

# The Connection Between Dry Needling and Increased Range of Motion

When it comes to improving flexibility, mobility, and overall physical performance, the importance of range of motion (ROM) cannot be overstated. Whether you're recovering from an injury, dealing with chronic pain, or simply working to enhance your athletic performance, restoring or improving your range of motion is a key component of rehabilitation. One highly effective treatment for addressing limited ROM is dry needling, a technique offered <a href="Dry Needling Therapy Spruce Grove">Dry Needling Therapy Spruce Grove</a> at Sunrise Physical Therapy. But how exactly does dry needling contribute to an increased range of motion, and why is it considered such an effective tool in physiotherapy? Let's take a closer look.



## **How Dry Needling Improves Range of Motion**

The primary mechanism behind dry needling's ability to enhance range of motion lies in its ability to address myofascial trigger points, which are tight, hyperirritable areas within a muscle. These trigger points can restrict movement, cause discomfort, and lead to reduced flexibility. By using dry needling to stimulate these points, physiotherapists can help release muscle tightness and promote greater muscle lengthening. Here's how this works:

#### Release of Muscle Tension

One of the most significant factors that limit ROM is muscle tension. When muscles become tight due to injury, overuse, or chronic stress, they shorten and become less flexible. Dry needling works by stimulating the muscle fibers directly, triggering a response that encourages the muscle to relax. This relaxation of the muscle tissue can help to lengthen the muscle, reducing tension and allowing for greater movement.

### Increased Blood Flow to the Area

The insertion of needles into a muscle creates a microtrauma, which promotes an inflammatory healing response. This increased blood flow carries oxygen and nutrients to the injured tissue, helping to accelerate the healing process. As blood circulation improves, the muscles become more pliable, which can result in improved flexibility and a greater range of motion. The enhanced circulation also helps to flush out metabolic waste products, reducing muscle soreness and stiffness.

## **Reduction of Trigger Points**

Trigger points are hyper-irritable spots in the muscle that can cause pain and stiffness, limiting range of motion. By targeting these specific areas with dry needling, the technique helps to break up the tightness and adhesions in the muscle fibers. When trigger points are released, the surrounding muscles are able to function more effectively, increasing their ability to stretch and move freely.

#### Pain Reduction

Pain is another factor that inhibits full range of motion. Chronic pain or discomfort in a muscle can make it difficult to move freely and perform exercises to restore mobility. Dry needling helps reduce pain by interrupting pain signals sent to the brain and promoting the release of natural pain-relieving chemicals called endorphins. With reduced pain levels, patients can engage in more effective stretching and strengthening exercises, improved flexibility and ROM over time.

# Conditions That Benefit from Dry Needling for ROM Improvement

<u>Dry needling</u> is particularly effective for individuals who experience limited range of motion due to various conditions, such as:

Muscle Strains and Sprains: Injuries to muscles, ligaments, or tendons can result in tightness and restricted movement. Dry needling can help release the tension in these muscles, accelerating recovery and restoring ROM.

Chronic Pain Conditions: Conditions like myofascial pain syndrome, fibromyalgia, and tension headaches often involve muscle tightness and trigger points that restrict movement. Dry needling can target these areas to reduce pain and stiffness.

Post-Surgical Rehabilitation: After surgery, scar tissue, inflammation, and muscle guarding can limit movement. Dry needling can be used to promote healing and restore flexibility in the affected areas.

Sports Injuries: Athletes often suffer from overuse injuries that result in muscle imbalances and restricted ROM. Dry needling helps alleviate muscle tightness and restore proper function, allowing athletes to return to their sport more quickly.

Joint and Soft Tissue Disorders: Conditions like frozen shoulder, tennis elbow, and carpal tunnel syndrome often involve muscle tightness that contributes to limited movement. Dry needling can help alleviate this tightness, improving ROM and reducing pain.

Complementing Dry Needling with Other Physiotherapy Techniques
While dry needling is highly effective for increasing range of motion, it is most beneficial when combined with other physiotherapy treatments, such as:

Stretching Exercises: After dry needling, physiotherapists will typically recommend specific stretching exercises to help maintain and further improve ROM. Stretching helps to reinforce the benefits of dry needling and prevent muscle tightness from returning.

Strengthening Exercises: Once ROM has been improved, strengthening exercises are crucial to prevent future injuries and maintain joint stability. Physiotherapists at Sunrise Physical Therapy design individualized rehabilitation programs that include both stretching and strengthening techniques.

Manual Therapy: Manual therapy techniques such as joint mobilization and soft tissue massage can complement dry needling by further reducing muscle tightness and improving joint mobility.

## Conclusion

Dry needling is a powerful physiotherapy technique that can significantly improve range of motion by addressing muscle tension, trigger points, and pain. Whether you're recovering from an injury, dealing with chronic pain, or looking to enhance your physical performance, dry needling can help restore flexibility, reduce stiffness, and improve overall mobility. At <u>Sunrise</u>

<u>Physical Therapy</u> in Spruce Grove, our skilled physiotherapists use dry needling in combination with other treatments to help patients recover faster and more effectively. If you're struggling with limited range of motion or muscle tightness, don't hesitate to contact us and explore how dry needling can benefit you.

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