

# FROZEN SHOULDER A CHRONIC PAIN

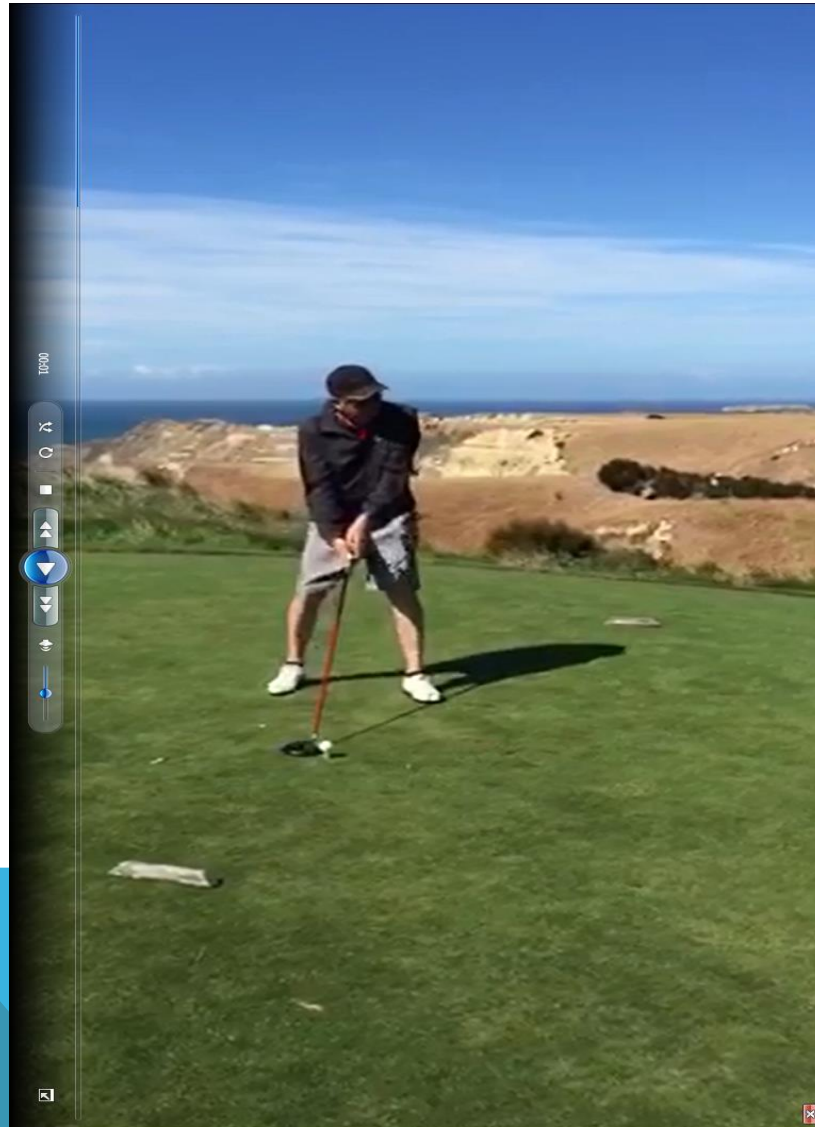
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# **ENIGMA**

**SOMETHING THAT IS DIFFICULT TO  
UNDERSTAND OR EXPLAIN**



# MY GOLF SWING



# **FROZEN SHOULDER**

**NO EVIDENT CAUSE OR PROVOCATION**

**A Normal Shoulder**

**Persistently Painful**

**Global Stiffness**



# FROZEN SHOULDER

Persistent Shoulder and referred arm pain

Protracted Course : Freezing : painful stiffening

1 – 9 months

Frozen : pain less, ROM frozen

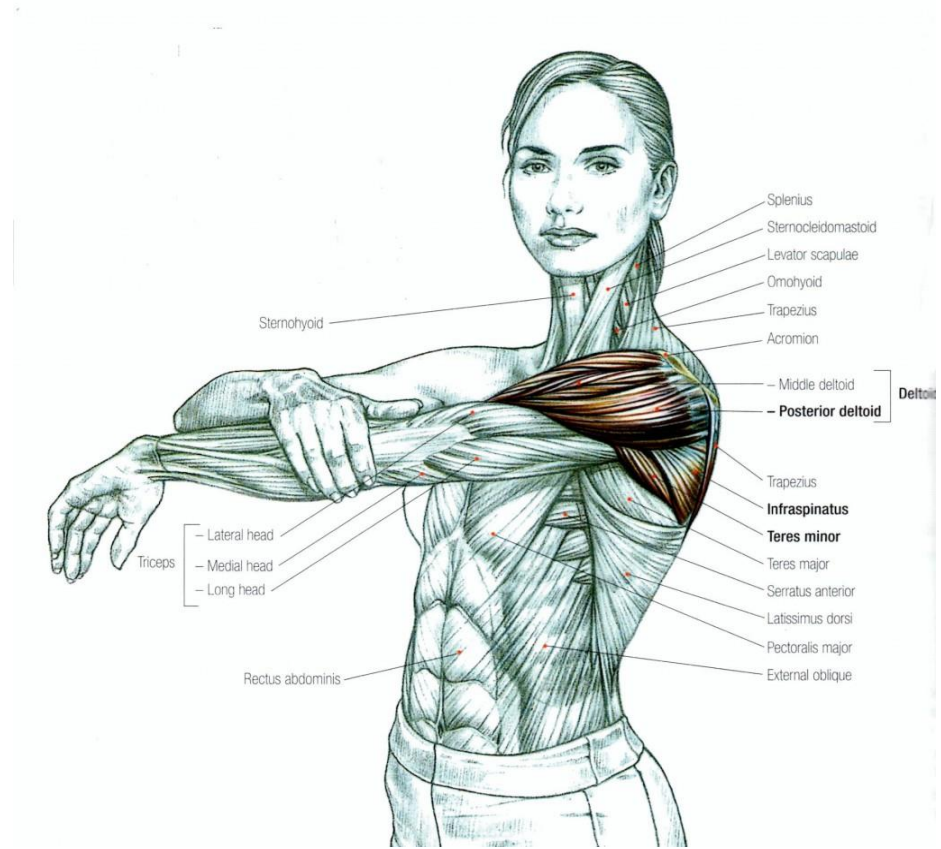
6 months

Thawing : Slow resolution

2 years



# SHOULDER ARM REGIONAL PAIN



# IDIO PATHIC

DOCTOR - IDIOT

PATIENT - PATHETIC



# **FROZEN SHOULDER**

**SHOULDER SPRAIN**

**ROTATOR CUFF STRAIN**





# **CASE 1**

**MRS. SM – AGE 59 – CLEANER**

**FALL AT WORK**

**NECK – SHOULDER – ARM PAIN**

**MRI – C5-6 DISC**

**Surgery Recommended**

# **CLINICAL EXAMINATION**

**LAY THE PATIENT SUPINE**

**FIX THE SHOULDER BLADE ON THE COUCH**

**PROTRACT THE RANGE OF MOVEMENT**



**IMPINGEMENT - EXTERNAL AND INTERNAL ROTATION ARE PRESERVED**

**FROZEN SHOULDER - ALL MOVEMENT RESTRICTED**



## **CASE 2**

**MR. RP - AGE 48 - FREEZING WORKER**

**CONTUSION SPRAIN RIGHT SHOULDER**

**LIMITATION OF MOVEMENT - SEVERE RESTRICTION**

**CALCIFIC TENDONOSIS + FROZEN SHOULDER**



# CASE 3

MR. PW - AGE 46 - DAIRY FARMER

ROLLED 4WD BIKE - CONTUSION SPRAIN LEFT SHOULDER

DIABETIC

FROZEN SHOULDER



# CASE 4

MRS. DH - AGE 46 - AIRPORT SECURITY OFFICER

FALL - ROTATOR CUFF TEAR LEFT SHOULDER

SIMPLE ROTATOR CUFF REPAIR

CRPS LEFT FOREARM AND HAND - 4 WEEKS

FROZEN SHOULDER - 6 WEEKS



**FROZEN SHOULDER MAY BE ACCIDENT INJURY  
RELATED**



# **CJ WOLF 2004**

**PAIN PATTERNS - NOCICEPTIVE**

**INFLAMMATORY**

**NEUROPATHIC**

**FUNCTIONAL**

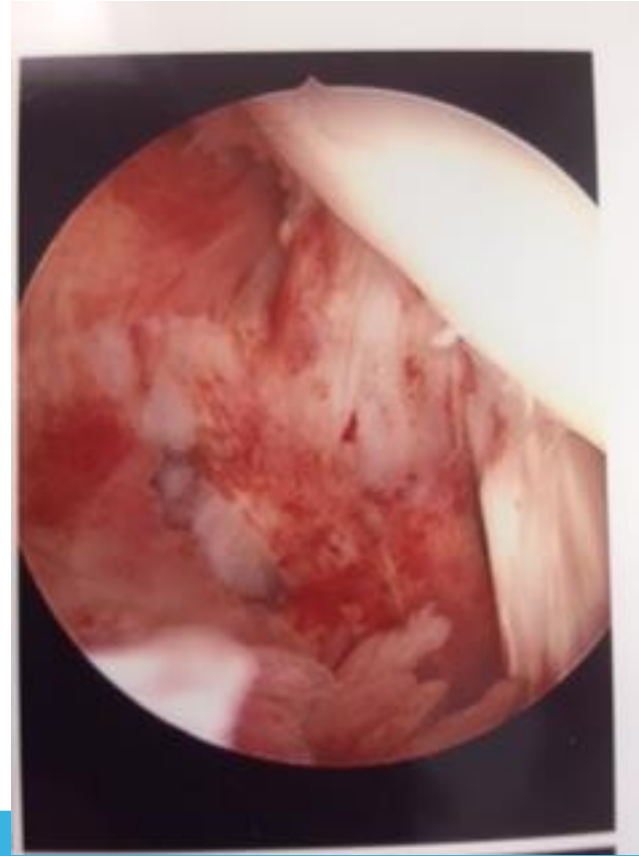
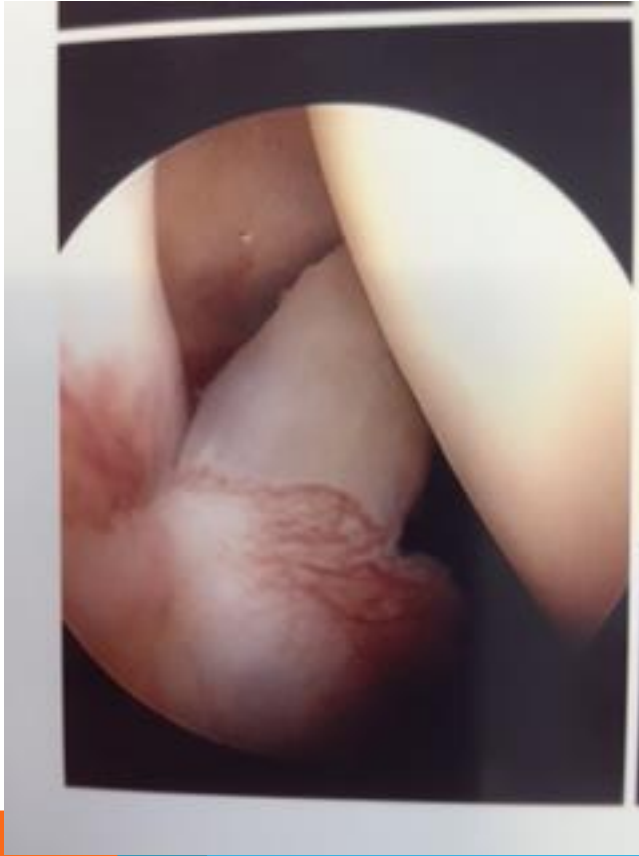
**CENTRAL NEURAL SENSITISATION**

**CENTRAL NEURAL TRANSFORMATION**





# SYNOVITIS



**? ! PATHO-PHYSIOLOGY ! ?**

**TRANSFORMING GROWTH FACTOR**

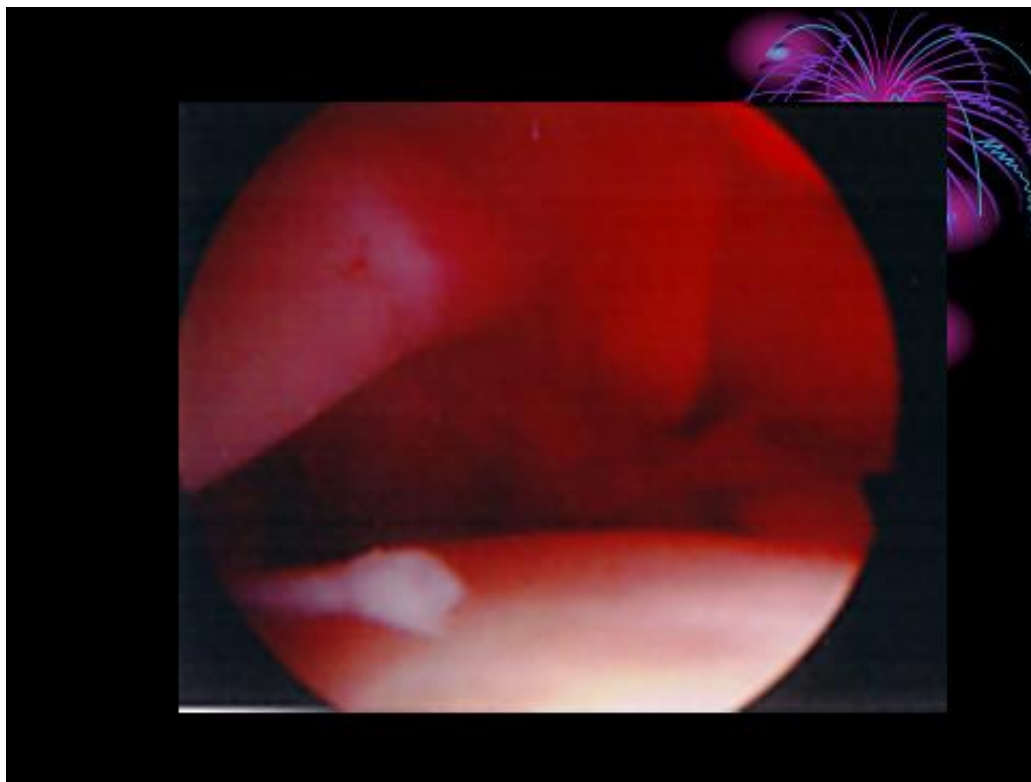
**PLATELET DERIVED GROWTH HORMONE**

**AUTO IMMUNITY**

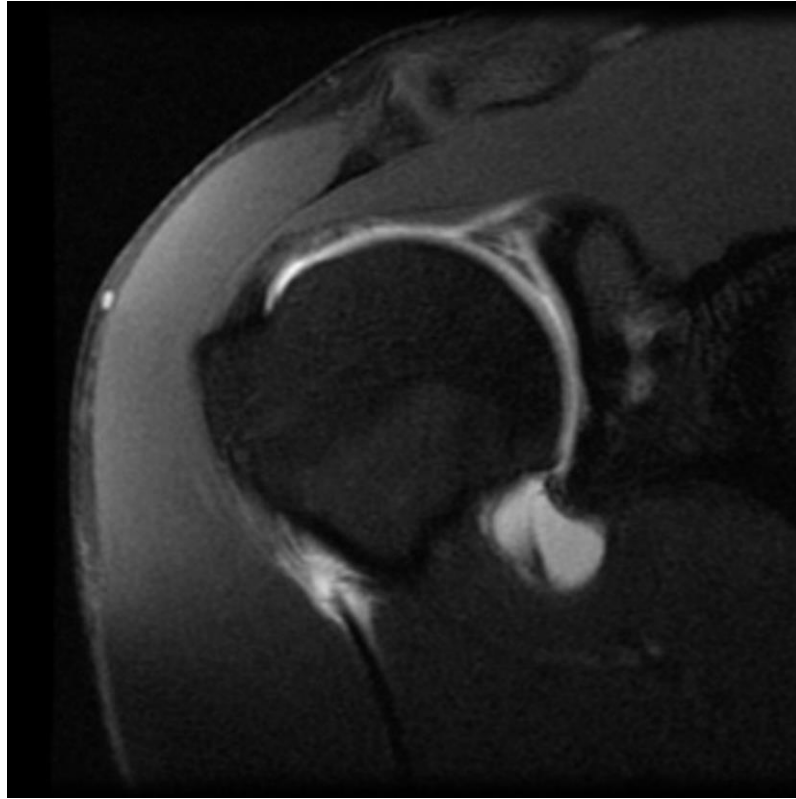
**GENETIC PREDISPOSITION**



# ARTHROSCOPY




# MRI



**CHRONIC PAIN DISORDER**

**PERSISTENT PAIN**

**BEHAVIOURAL DYSFUNCTION**



**FROZEN SHOULDERS**

**DO NOT ALL EVENTUALLY RESOLVE**



# TREATMENT

NOT SURGICAL

PHYSIOTHERAPY

CORTICOSTEROID



# Gentle thawing of the frozen shoulder: A prospective study of supervised neglect versus intensive physical therapy in seventy-seven patients with frozen shoulder syndrome followed up for two years

Ronald L. Diercks, MD, PhD, and Martin Stevens, PhD, Groningen, The Netherlands

*Seventy-seven patients with idiopathic frozen shoulder syndrome were included in a prospective study to compare the effect of intensive physical rehabilitation treatment, including passive stretching and manual mobilization (stretching group) versus supportive therapy and exercises within the pain limits (supervised neglect group). There were no significant differences in age, sex, time elapsed since onset, and disease severity at inclusion. All patients were followed up for 24 months after the start of treatment. In the patients treated with supervised neglect, 89% had normal or near-normal painless shoulder function (Constant score  $\geq 80$ ) at the end of the observation period. This end result was reached by 64% within 12 months. In contrast, of the group receiving intensive physical therapy treatment, only 63% reached a Constant score of 80 or higher after 24 months. Both the level of the Constant score at*

*range of motion without any form of passive stretching. To establish the effect of supervised neglect on frozen shoulder compared with an intensive physical therapy regimen that includes passive stretching and exercises that supersede the pain thresholds, a prospective study was designed in patients with well-defined idiopathic frozen shoulder syndrome. The study hypothesis was that, by treating patients with supervised neglect, a painless and better range of motion can be attained within a shorter time span than by means of intensive physical therapy with passive stretching and mobilization.*

## MATERIALS AND METHODS

All 77 patients with idiopathic frozen shoulder syndrome diagnosed between January 1997 and January 2001 were included. The diagnosis was established as defined by Lundberg<sup>14</sup>: more than 50% motion restriction of the glenohumeral



# CORTICO STEROID



# **INTRA-ARTICULAR KENACORT 80<sub>MG</sub>**

**SYSTEMIC – PREDNISONE**

**20<sub>MG</sub> - 10 DAYS**

**10<sub>MG</sub> – 10 DAYS**

**70% RESPONSE – 4 WEEKS**

# ADRENAL EXTRACT

World War 2 German Aircrew



British Spies



**AND SO A MYTH WAS BORN**



# TO HELP YOU SEE IN THE DARK

British - Carrots

STEROIDS

Americans

Amphetamines



# **MECHANISM OF ACTION**

**Stabilises the Lysosomal Membrane of Immune system cells**

**Thereby Controlling the Release of Cytokines and P Substances**

**Thus diminishing the Inflammatory Reaction**



**Orthopaedic  
Surgeons aren't  
just Bone Heads**



# **CONCLUSION**

**FROZEN SHOULDER - Idiopathic**  
**- Accident Injury Caused**

**CLINICAL EXAM - Patient Supine**  
**- Protract True R.O.M**

**TREATMENT - Cortico Steroid**





**THANKYOU - PETER WELSH**





**TGF**



# LIMITATIONS : RESTRICTIONS

No don't do's

Can't do's

But pushing it doesn't Help



# CORTICO STEROID INJECTION

How does it work



# DEVELOPS IN A NORMAL SHOULDER

Age 40-60

More common in  
diabetics

Family history

Rarely recurs on  
the same side  
20% on opposite

# REGIONAL PAIN DIAGRAM



**WHY : HOW**

**Auto immune Reaction  
Myofibroblastic Proliferation  
Transforming Growth Factor**



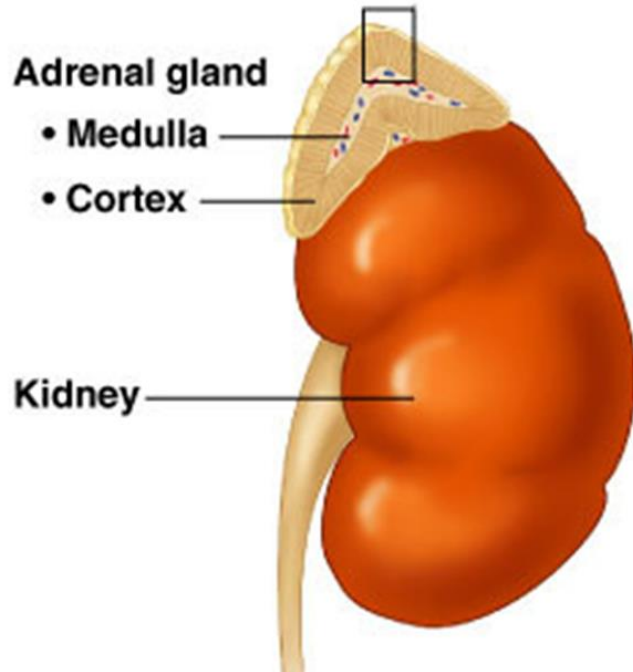
**M.U.A.**

**Manipulation Under Anaesthetic**

**A gentle stretch over 2-3 minutes**



# ADRENAL CORTICOSTEROIDS



## Glucocorticoids

Regulates glycogen  
and lipid function

Boosts energy levels

## Androgens

Anabolic , energy  
boosting