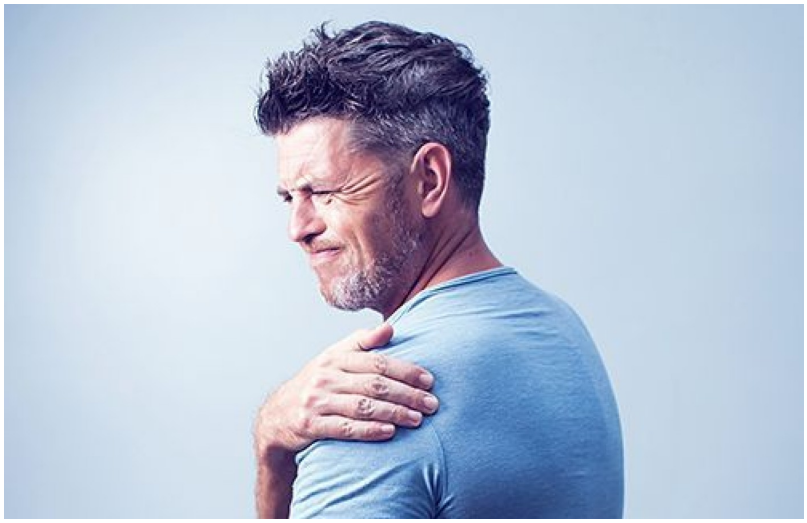
Dynamic Chiropractic



RESEARCH ROUNDS

Improving Shoulder Function and Pain With an HVLA Thrust

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The shoulder has been reported to be the fifth most common cause of chronic pain.[1] Subacromial pain syndrome (SAPS) is one of the most common causes of shoulder pain, with multiple etiologies and known to be a combination of rotator-cuff pathologies, such as tendonitis bursitis tendinopathies, and tears.[2]

Previously, there has been little knowledge of the natural history and treatment of SAPS, with the focus on treating inflammation through steroid injections and NSAIDs, although the presence of said inflammation has not been confirmed.[3] All non-surgical interventions, including injections, medication, manual therapy, exercise, electrotherapy, and cognitive therapy as first-line management, remain unclear as to dose, type and load.[4]

The prognosis of SAPS is poor, with 40-50 percent of patients reporting pain 6-12 months after an initial consultation.[5] With historical treatments remaining unclear, a thoracic spine low-amplitude, high-velocity thrust (manipulation or chiropractic spinal adjustment) immediately increases neuromuscular drive, and improves pain and function.[6] When evaluating pain inhibition and increased function, this high-velocity low-amplitude thrust (HVLAT) mechanism shows a level of consistency in a physiological mechanism rendering positive outcomes.

An HVLAT involves gapping the zygapophyseal joints, reducing the impaction and opening the joint, encouraging the misplaced meniscoid (spacer) to return to its normal anatomical position in the joint cavity. With the meniscoid displaced, the articular cartilage buckles, forming a space-occupying lesion under the capsule, causing a meniscoid entrapment.

Many type 3 and type 4 nerve fibers (nociceptors) have been observed in the joint capsule and render central sensitization involving muscles spasms and resultant malfunction.[7]

It has also been reported that an HVLAT causes hypoalgesia and increased mechanical function in disparate regions through central sensitization.[8-9] These mechanisms are intact in symptomatic and asymptomatic patients, and offer therapeutic answers to those in pain and those seeking increased function or strength.

The evidence of a thoracic spinal HVLAT leading to an immediate increase in muscle activity linked to short-term changes in reported shoulder pain is consistent with previous findings. So is the connection

between an HVLAT and central sensitization as the neurological connection to cause and effect.[6-7,10]

References

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