

Winging Scapula, causes, approach & treatment

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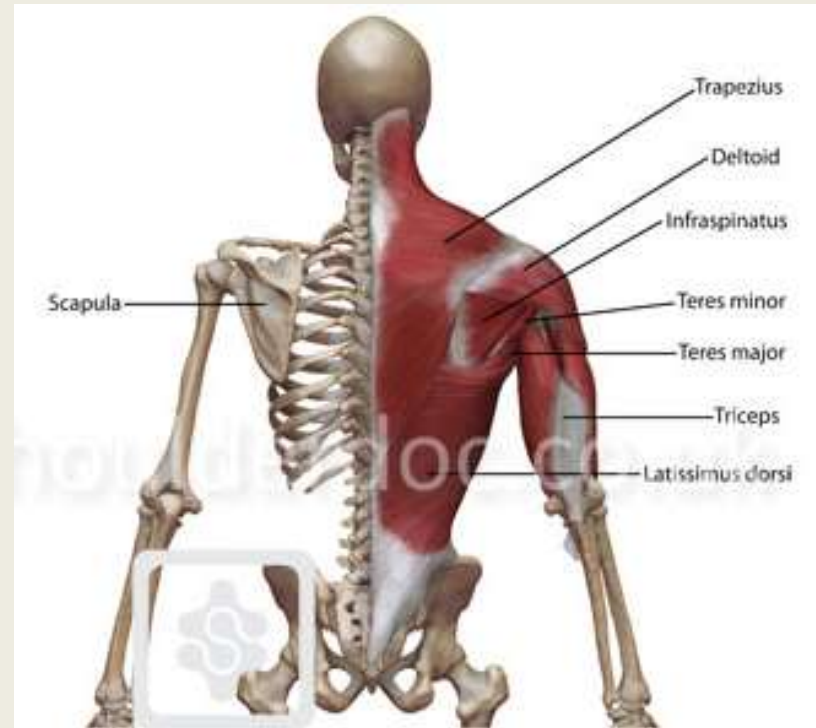
Scapula

- Largest bone in shoulder
- Greatest number of muscle attached
- Synchronized action of muscles

Dysfunction of the muscles

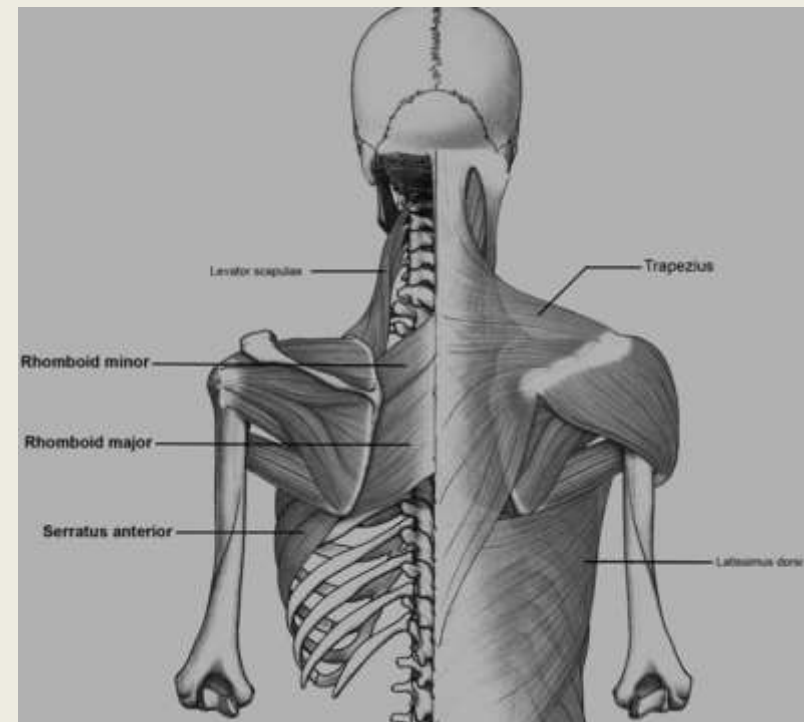


Winging



scapular winging

- **Scapulohumeral rhythm disruption :**
 - limited flexion and abduction
 - considerable pain
 - **Mostly due to nerve lesions**
 - long thoracic nerve
 - spinal accessory nerve
 - **Muscle dystrophies**



scapular winging

- **Winging secondary to RC injury or instability**
- **Winging secondary to pain**



- **Winging is mild**
- **EMG & NCV is normal**



TABLE 34-3

WINGING OF THE SCAPULA

I. Primary Scapular Winging

A. Neurologic

1. Long thoracic nerve—trapezius palsy
2. Spinal accessory nerve—serratus anterior palsy
3. Dorsal scapular nerve—rhomboides palsy

B. Bony

1. Osteochondromas
2. Fracture malunions

C. Soft Tissue

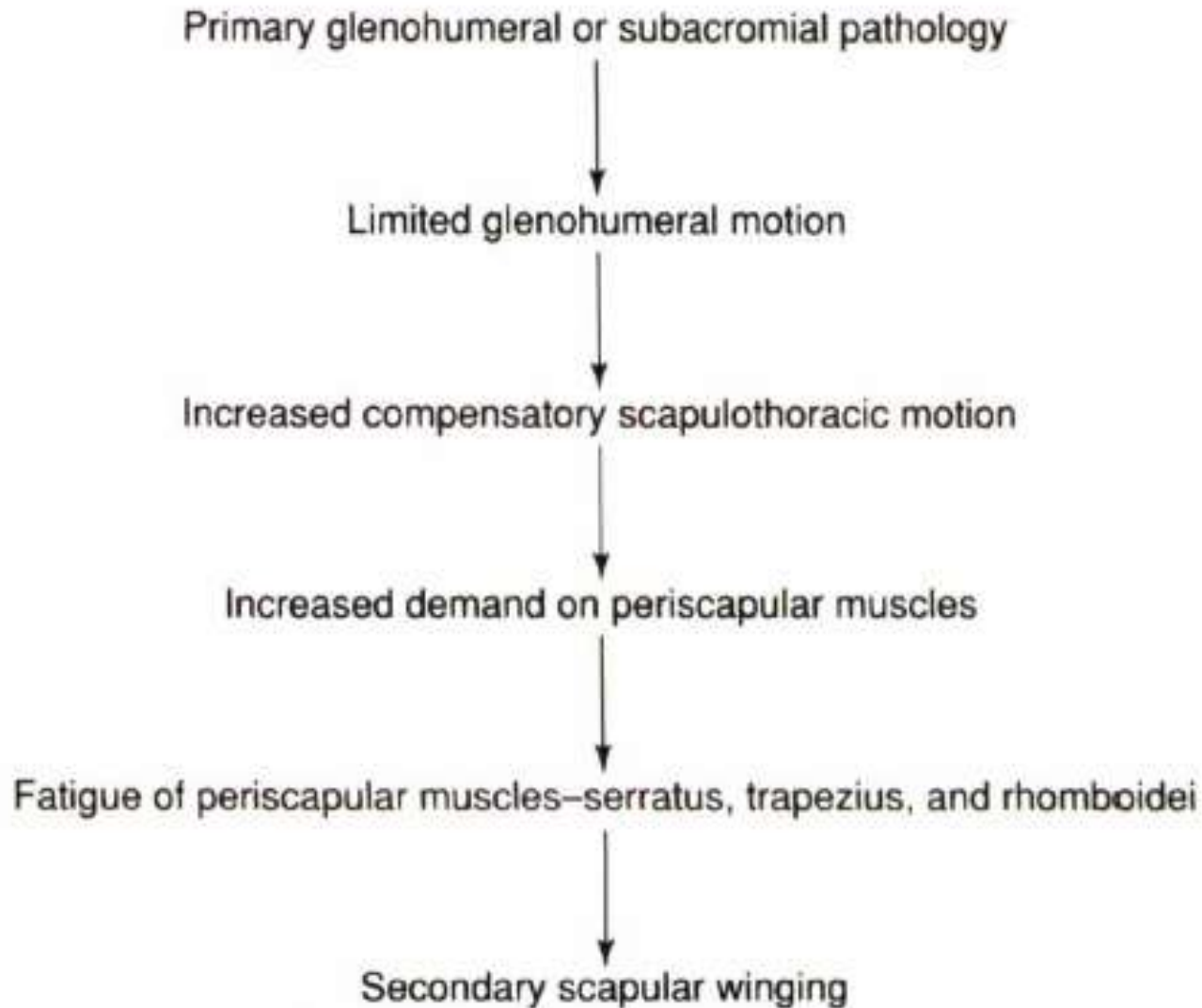
1. Contractural winging
2. Muscle avulsion/muscle agenesis
3. Scapulothoracic bursitis

II. Secondary scapular winging

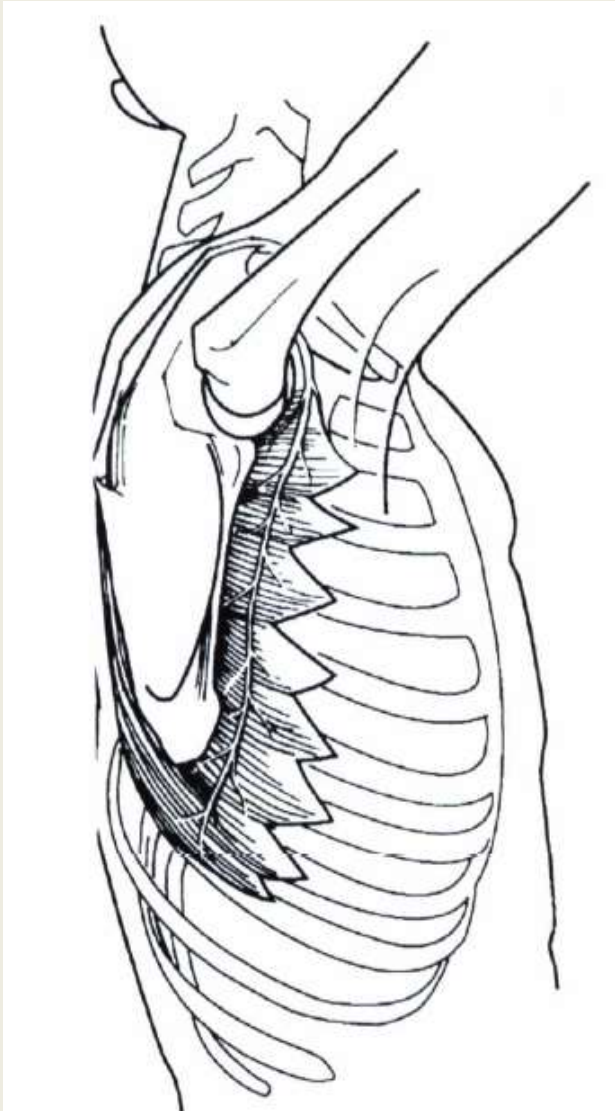
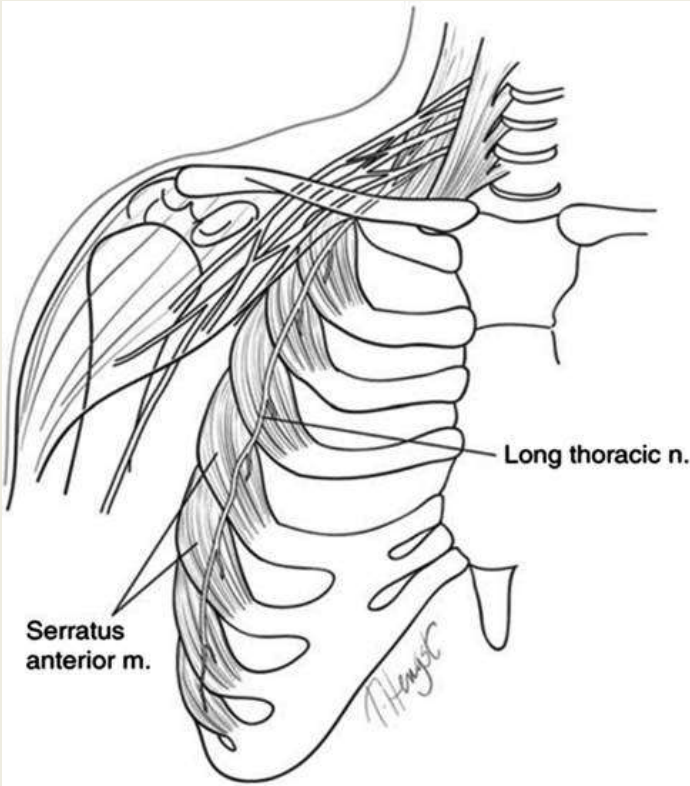
III. Voluntary scapular winging

Complex and revision problems in shoulder surgery.
Philadelphia: Lippincott-Raven Publishers, 1997:357-375.)

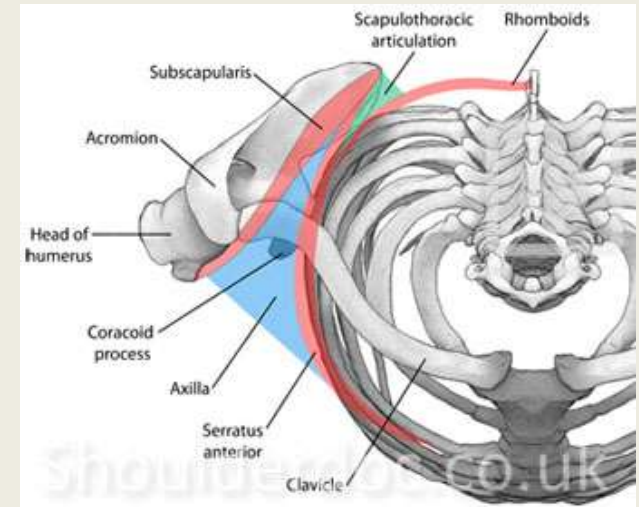
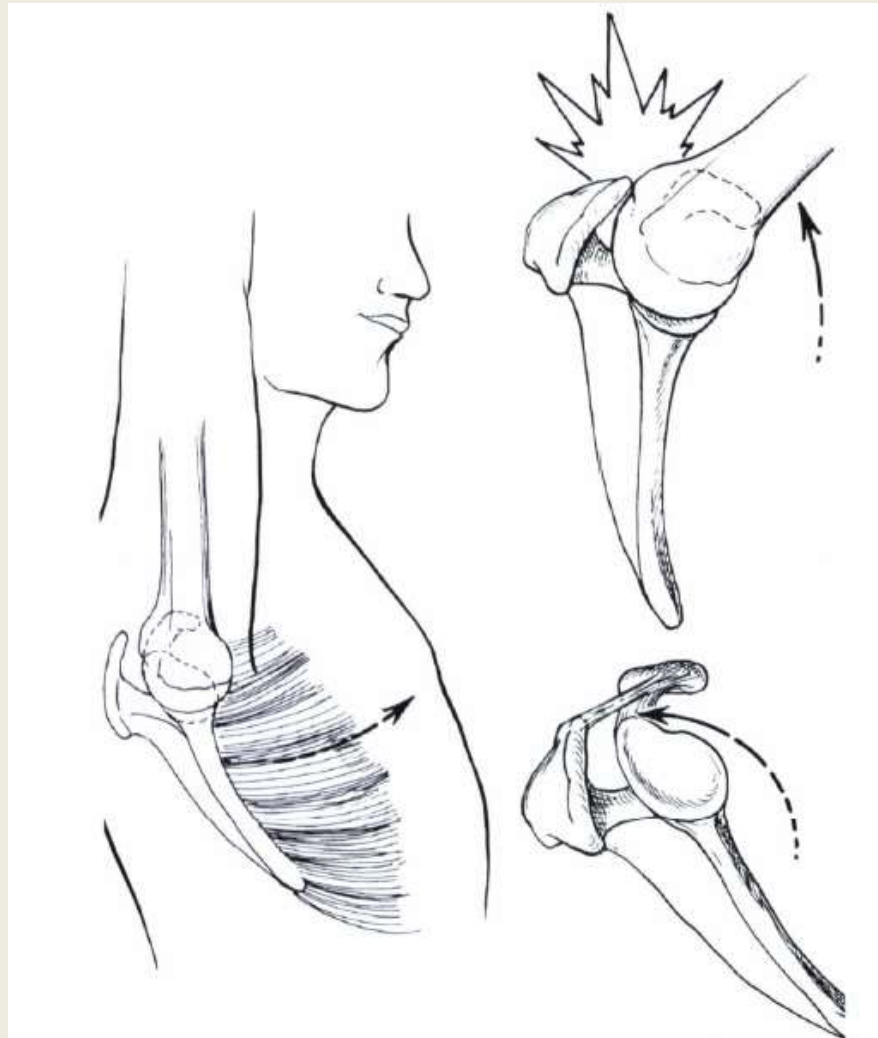
Secondary Scapular Winging



Long thoracic nerve

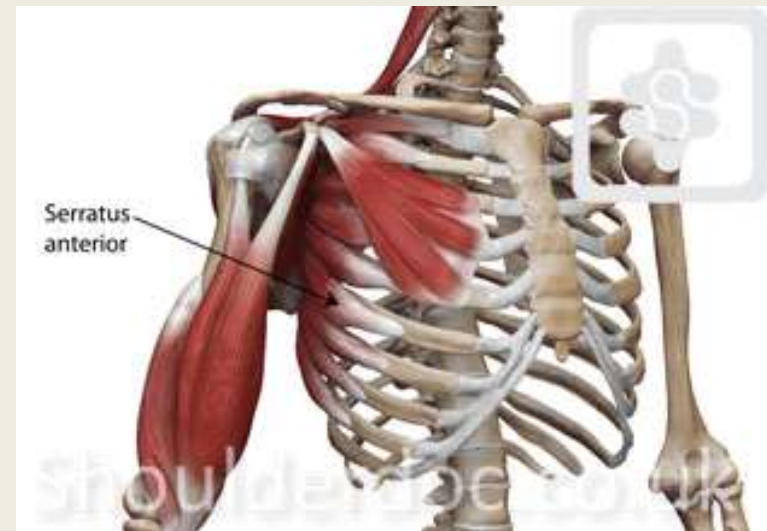
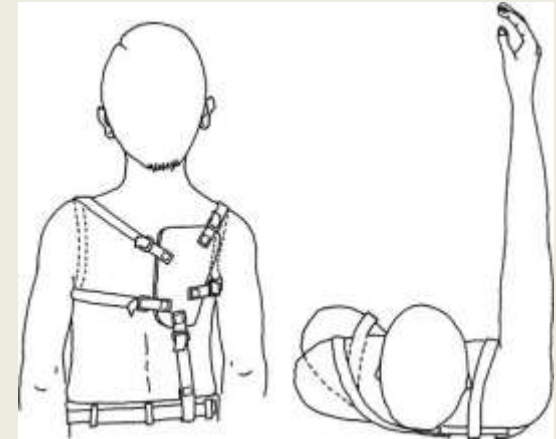


Injury to long thoracic nerve



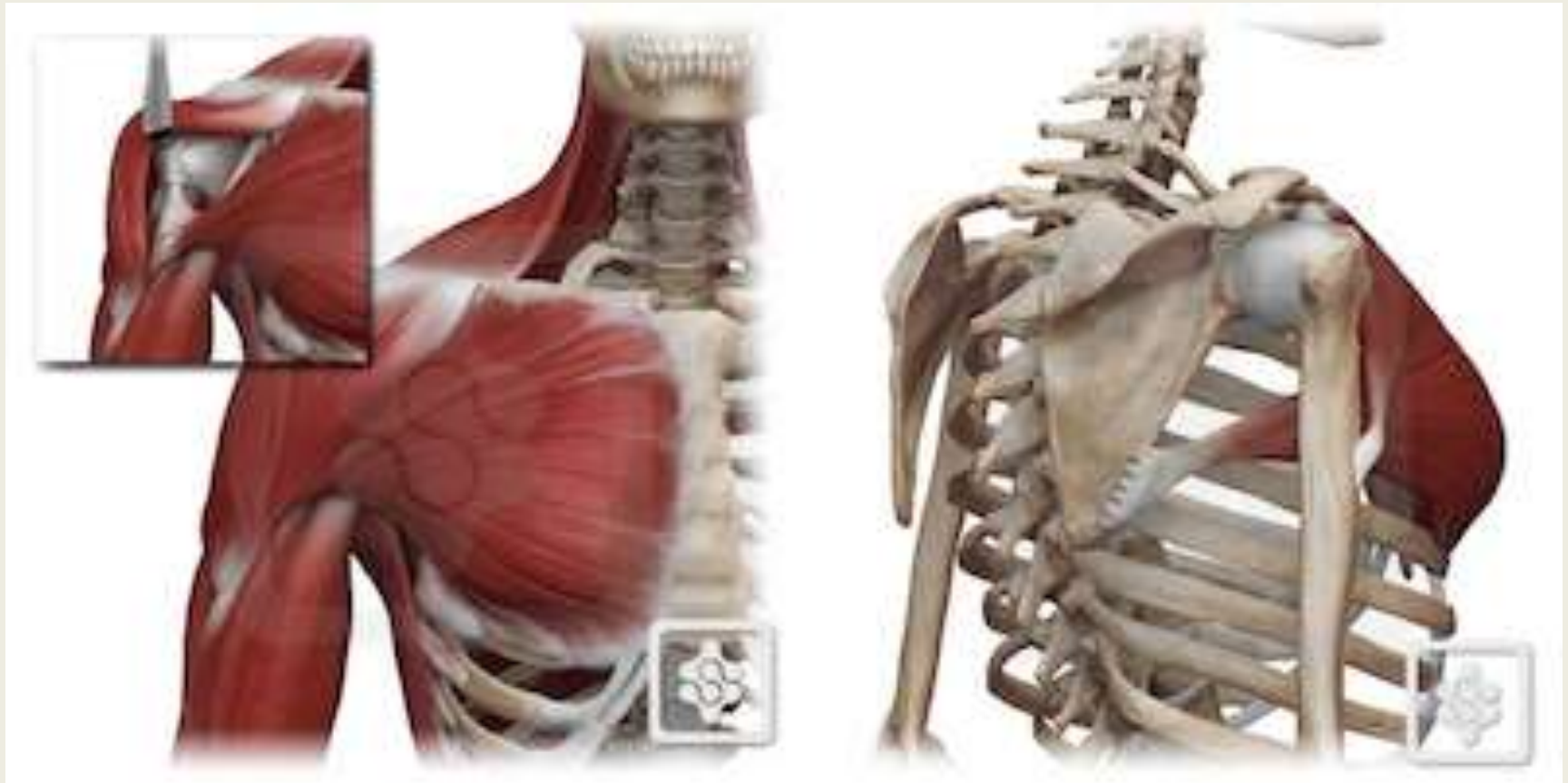
Treatment for Serratus anterior palsy

- Conservative treatment
 - Physiotherapy , scapular brace
- Surgery
 - Scapulothoracic fusion
 - Static stabilization
 - Dynamic muscle transfer



Treatment for Serratus anterior palsy

Dynamic muscle transfer



Pectoralis major transfer





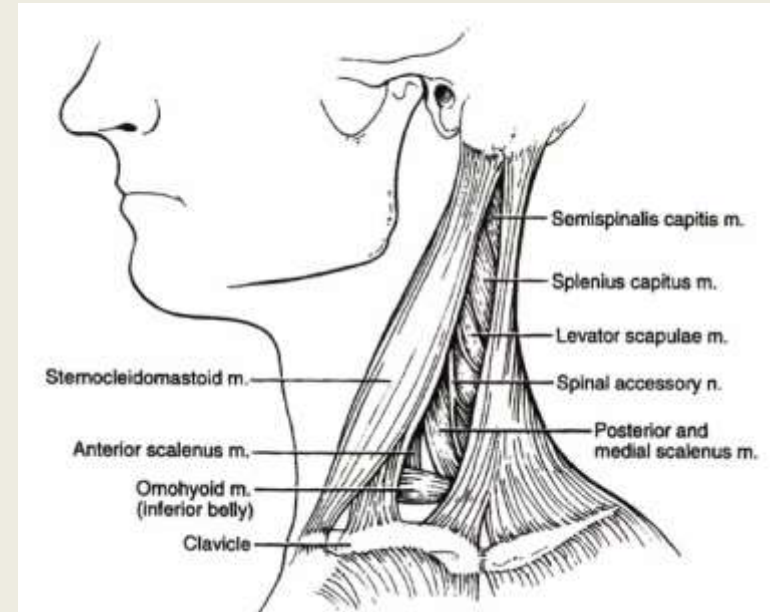
Pre-operation



Post-op

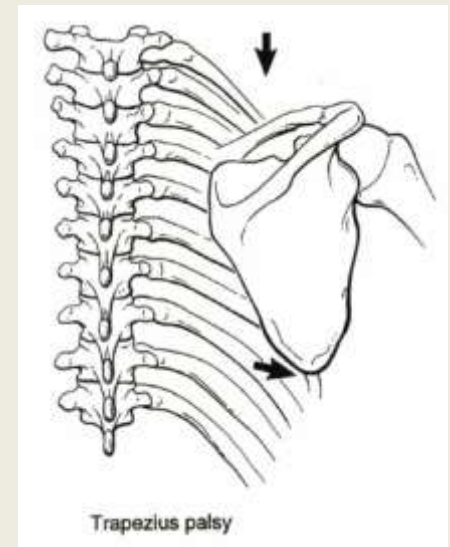
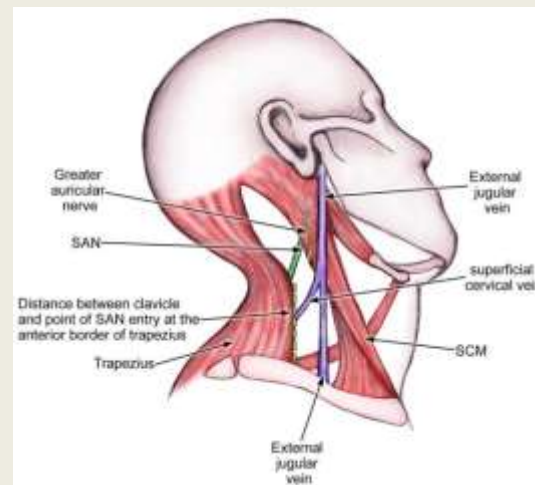


Injury to accessory nerve



Treatment for Trapezius palsy

- **Conservative treatment**
 - Physiotherapy , scapular brace
- **Surgery**
 - Early spinal accessory nerve exploration
 - Dynamic muscle transfer



Treatment for Trapezius palsy

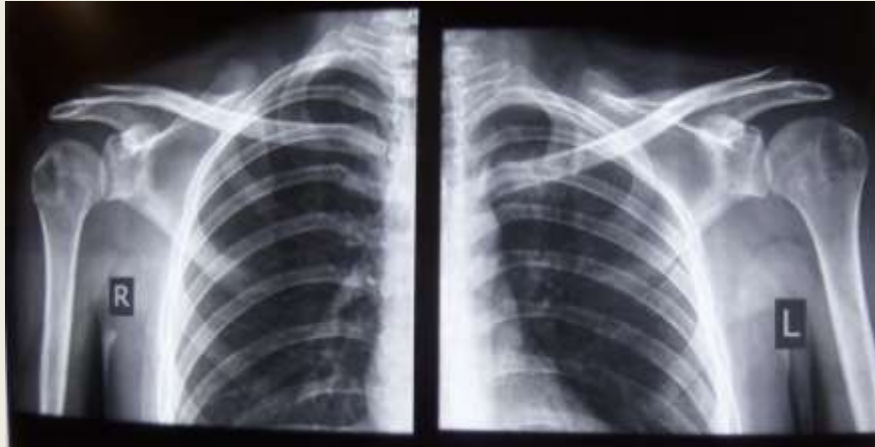


Eden-Lange Procedure

Pre-operation



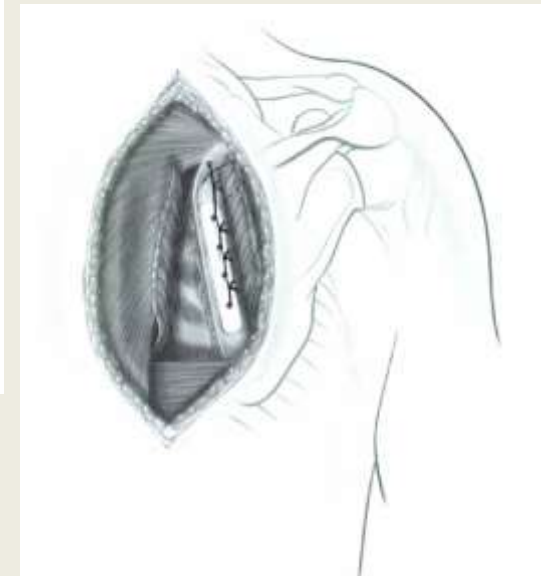
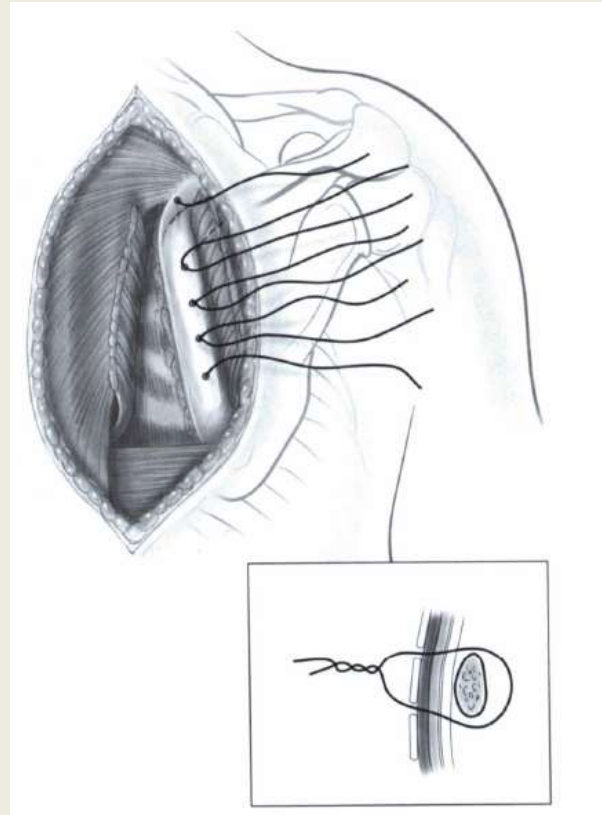
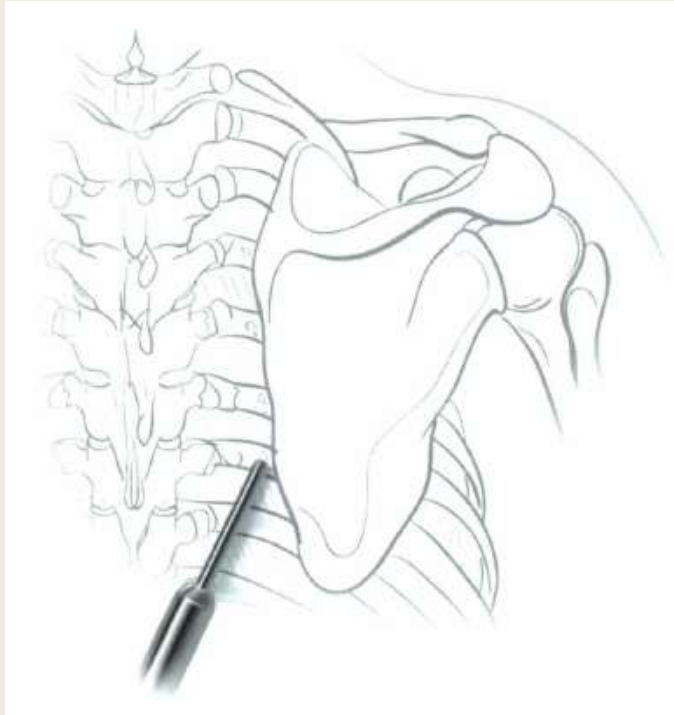
Post-operation



Scapulothoracic fusion

- **Indicated in debilitating scapulothoracic dysfunction**
 - Dystrophic conditions : FSC muscle dystrophy
 - Nondystrophic condition : Failed previous operations
- **Indications :**
 - pain relief
 - improvement of function

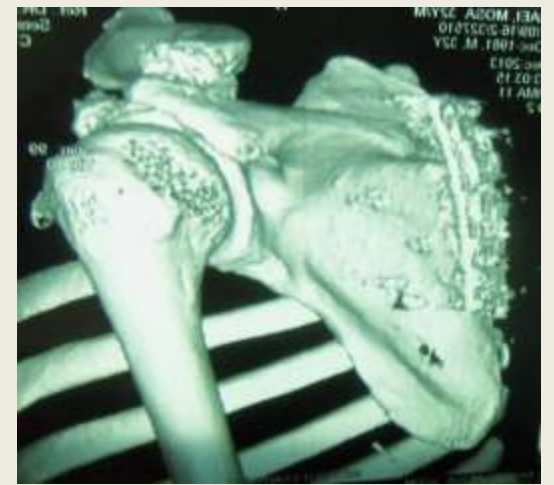
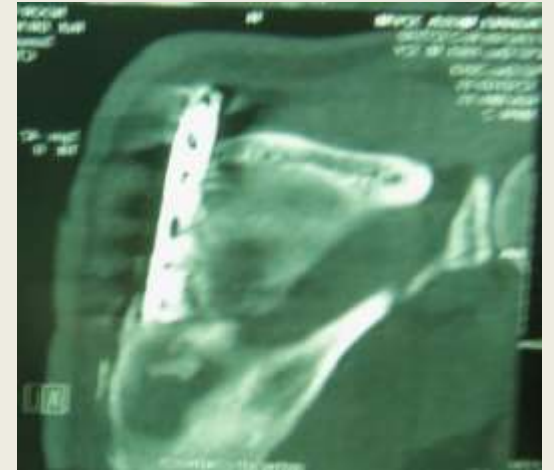
Scapulothoracic fusion





Pre-operation photos





Post-operation care

- Swap Sling for 6 weeks
- Pendulum & passive movement after 6 wks
- Active movement after 10 - 12 wks

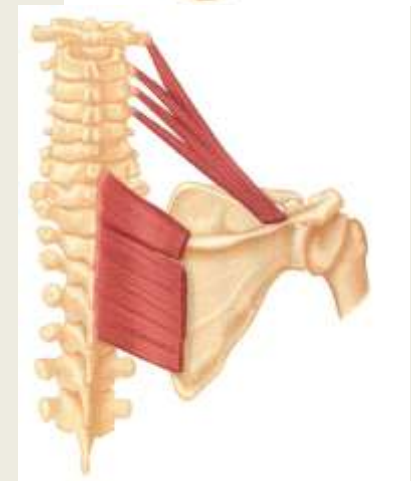




Summary



- Scapular winging is not uncommon, can be debilitating
- Electromyographical testing is essential
- Conservative treatment try first up to 6 - 24 month
- Dynamic muscle transfer in resistant cases
- Scapulothoracic fusion indicated in selected cases



Thank you for attention