# RAPID RESEARCH



## Inside This Week: The Mystery of Frozen Shoulder

Frozen Shoulder: The Mystery Syndrome

Surgery Vs Physio for Frozen Shoulder

Non-Surgical Treatments for Frozen Shoulder



@physicaltherapyresearch



**JUNE 2021** 

## FROZEN SHOULDER: THE MYSTERY SYNDROME

This review overviewed the current scientific position of frozen shoulder in terms of evolutionary factors, etiology, the different mechanisms of action involved, current treatment options and other possible interventions based on recent discoveries of pathophysiological mechanisms.



## KEY FINDINGS

#### Epidemiology:

Incidence of Frozen Shoulder (FS) is 2 to 5% worldwide. 4-fold higher rates of FS in women vs men. With Type 1 diabetes, incidence is as high as 59% in patients over 45 years of age.

#### Pathogenesis:

Not fully understood.

Mechanisms include the accumulation of advanced glycation end products (AGE), associated with insulin resistance with compensatory hyperinsulinemia, chronic hypoxia, chronic LGI, and endotoxemia.

#### **Treatment Options:**

A wide spectrum of local treatments available, both surgical and non-surgical.

None of the current therapeutic options are universally accepted as the most effective in restoring symptoms in patients with FS.

Common nonsurgical treatments include:

Medication, physical therapy, exercise, manipulation under anesthesia, steroid injection or nerve blockers which can provide temporary relief of symptoms.

## MAIN TAKEAWAYS

#### FS is a dysfunction related to pathologies such as diabetes, Parkinson's, Dupuytren's and hypothyroidism.

The mechanisms of action related to the aforementioned pathologies include low-grade inflammation and chronic hypoxia.

These mechanisms, together with the influence of modern life, including a sedentary lifestyle, and the partial or complete absence of range of motion of the shoulders in general and of the non-dominant shoulder in particular, suggest that the pathology of FS is systemic.

FS does not seem to resolve itself, although this paradigm still persists, and more research is needed to corroborate it.

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### SURGERY VS PHYSIO FOR FROZEN SHOULDER

This study compared 2 surgical interventions (Manipulation under anesthesia and arthroscopic capsular release) with early structured physiotherapy plus steroid injection.



# <u>KEY FINDINGS</u>

Manipulation: 89 participants (94%). Capsular release: 191 (94%). Physiotherapy 93 (94%).

Minimal Differences in 12 Month outcomes between 3 treatments.

8 serious adverse events were reported with capsular release 2 with manipulation.

At a willingness-to-pay threshold of £20 000 per quality-adjusted life-year, manipulation under anesthesia had the highest probability of being cost-effective.

## MAIN TAKEAWAYS

None of the 3 trial treatments were superior on patient-reported outcomes for shoulder pain and function at 12 months.

However, a marginal clinically important benefit of capsular release over physiotherapy might exist in the wider population.

Physiotherapy was accessed more quickly than were the surgical options, and was lower in cost.

Manipulation under anesthesia was the most cost-effective option.

Capsular release carries higher risks and costs compared with manipulation and physiotherapy, but fewer participants in this group required further treatment.

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### NON-SURGICAL TREATMENTS FOR FOR FROZEN SHOULDER

This review evaluated the clinical effectiveness of non-surgical treatments for primary frozen shoulder in terms of pain, movement, self-reported function and disability, quality of life, recovery time, return to work and recreation, and adverse events.



## **KEY FINDINGS**

30 Research trials were included.

The majority of studies evaluated as being at high risk of potential bias.

Only 4 trials were evaluated as being at low risk of bias.

Overall limited new evidence informed the non-surgical management and treatment of people with frozen shoulder.

Including: Manual Therapy Joint Mobilization Stretching Injections

# MAIN TAKEAWAYS

Limited additional research was found in the recommendation for non-surgical management of idiopathic FS.

An intra-articular corticosteroid injection supported by a home exercise program may be of benefit for those with symptoms of less than 6 months.

There may be some benefit for including manual therapy and stretching, but due to the high number of treatments required and the uncertainty of achieving clinically meaningful differences, the inclusion should be considered cautiously

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