

## Trigger Point Dry Needling

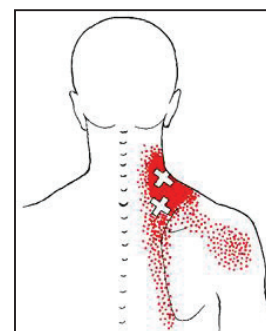
Recent studies have found that the treatment of myofascial trigger points (MTrPs) by dry needling is an effective and safe method when provided by adequately trained professionals within their scope of practice, including Physical Therapists. There is an official statement by the American Physical Therapy Association (APTA) which supports the practice of Trigger Point Dry Needling (TDN), which can be used interchangeably with Intramuscular Manual Therapy (IMT) or Intramuscular Stimulation (IMS).

KinetaCore is a clinical education group that is providing courses for physical therapists on Functional Dry Needling, defined as a mechanical device assisted manual therapy technique. It involves a thorough physical examination and assessment to guide treatment of neuro-musculoskeletal conditions as developed and described by Janet Travell MD, David Simons MD, Dr C. Chan Gunn and others. TDN uses small acupuncture-like solid needles to deactivate trigger points and "loosen" shortened muscles. The treatment likely affects the immune, inflammatory, biomechanical, vascular and neurological systems. However, it should be made clear that TDN is not Acupuncture which is based on Eastern medical theories requiring training in



traditional Chinese medicine.

Trigger points are hyperirritable spots in skeletal muscle associated with a hypersensitive palpable nodule in a taut band<sup>1</sup>. Active trigger points are painful upon compression and can give rise to characteristic pain, referred tenderness, motor dysfunction and/or autonomic phenomena. Latent trigger points may also be present leading to pain upon palpation but otherwise recognizable symptoms are not present. These are also important to incorporate in the TDN treatment. Satellite trigger points can also exist which develop in a zone of reference in key trigger points (synergist, antagonist, neural link or referral zone.)



There are several theories that describe the cause of these trigger points including the motor end plate dysfunction hypothesis and energy crisis theory. The motor end plate dysfunction hypothesis by Travell and Simons describes an abnormality of the motor end plate, or neuromuscular junction, causing an increase in acetylcholine (ACh) resulting in spontaneous electrical activity (SEA) and ongoing depolarization and contraction of muscle. The SEA can be measured by EMG and stands out against adjacent "quiet" muscles. The energy crisis theory postulates that excessive muscle contraction (TrPs) decreases circulation and local oxygen supply. The impaired circulation, in conjunction with increased metabolic demand from a contracted muscle, depletes the adenosine triphosphate (ATP) within the cell. This loss of ATP increases the presence of ACh and impairs calcium reuptake, thus increasing contractile activity of the muscle<sup>2</sup>. Another theory is the Radiculopathic model by C. Chan Gunn that describes denervation super-sensitivity. This model believes

### About the Authors: Tamara "Tami" Grunitzky, PT, DPT, OCS

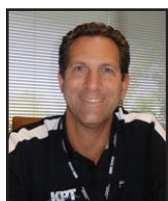
Staff Physical Therapist



Tami is a graduate of the University of Maryland at Baltimore, where she obtained her DPT, Doctor of Physical Therapy degree. She is KPT's Clinical Supervisor, Clinical Coordinator of Continuing Education, and Aquatic Therapy program director. Tami also holds the title Orthopedic Clinical Specialist, OCS. Tami is a personal trainer and enjoys spending time working out and teaching aerobics classes. Tami is certified in Level 1 Trigger Point Dry Needling and will be completing Level 2 certification in November.

### Gary D. Kassimir, PT, MS, CHT

Owner/President of Kassimir Physical Therapy



Gary D. Kassimir, PT, MS, CHT, is a licensed physical therapist in Maryland, with over 25 years of clinical and administrative experience. Gary graduated from Long Island University in 1987 with BS-MS degrees in physical therapy. He has extensive experience in outpatient orthopedics, hand rehabilitation and splinting, and sports rehabilitation. In 1998, Gary became a certified hand therapist (CHT).

Gary is certified in Level 1 Trigger Point Dry Needling and will be completing Level 2 certification in November.



that neural injury at the spinal level, compression and partial denervation, creates super-sensitivity of the structures supplied by the pathological neural tissue. This may explain the sensory, motor and autonomic changes seen in myofascial pain syndromes.

The effects of TDN can be mechanical, chemical, electrophysical and neurophysical in nature. The goal with TDN is to desensitize supersensitive structures, as well as restore functional movement and assist with healing. This goal is achieved by obtaining a local twitch response which decreases SEA, releases shortened muscles, and promotes healing through creating a local inflammatory response.

Types of patients typically treated with TDN can range from those with acute to chronic neuromuscular and/or myofascial dysfunction. The goal is to restore a patient's function while decreasing pain and improving quality of life. Dry needling is effective to quiet a hypersensitive/hypertonic muscle, as well as potentially improve contractility of a poorly functioning muscle. The physiological response to TDN can allow for more direct manual techniques to joints that otherwise would have been too guarded to address. In order to assess a patient's baseline functional mobility the therapist will perform a Selective Functional Movement Assessment (SFMA) which looks at specific and multisegmental movement patterns. The patient will inform the practitioner if a

movement is painful and the therapist will determine if the movement is functional or dysfunctional. Following a TDN treatment, the SFMA is repeated. At this time the immediate effects of the dry needling can be documented with respect to both function and pain provocation. The therapist then prescribes "corrective exercises" to maximize the functional gains achieved from the TDN treatment. Depending on the patient's tolerance, the exercises can range from gentle mobility and stretching to more specific neuromuscular re-education and strengthening.

At this time only 5% of licensed Physical Therapists are trained in Trigger Point Dry Needling and KPT is proud to offer this exciting and effective intervention to our patients from Gary Kassimir PT, MS, CHT and Tamara Grunitzky PT, DPT, OCS. For those interested in learning more about this technique and how it can affect your patients, KPT will be hosting an in-service in the Fall of 2013 complete with demonstrations.

1. Simons, D.G; Travell, J.G.; Simons, L.S. (1999) *Travell and Simons Myofascial Pain and Dysfunction: The Trigger Point Manual* (2nd Ed). Baltimore, MD: Williams & Watkins

2. McPartland, J.M. (2004). Travell trigger points - molecular and osteopathic perspective. *Journal of American Osteopathic Association*, 104, 244-249.

### KPT News Flash:

#### Comings and Goings...

KPT is happy to welcome back from maternity leave, Staff Therapist Day Alfonso. Day and her family welcomed their new addition, a second daughter, Jianne. We know it's hard to leave those sweet babies, but we're so glad Day is coming back!

We also give a sincere THANK YOU to Chris Backus for filling in for Day during her absence. Chris did an outstanding job with our patients and will surely be missed.

KPT wishes a fond farewell to Billing Manager, Kim Stockslager. Kim's thoroughness and attention to detail are second to none. Kim's new employer is lucky to get her and her outstanding billing expertise.

KPT welcomes new Practice Manager, Michelle Horodowicz. Michelle comes to KPT with a diverse background in Healthcare and Leadership. She managed the Shock Trauma Radiology Department for 10 years, before becoming a certified HR Organizational Development Trainer, specializing in Leadership Development. In addition to leading workshops designed to improve managers' skills and effectiveness, she also assisted her husband in the management of his dental practice. We're happy to welcome Michelle to the KPT team.

### Green News....

KPT is excited to be entering into a relationship with Clinicient, a Physical Therapy Electronic Medical Records (EMR) services company. A web-based, physical therapy software, Clinicient provides clinical documentation, scheduling, billing and management reporting – all in one system. Once staff training and the transition is complete, KPT will experience a seamless integration of all the non-clinical aspects of patient care, eliminating the need for repeated data entry and giving our Therapists more time to do what they do best...treat our patients! An added bonus to this exciting undertaking is the ability for us to go paperless.



**KASSIMIR PHYSICAL THERAPY, P.A.**

*"Ultimate Rehab . . . through personal committed care"*

Monday	7:30 a.m.	–	7:30 p.m.
Tuesday	8:00 a.m.	–	7:30 p.m.
Wednesday	7:30 a.m.	–	7:30 p.m.
Thursday	8:00 a.m.	–	7:30 p.m.
Friday	7:30 a.m.	–	5:00 p.m.
Saturday	8:00 a.m.	–	12:30 p.m.

**Many Insurance Plans Accepted**



COMMERCENTRE EAST  
SUITE 130  
1777 REISTERSTOWN ROAD  
PIKESVILLE • MARYLAND • 21208

PRSRT STD  
U.S. Postage  
PAID  
Owings Mills, MD  
Permit #38

**kptrehab.com**  
Please visit our website for practice information, directions, patient forms and a complete list of accepted insurances.