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Tissue Re-Education Model: A New Approach to Foundational GPP

Jim Snider

"We're working the tissue at end range, so you have origin and insertion, tissues stretched, you're working those components while also increasing flexibility"

- Jim Snider
Episode 70 of The CVASPS Podcast

The world of collegiate sports in today's day in age causes traumatic stress to the body over the course of a sport season. These stressors plague the sport of hockey especially, as the regular season can stretch as many as eight months. The wear and tear that this causes on athlete's ankles, knees, hips, and spine from maintaining constant competitive stances, not to mention skating on an eighth of an inch of steel, causes disruptions within the bodies muscular and fascial structures. The repetitive demands of a sporting season can leave the body in disarray; physically, mentally, emotionally, and structurally. These patterns of disorganization can leave the human body in a threatened sympathetic state, causing and altered length tension relationship of the *muscular* and *fascial* systems. Following this demanding season, it is important for athletes to undergo a tissue re-education phase of training, to correct the deficiencies that have occurred to the muscular and fascial systems. The sport of ice hockey will be used to demonstrate the Tissue Re-Education Model, but keep in mind this model can be applied to every sport if you follow the principles of this system.

There is little that one could say is natural about the game of ice hockey - blades strapped tight to the feet, athletes skating at speeds faster than most humans can run, a spear disguised as a stick in hand, while chasing a frozen piece of rubber across ice. This game is not only one of the most exciting on the planet, but also the most challenging from a biomechanical and physiological perspective. With the game progressing, just as all sports continue to do, the demands upon the athlete become greater and greater. The following is a documentation of the science and methods behind the unique approach to beginning training for the hockey player. The tissue re-education model addresses the unique biomechanical loads and adaptations that have developed from playing the game of ice hockey. This model lays a strong foundation for the remaining off-season strength and conditioning program, which now will result in a better mechanical and physiological response due to corrected anatomical positioning through optimized length-tension relationships.

The first phase of the tissue re-education model is a targeted isometric block. The goal of the first general physical preparation block is to re-establish optimal fascial lines opening up neural networks to allow for more efficient mechanical movement. By doing so, the tissues of the body will re-model with increased pliability and resiliency. Specifically, by attacking the origin and insertion points of the muscle due to the extreme lengthening nature of the long duration isometrics. This will thicken these points of the structural system increasing the durability and elastic response which is key in an introduction training block. This block also is generally focused on restoring body systems into a *parasympathetic* state. The tissues of the prime movers in sport tend to become shortened and sympathetic over time from the explosive nature of sporting action and metabolic waste products from increased heat in the shortened tissues and fascial friction. With the long durational stretched holds, they mimic that of Ying Yoga which has been shown to bring the body back down to a parasympathetic state. Similarly, to the research of not doing long stretches before explosive activity because it reduces explosiveness, maybe this reduction is due to sympathetic down regulation and an upregulation of the parasympathetic branch of the Autonomic Nervous System. As one could imagine, skating around on an eighth of an inch blade with weapon in hand trying to fire a frozen piece of rubber into a net can gear up that flight or fight system for either the athlete scoring the goals, or the one trying to prevent them.

Optimal posture is important for any sport and considerably valuable for the high-power explosive athlete. The postures in which are required of the athlete to generate force and sustain it require a significant amount of demand upon the body systems. As Dr. Bill Sands so perfectly stated, "Most athletes are skilled enough to direct the force adequately but are often not strong enough to produce it or not strong enough to maintain the posture necessary for optimum change of momentum because they can't hold the positions needed." Our postures tell a story of the inner workings of our fascial system. Some would not consider our body's fascia to be its own separate system within the discussion of "normal" body systems; however, it should be viewed as such a system due to it is a highly nervous and complex tissue that is not fully understood within the research even to this day. For this reason, especially within the strength and conditioning realm, addressing the fascial network as a system is a vital part to how coaches/athletes set themselves up for success during a training regimen.

Fascia consists of several extremely thin layers of tissue where the musculoskeletal, circulatory, and nervous systems all unite. The healthy-looking fascia can best be described as organized closely bundled fibers (fig 1).

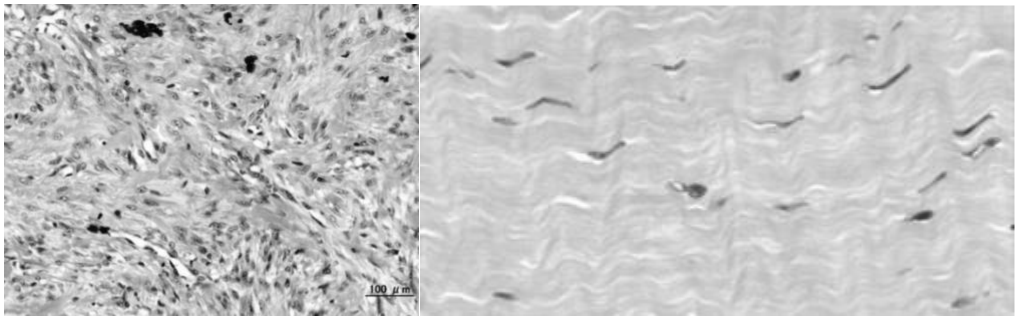

Figure 1: Disorganized fascia (left) compared to organized fascia (right).

Fascia touches all elastic connective tissues including the aponeuroses, retinaculum, ligaments, tendons, joint capsules, the synovium (fascia-like sheath that covers tendons), organ sheaths/membranes, vascular sheaths/membranes, the epineurium (Fascia-like membranous nerve sheaths), the meninges (spinal cord sheaths), the periosteum (sheaths that surround bones), as well as the membranes that surround all muscles (Schleip, 2003). The interconnected nature of this tissue allows for it to communicate the force in which muscle contraction occurs, the status or tone of a muscle, the rate of change in muscle length, and position via mechanoreceptors and proprioceptors, all to the central nervous system (Stecco and Hammer, 2015). It is undeniable that the fascia is a highly connected and an adaptable system and will respond according to the demands placed upon it. Contrast the healthy fascia with the adhered fascia (Fig 1.0); which one would be best to communicate messages to and from the nervous system? Oxygen from the circulatory system? The organized fascia will certainly have an easier time relaying these signals. Disorganized fascial tissue will certainly be less efficient in regard to the many facets of function and communication it is responsible for. It is clear the need to create a change in the tissue in efforts to optimize the efficiency of this system. Therefore, it is an important goal of the first training phase within the tissue reeducation model to organize and create continuity within the fascial systems.

It is clear from the research that fascial change occurs through training (Franchi, Reeves and Narici, 2017). However, the specific methods in which this change occurs is a grey area within the research. In manual therapy research, myofascial release (MFR) held for longer than two minutes may simulate the mechanical stress signals generated by myofibroblasts triggering early matrix remodeling (Coa et al., 2015). Schleip recommends two minutes with even longer amounts of time or force to change connective tissues (Schleip, 2003). The work of Meyers recommending longer duration for fascial change–ranging from two minutes to a total of five minutes in duration. It is through these two to five-minute isolation durations that the fascial matrix system restructures themselves into an organized and efficient system.

Now that the background and reasoning of the program has been reviewed, let's dive into the actual training itself.

Phase One – TARGETED ISOMETRICS

Strength training in the elongated position promotes structural adaptations. This phase of training is classified as the isometric phase; however, one could really think of it as quasi-isometric eccentric loading. Long duration isometrics in a lengthened state places an eccentric demand upon the actin–myosin cross-bridging system. It is clear within the literature there are morphological, metabolic, and neurological adaptations as a result of loading on our skeletal muscle. It has been demonstrated that architectural changes within the muscle occur as a response to different loading demands (Franchi, Reeves and Narici, 2017; Potier, Alexander and Seynnes, 2009). The mechanisms to which muscle within the body adapts and changes morphologically are contraction specific and still not completely clarified (Franchi, Reeves and Narici, 2017). The research does however point favorably toward the impact of eccentric demands (Hoppeler 2015; Baroni et al., 2013; Duclay et al., 2009) – however it is important to understand complete loading - concentric and eccentric - of the tissues is necessary for optimal performance. The target of this initial phase is to establish tissue remodeling and change to the fascial system through the use of long isometric, or quasi-isometric eccentric loading.

Contraction Specific Tissue Remodeling

The plasticity of skeletal muscle tissue allows for us as coaches to create change due to the demands placed upon the structures through training. Think of a small child's foot. As a young baby, the foot is without arch development. Only through forces placed upon the foot structures will the arch begin to develop. Likewise, skeletal muscle will adapt and grow using both concentric and eccentric loading – this is well established in the literature and applied practice. If we truly desire structural remodeling as a result of our training programs, then contraction specific structural remodeling must be considered. When a desired change in fascicle length is the goal of training, it appears eccentric exercise is the best method (Duclay et al., 2009; Potier, Alexander and Seynnes, 2009; Baroni et al., 2013). The work of NOORKÕIV et al 2014 demonstrated accentuated eccentrics will create a significant increase in the length of the fascicles.

Fascicle length and Angle of Pennation

Just as a structural engineer will consider the purpose of a structure with respect to withstanding various forces – our bodies intelligent design and adaptation capabilities lay the structural framework in various muscle fiber architectural designs to allow us to withstand forces of daily life and sporting demands. We can think of this simply as structure governs function. The amount of force that can be generated by our muscle tissue is determined by the length of the fiber, physiological cross-sectional area, and pennation angle. Understanding pennation angles allows for proper stresses to occur on the tissues in the proper manner. Example would be in isometric pushup the arms should be in an approximate 45-degree angle to follow pennation angle of the pectoralis muscle group. Muscles with an architecture with large pennation angles and physiological cross-sectional areas are designed for higher levels of force production. Long fiber lengths and smaller pennation angles are able to generate higher shortening velocities. We can think of this like a thin band as compared to a heavy band with much larger width. The thinner band if broken will shorten quite rapidly with great velocity. A thick band or heavy band will be much stronger and if this band were to break would move with a lesser velocity as compared to the thinner band.

Skeletal muscle tissue will remodel by either adding sarcomeres in series or in parallel (Hoppler, 2015). The addition of sarcomeres in series will impact the fascicle length whereas the addition of sarcomeres in parallel will increase the cross-sectional area and pennation angle. With respect to muscle performance, when sarcomeres are added in series, we will have a change in the velocity in which the muscle will shorten. Sarcomeres in series are also protective in nature; they allow the body to decelerate more optimally. If tissues can decelerate optimally the subsequent "rebound" or elastic response will be greater. With respect to the goal of tissue re-education, our goal is to re-establish proper length tension relationships. Certain tissues that have adapted to the demands of a season and have found themselves in a shortened state must be re-educated to a more series orientation in order to lay the foundation for structures to handle more high velocity training later in the training year.

Remodeling of the tendons and aponeuroses structures

Almost more important than the skeletal muscle remodeling, we come to the remodeling of the tendinous structures. There is still much to be understood in regard to the full magnitude of implications and mechanisms the tendon and aponeuroses structures have within the body. It is clear the forces generated by the muscle tissue is transferred through the tendon and aponeurosis to the skeletal system (Duclay et al 2009, Hoppeler 2015). Tendons can be best described in the work of Hoppeler as 'power amplifiers' due to their ability to recoil much faster after being stretched than a muscle is able to contract. This is protective in nature due to the role the tendon and aponeurosis structures play in deceleration of our movements. This also adds to the argument for increasing sarcomeres in series rather than parallel for the same decelerating capabilities and their protective nature on the human structure (Franchi, Reeves and Narici, 2017).

Different abilities of the tendinous structures to stretch along with the aponeurosis abilities make it clear they play a crucial role in human movement and performance. Research suggests structural adaptations within the tendon structures will in fact occur as a result of external loading in the form of strength training (Kaux et al., 2014; Kubo, Kanehisa and Fukunaga, 2001; Franchi, Reeves and Narici, 2017). A key mechanism of adaptation is seen in the ability of the tendinous structures to regularly repair following loading demands as simple as walking. Strength training, both long and short duration, will modify tendon size and tensile structures positively just as remaining sedentary will negatively impact our structures decreasing size and tensile ability (Hoppeler 2015). In a study reviewing the effects of differing duration isometric contractions on tendon elasticity it appears longer duration isometric demands produce greater change in the tendon structures when compared to short duration (Kubo, Kanehisa and Fukunaga, 2001). Hence our goal in GPP to prepare the tissues/tendons for greater upcoming stressors.

Upper and Lower Crossed Syndrome and the Hockey Athlete

We have addressed the remodeling of the fascial and skeletal systems in addition to the tendon and aponeurosis. Bringing the conversation back to the global application of addressing the structures of your particular athlete from a postural perspective. When we simply look at the hockey athlete following a season we find an excellent example of postural classification within Janda's upper and lower crossed syndrome. Lower crossed syndrome we have tightness of the back extensors, iliopsoas, and rectus femoris. Upper crossed syndrome displays tightness of the upper trapezius, levator scapula, and pectoral muscles. This postural classification example all observed in the hockey athlete (fig 2).

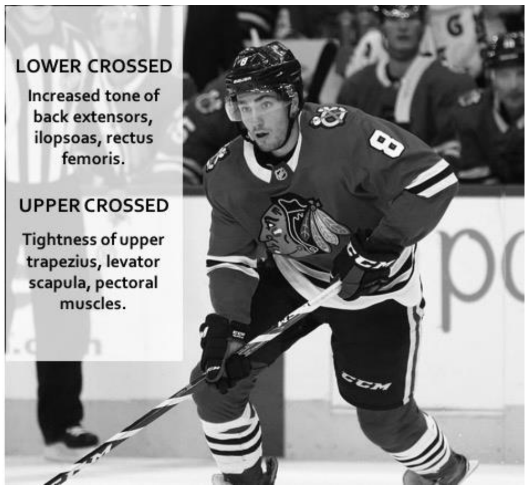

Figure 2 Lower and Upper Crossed Syndrome

Although characteristics of each of these syndromes are observed within the hockey athlete, this does not necessarily result in a clinical diagnosis. We can consider these patterns from a clinical setting or approach in efforts to optimize muscular performance and avoid traveling down a path of dysfunction.

Consider for a moment the demands placed upon the human structure as a result of a typical hockey season. The pectoralis muscles and flexors of the hip and forearm will be shortened, the hamstrings we be lengthened, and the mobility of the lower limb structure of the ankle will be reduced. Within this first phase of training, targeted isometrics are used to address each of these areas. These targeted isometrics will address specific areas in which the hockey athlete will require the greatest remodeling. This introductory phase of training will set the foundation for the increased demands that will arise in future training blocks. Phase one of training will induce force upon the tissues in a lengthened position promoting structural adaptation in the tissues that are in a shortened state.

Phase One Training

Training begins for these athletes with isometrics with an emphasis on the fascial lines of overuse or tissue areas of major concern. The movements will mainly be closed chain and rehabilitative in nature. Beginning with the tissues that are in a shortened state for the hockey athlete, we can evaluate the contraction specific adaptions we desire within these specific tissues. From the literature and previous discussion, it would make sense to pursue a method in which we would demand the tissues to remodel through an increase in sarcomeres in series thus creating an increase in fascicle length and thus restoring that tissue to its optimal length. The shortened tissues will be challenged in a lengthened state thus requiring a sustained eccentric contraction which we will term ***targeted isometrics***. This unique method will mimic that of a loaded eccentric exercise via a long duration time under tension. This quasi-isometric contraction will be the emphasis for the duration of phase one of training.

To address the pectoralis muscles, the athletes will be using the targeted isometrics with the pectorals in a lengthened state (fig. 3). While the athletes are holding this position, an accentuated eccentric contraction will occur within the pectoralis tissues. Volume of accentuated eccentric work will accumulate over the course of this first general physical preparation block. Similar method of addressing the iliopsoas and rectus femoris will be used within a deep lunge position (fig 3.1). Volume will accumulate over the duration of phase one from 2-5mins of the tissue re-education block.

Figure 3 Iso Push-up Exercise

Figure 3.1 Iso Acceleration Deep Lunge Exercise

Moving to the other side of the coin, addressing the tissues in a lengthened state, we will use a similar approach in the targeted isometrics method addressing the muscle remodeling in a different joint position. Thinking of the hockey athlete in the postures in which they operate, the hamstrings will generally be encouraged to be long. We know from the research when muscles are stretched they will have the most remodeling distally. So, if we desire to optimize this tissue for the future multidimensional demands we will be after remodeling to occur within the proximal area of the tissue. Figure 3.2a and 3.2b shows the hamstring in a long duration shortened state to encourage this remodeling to occur. And as we accumulated volume through increased time under tension we will do so in the hamstring tissues as well.

Figure 3.2a Alternating PRI Hamstring Curl Exercise

Figure 3.2b Seated Alternating (Alt). Hamstring Curl

Now for the tissues of the upper back, these will be addressed in a similar fashion to the hamstrings. Once again reviewing the posture of the athlete – these tissues are often seen lengthened in our hunched over weapon wielding athlete chasing around the frozen biscuit trying to shoot it at some guys face – but we digress. In a supported position the tissues of the lumbar will be able to relax while the upper back muscles will be contracted for a long duration in both an over-coming and yielding manner (fig 3.3 and 3.4).

Figure 3.3 Overcoming Bench ISO Row

Figure 3.4 Yielding Over-head ISO

Additional tissue remodeling will be executed in this block addressing the shoulder complex using an L handstand hold as well as an isometric close grip pull-up hold. These exercises can be found in day two of the program in figure 3.5.

This concept of long duration isometrics is not a new idea. If we go back to 1994 Mel Siff discussed the use of eccentric quasi-isometrics. Siff describes this type of slow isometric action as a necessary means of training active flexibility (Verkhoshansky and Siff, 2009). The quasi-isometric action in phase one can be further categorized as an eccentric quasi-isometric. The quasi-eccentric action is a natural occurrence of the nature of the demands of the exercise. Take for example the isometric deep lunge exercise – the athlete will be undergoing an extremely slow dynamic eccentric lunge. This is a key idea used within this initial stage of training and intentionally built upon during our second phase of training – in an externally loaded sub-maximal eccentric emphasis. Phase two will continue to work the same elongated postures we were using within phase one with the general concept here being we are adding more stress to the fascial system now that range of motion has been created from the initial phase one block. An example of the phase one isometric block can be found in figure 3.5.

ISOMETRIC PHASE I – DAY A

WARM-UP / DYNAMIC		
EXPLOSIVE WORK	**SETS**	**REPS**
Clean Complex w/ ISO Reach out Squat w/ Pause Box Jump	2 2 2	6e :6.5.4.3.2.1 5 (:04 iso)
STRENGTH		
1a). Push-up 1b). ISO Push-up	1 2 2 2	12 :30 :20 :10
2a). Overcoming Bench ISO Row 2b). Yielding OH ISO Low Trap 2c) Yielding Prone DB Batwing Row	2 2 2	:12 :60 :60
3a). Seated Alt Hamstring Curl 3b). Supine ISO Bench Hamstring Curl	3 2	10 :60
4a). BW Split Squat 4b). ISO Acceleration Deep Lunge (perform all one side A&B before moving to next leg)	1 1	15e 2:00-4:00
5). Dead Hang Pull-up Grip	1	1:30-2:30
ISOMETRIC PHASE I – DAY B		
WARM-UP / DYNAMIC		
EXPLOSIVE WORK	**SETS**	**REPS**
Snatch Complex w/ 2 to 1 Box Jump (:3 ISO) w/ Pogo Jump	2 2 2	6e 5e 15
STRENGTH		
1a). Pause Zercher Squat 1b). Foam Roll Press 1c). Childs Pose External Rotation 1d). Calf Stretch	4 2 2 2	6 10 5 breaths :30
2a). Up Dog Down Dog 2b). ISO Goblet Squat	2 2	8 :7,6.5.4.3.2.1
3). L Handstand Hold	2-4	:60
4a). PRI Alt. Hamstring Curl 4b). Seated DB Z Press (:02iso top) 4c). CG ISO Pull-up	3 3 3	10 8-10 :7.6.5.4.3.2.1

Figure 3.5 Example Isometric Phase

Programming Phase One

The above hopefully gives a very general idea of how to set up a program. The exercises can be modified to fit your specific athletes, and are just an illustration, the model is the key. Depending on the level of your athletes you can adjust the duration of the bouts in any manner you see fit. The key is to try and accumulate time progressively. We recommend, based on the above literature, you to try to get at least two minutes of total time. The sets can be broken up, but preferably with minimal amounts of rest between sets, but always demanding proper positioning. Athletes typically can sustain longer durations in the lunge position versus the push up due to the larger muscle groups. The duration of this phase can be two to three weeks in duration. The rate of adaptation from isometric training on the body is one of the fastest to adapt so typically this phase is shorter than phase two. Think about the old school wall sit for example, it's brutal when you first do it, but the body adapts quickly, and progress/strength is gained rather quickly.

Phase Two Training – Submaximal Eccentrics

Phase two of training is the second layer to this beginning fundamental training block. The use of submaximal eccentrics to create additional remodeling of tissues will be used for the entire duration of this phase. It is key to note that this follows the targeted isometric phase now working the muscular/fascial system through a full range of motion with a reduction in adhesions or collagen dysregulation. What is most important and our main target within this phase is the eccentric training effect that is most potent on tendon structures. Eccentric methods are widely used in the rehabilitation of tendinopathy of hamstring as well as anterior cruciate ligaments (Lorenz and Raiman, 2011). Hoppler's work identifies this eccentric eustress as a rehabilitative method for the rotator cuff, ligamentous structures of the knee (anterior cruciate ligament and posterior cruciate ligament), other tendinopathies such as the achilles, patellar, and lateral epicondylitis (Hoppeler, 2015). Bottom line, eccentric exercise is beneficial for all tendinous structures.

In addition to the tendon structure benefits, it has been demonstrated that eccentric work will stimulate collagen synthesis. The use of the long duration stretching places an eccentric strain on the muscle tissue. It is unclear what mechanisms are exactly responsible for alteration in tissues during a long duration of stretching – some of which have even been recorded for upwards of seven minutes of continuous stretching (Freitas and Mil-Homens, 2015). In the work of Stone et al., the use of chronic stretching appears to enhance performance via increase in range of motion (Stone et al., 2006). This 'chronic' stretching that is described in the literature is not a part of warm-up as one would think but instead an application such as we see within this first block of training. The entire purpose of this initial block being to restore tissue length, improve range of motion, and therefore subsequent performance. The use of the eccentric quasi-isometrics and sub-maximal eccentrics will induce the type of stress necessary for the fascia, tendon and aponeurosis structure remodeling.

ECCENTRIC PHASE II – DAY A

WARM-UP / DYNAMIC		
EXPLOSIVE WORK	**SETS**	**REPS**
Snatch Complex	2	6e
w/		
2 to 1 in place hop	2	5e
w/		
Fwd. Moving Pogo	2	20
STRENGTH		
1a). Ecc. Squat (:05ecc) w/	3-5	6
1b) Back to wall 1 arm Press	2	8e
2). Banded Feet R/O Squat	1	20
3a). DB 2/1 Push Press (:05ecc)	3	6-10e
3b) Staggered Stance DB RDL (:05ecc)	3	6-8e
3c). Eccentric CG Chin-up (:05ecc)	3	6-8
5). Side lying Raise – adductor	3-4	12-15e
ECCENTRIC PHASE II – DAY B		
WARM-UP / DYNAMIC		
EXPLOSIVE WORK	**SETS**	**REPS**
Clean Complex w/	2	6e
Altitude Drop w/	2	6
S.L. Clock Jump	2	10e
STRENGTH		
1a). Eccentric Lunge (:05 ecc)	3	6-8e
1b). Halfsey Push-up (:05 ecc)	3	8-10
2a). SB Hamstring Curls (:05 ecc)	3	8-10
2b). 3-point 1a Ecc DB Row (:05 ecc)	3	8-10e

Figure 4 Example Eccentric Phase II

Similar to the movements seen in phase one, a deep lunge will be used achieving this position using a long duration eccentric action to achieve full stretch in the lunge. This exercise will pair well with similar duration eccentric action on the pectorals just as we targeted in phase one. Hamstrings, structures of the upper back, and lower leg will also be addressed eccentrically. Figure 4 is an example of the training from phase two of this introductory cycle for the hockey athlete. It is important to note that the eccentric patterns of this second phase follow the exact patterns of the previous targeted isometric phase. This assures the proper remodeling of the targeted areas.

Conclusion

Athletes go through a tremendous amount of trauma through a highly competitive season. The main purpose of this initial phase of training is to optimize tissues which have been altered in their presentation, potentially causing a decrease in performance. Through the use of targeted isometrics in phase one of the program, the fascial systems were altered and realigned to become an efficient pathway. In the second phase of the program, we progress outward from the fascia to the ligamentous tissues. Here, the use of sub-maximal eccentric exercise is used to target and remodel the ligamentous tissues, much like that of the fascial system. With improved fascial alignment and collagen synthesis as well as ligamentous remodeling, the athlete is far more prepared for future training cycles. The amount of rebound and elasticity that is restored to the tissue is key to increasing explosive ability of any athlete. Although this model used a hockey player as the example it can be modified to any sport as long as you understand the biomechanical movement of your sport and adhere to the scientific principles outline in this chapter.

This model can and has been applied successfully in the rehabilitation side as well. Think about the mechanism of injury and apply the principles to the structure's damaged tissues. Put the injured area on length for a period of time allowing scar tissue to remodel in the proper lines of movement or in parallel (figure 1) then proceed with the submaximal eccentrics. You will be surprised at the results and rate of return to play. The hope is that everyone can use this "system" to lay the foundation for future training blocks coming off the season and continue to push the boundaries of athletic performance. Next time you find yourself faced with that weapon wielding athlete – I mean hockey player, consider taking the time to re-educate the body through the restorative approach of the Tissue Re-Education Model. For more information or specific training programs go to neuroexplosion.com and request Tissue Re-Education Model.

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Who is Jim Snider?

Jim Snider is in his second stint at Wisconsin, this time as Associate Director of Strength & Conditioning overseeing the Men's and Women's Hockey programs. He is also the primary liaison to the Sports Performance Lab where they conduct research, evaluate key sport performance metrics, and athlete monitoring. Previously, Snider spent four seasons at Wisconsin as assistant strength and conditioning coach with primary responsibilities of men's and women's soccer, tennis, and crew, while also assisting with football.

Snider spent two years before rejoining the Badgers as Assistant Director of Strength and Conditioning at the University of Minnesota. At Minnesota, Snider was responsible for the administration and development of athletic enhancement programs for men's basketball, baseball, track and field, and assisted with Men's and Women's Hockey, while managing full-time and intern personnel.

Snider originally came to Wisconsin for his internship from the University of Wisconsin La Crosse where he earned a Bachelor of Science degree in Exercise and Sport Science with an emphasis in Strength and Conditioning and also a degree in Sports Management. He also has a Master's Degree in Applied Kinesiology from the University of Minnesota, as well as a degree in Asian Bodywork & Therapeutic Massage from East West Healing Arts Institute.

Snider is a member of several organizations including the National Strength and Conditioning Association (NSCA), American Massage Therapy Association (AMTA), and USA Weightlifting. He is a Certified Strength and Conditioning Specialist through the NSCA, Level II Senior Coach through USA Weightlifting, Licensed Massage Therapist, Level II BioSignature Practitioner, and also a certified and active referee through USA Weightlifting.