

Functional Dry Needling (FDN)

What It Is: A technique used to treat pain by addressing trigger points in muscles that can be responsible for your pain

The Procedure Includes:

- A thin, round tipped needle (same needle used for acupuncture) is inserted directly into the muscle in an active trigger point
 - o A trigger point is a small area of muscle that is in spasm (contracted), causing taut bands and hypersensitivity. These so called “knots” in the muscle cause a restriction of the blood supply leading to the accumulation of waste products and toxins which sensitize the trigger point causing it to send out pain signals and further increase local and/or referred symptoms. Trigger points often refer pain to areas other than where they are actually located. These areas have been mapped in studies and charted.
- Studies have shown a local twitch response caused by dry needling to produce a change in the actual length of these tightened muscles and improve the biochemical concentration of the muscle thereby reducing pain
 - o Often once the needle has been placed, electrical stimulation is used to cause a repeated contraction which further alters the muscle length and biochemical make up

How It Works: FDN incorporates 2 theories on soft tissue dysfunction: the Trigger Point Model and the Radiculopathic Model

- The Trigger Point Model focuses on depleting the muscle of needed substances used in contraction forcing the muscle to relax
 - o Injury to muscle → Calcium release & prolonged muscle shortening → reduced blood flow and oxygen → compromised healing → accumulation of waste products → hypersensitivity of local nerves and pain → further injury due to improper use
 - o Abnormal nerve and muscle interaction → increase in contractile chemicals → increased spontaneous electrical activity of the muscle
- The Radiculopathic Model focuses on Cannon’s Law stating when nerves are destroyed an increased sensitivity to chemical agents develops in that area
 - o Changed to spinal nerve segment or compression of nerve → heightening sensitivity in area supplied by nerve → banding of muscle tissue → excess strain on muscles → further nerve and muscle irritation due to improper use

What to Expect: It is important to understand what is a normal response to this treatment

- It is important to achieve a muscle twitch, though it does not always happen, that is the goal with needle insertion
- Muscle soreness that feels much like a soreness that comes from working out can occur following needling
 - o Use of ice or heat can help and gentle activity rather than not moving the area is best
- Following the instructions given by your therapist for exercises and stretches is CRITICAL to achieve the best outcome... these may be the same things you had been doing but doing them more often or performing new specific activity
 - o FDN is always used in conjunction with other therapy interventions with the goal of making those interventions the most effective they can be
- Several sessions may be needed to fully reset and restore the musculoskeletal system