shoulder, elbow, wrist and hand).

Lymphatic Balancing; Local Approach - Lower Quadrant (LBLQ): This course teaches you how to perform a local body evaluation (ARTS), and treat excessive body fluid or swelling in the lower abdomen (viscera), lumbar spine, pelvis, sacrum, and lower extremities (hip, knee, ankle and foot).

When you have an orthopedic patient with swelling or edema, it is important to make sure you evaluate the entire anatomy and physiology of your patient. This will ensure the pathway to healing is unobstructed and will guide you to use the appropriate Specific and Supportive Treatment Techniques in your principle-based treatment approach. *Remember to re-evaluate after your treatment to see if your approach was successful.*

Please visit www.DAmbrogioInstitute.com for more information.

