



# Trigger Point Dry Needling

GETTING YOU BACK FROM INJURY FASTER

## Trigger Point Dry Needling

### Background and Indications

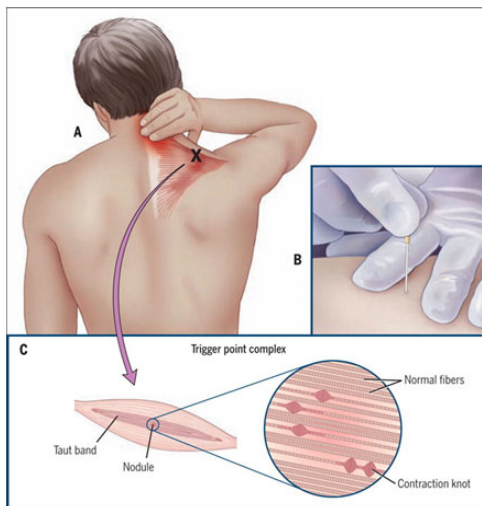
Trigger point dry needling (TPDN), also referred to as Intramuscular Manual Therapy, is a treatment for muscular tightness and spasm. These areas of tightness or spasm are commonly referred to as trigger points. Trigger points are defined as the presence of exquisite tenderness, in a nodule, in a taut band of muscle, and may elicit a twitch response to pressure. Trigger points can develop from injuries, postural faults, or a disease process.

The muscular tightness or spasm that develops from an injury or disease process can cause compression and irritation of the nerves exiting the spine and/or anywhere along their pathway. When the nerves are irritated, they can cause a protective spasm to any of the muscles along the pathway. Care must be directed both centrally to address the origin of pain and peripherally to reduce symptoms from the central compression.

The term "dry" refers to the fact that no medication is inserted with the needles. When the technique was first discovered, doctors found that the therapeutic benefits were a result of the needle entering the trigger point rather than the use of medication for pain relief.

### Technique Used

The technique uses small, thin filament needles that are inserted into the muscles at the trigger points, resulting in a replication of the pain referral pattern. The muscles then contract, or twitch, and release, which improves muscle flexibility, removes the source of irritation, initiates a local inflammatory response, and decreases spontaneous electrical activity at the trigger point.



### AT A GLANCE - BENEFITS OF DRY NEEDLING

- Resets pain cycle, making it a natural pain reliever
- Produces local inflammatory response to promote healing
  - Increases blood flow
- Releases trigger points, often known as muscle knots

### Who can benefit?

TPDN is used for both acute and chronic injuries or conditions. Some of the common diagnoses we treat with this technique are:

- Muscle tears
- Shin splints
- Rotator cuff injuries
- Tennis/golfer's elbow
- Sciatica
- Cervicogenic headaches
- Neck pain
- Patellofemoral pain syndrome
- Carpal tunnel
- Shoulder impingement
- Plantar fasciitis
- Pelvic pain
- Temporomandibular dysfunction
- Fibromyalgia
- Tendonitis

## Dry Needling and Acupuncture: Similarities and Differences

A common misconception about TPDN is that it is the same thing as acupuncture, but although the two techniques use the same kind of needle, they have their own distinct purposes.

Dry needling is derived from neurophysiological principles about anatomy and pathophysiology of myofascial (muscular) trigger points. The theory behind TPDN is that needles are inserted into the trigger point, resulting in local inflammatory response that includes increased blood flow to the muscle, and clearance of excess contraction-inducing neurotransmitters in the muscle. This brings more nutrients and inflammatory factors to the muscle, creating an optimal environment for healing. There is also localized release of endogenous opioids (natural pain killers), as well as at the spinal cord.

Acupuncture, on the other hand, is rooted in traditional Chinese Medicine. The goal is to regulate energy flow and balance through inserting needles into various "meridian points" that are found all over the body and have a high percentage of overlap. Stimulation of these points may produce the production of endogenous opioids (natural pain killers) and change blood flow patterns, but is thought to be more systemic rather than a localized response. For instance, a common condition that has been shown to improve with acupuncture is nausea and vomiting in patients who have undergone surgery or chemotherapy.



### What to expect

The goal of dry needling is to penetrate a tender trigger point in order to elicit a twitch response. The needles used are so thin, you can bend them with your finger, and you do not feel them enter the muscle. As the Physical Therapist inserts the needle, you should feel a deep aching sensation that may or may not be in the same place as your familiar pain. You may also feel a pinching sensation, which is a normal, but undesired response, and the needle will be repositioned. Some of your pain may be relieved immediately, but you may also experience some soreness in the treated muscle. These symptoms can last from 24-48 hours, and feels similar to the soreness following a hard work out. Treatment may be followed up with heating the area to continue to promote muscle relaxation. Following treatment, it is recommended to increase your water intake to help decrease soreness. Once soreness wears off, you should notice a decrease in pain. Due to the healing nature of the process, the positive results should last longer than regular manual treatment.

It must be understood that this treatment may not alleviate your symptoms in one session. Everyone responds to the treatment differently and other types of treatments may be suggested to facilitate the relief of symptoms.

### How long will the benefits last?

As mentioned previously, the effects of dry needling differ for everyone, some only require one treatment while others require multiple treatments. Regardless of your response to treatment, it is important to remember TPDN is used as an adjunct to a comprehensive physical therapy program. With any type of musculoskeletal dysfunction, contributing factors include tight muscles, weakness or instability in the surrounding muscles, joints, and lack of proprioception (sense of balance or position). Physical therapy targets these areas of dysfunction through exercise and manual therapy. As muscle imbalances are corrected through strengthening, stretching, and stability training, the frequency at which you need dry needling will decrease. This is a natural course of healing and when done properly, will help future or recurrent injury.

