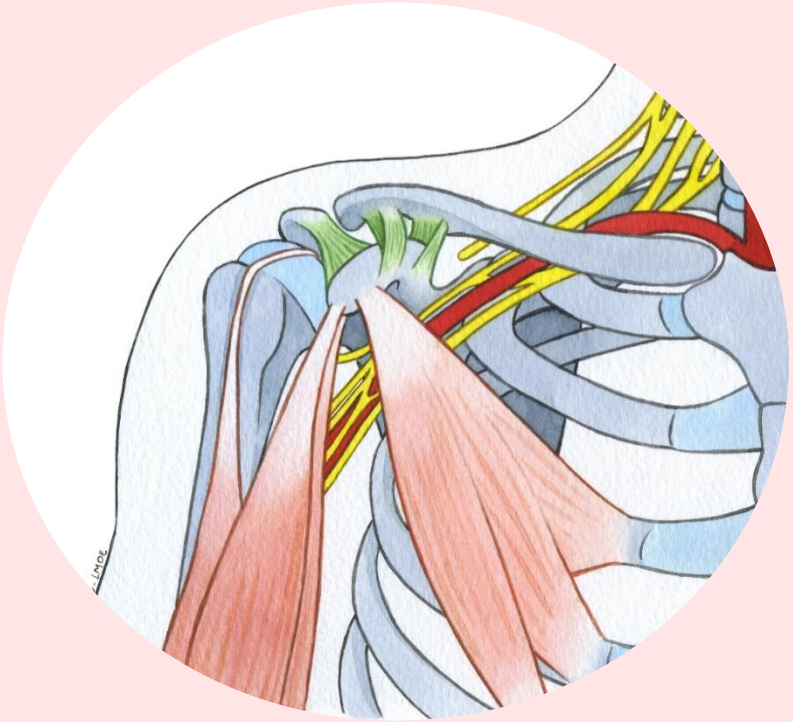
# THE SHOULDER

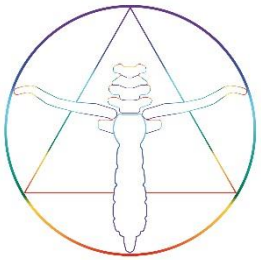


## Workshop OSD Congress 2023

Realisation : Eric Prat DO
Illustrations: Benoit Caillé DO, Sarah Stringhetta and others
Photos: Bernard Belisme and others

# INTRODUCTION

## to Osteopathic Mechanical Link



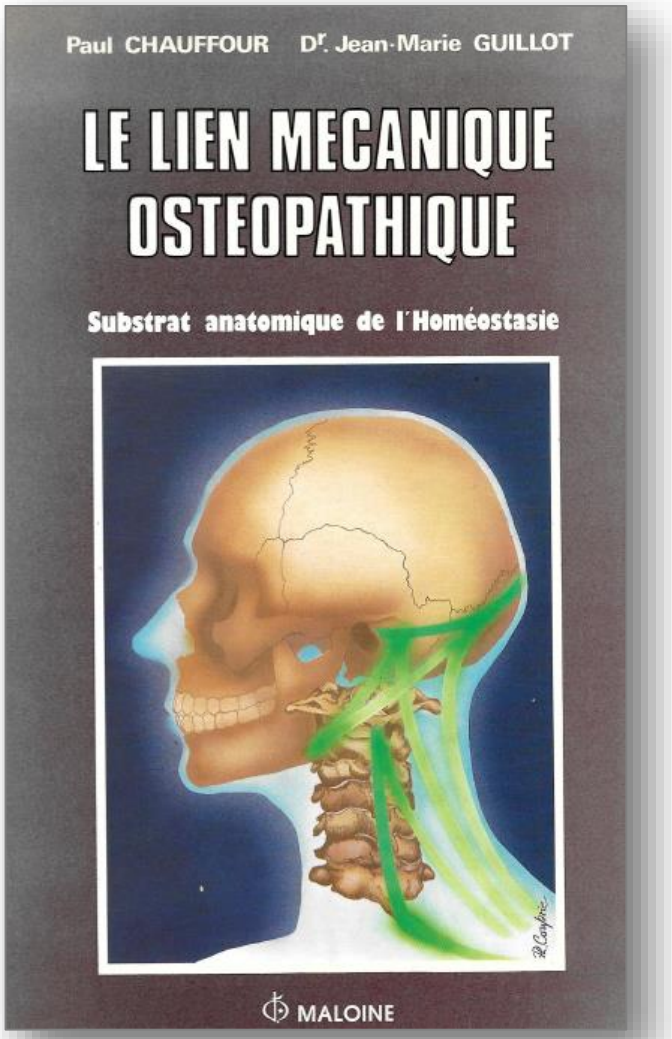
LMO - Méthode P.CHAUFFOUR & E.PRAT ®

Paul Chauffour DO

# 1. Origin

The Osteopathic Mechanical Link (OML) is a diagnostic and treatment method developed by Paul Chauffour in the 1970's.

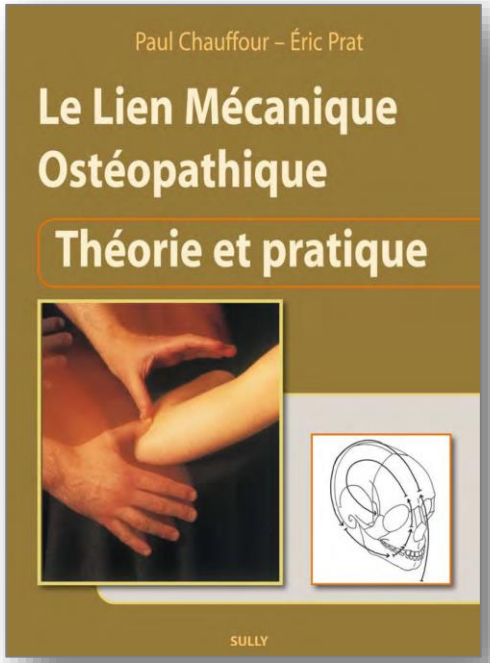
The association of 4 original techniques – The cutaneous depression, the tension test, the inhibitory balance test and the recoil – allows him to completely revisit classical osteopathy.

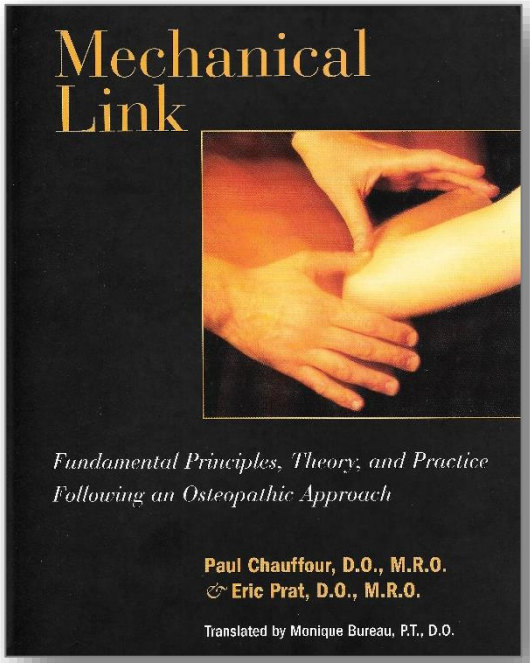


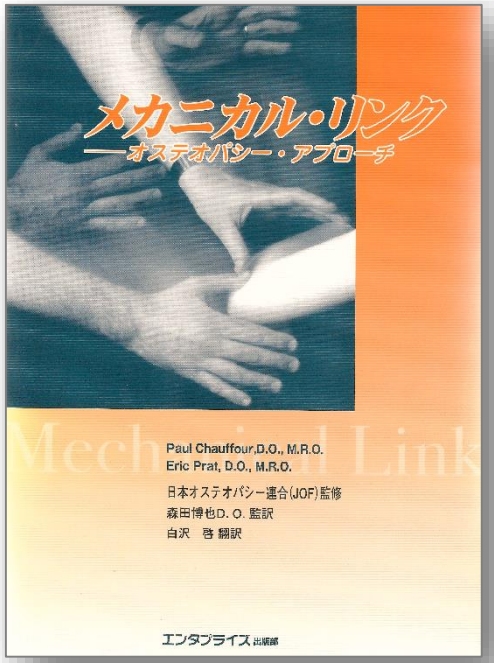

*P. Chauffour, J. M. Guillot, Editions Maloine, 1985.*

# 2. Development

Paul Chauffour and Eric Prat, from 1990 to 2005, work together on the evolution and teaching of Mechanical Link throughout the world. They introduce new fields of application in osteopathy: filum terminal, intraosseous lines of force, articular diastases, arteries, etc.



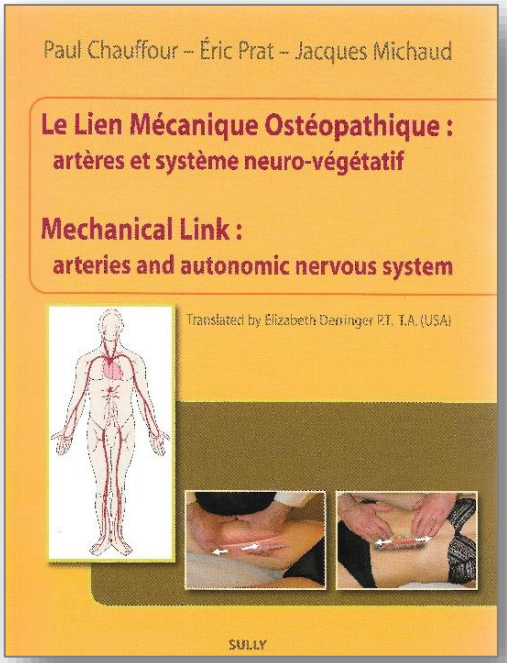



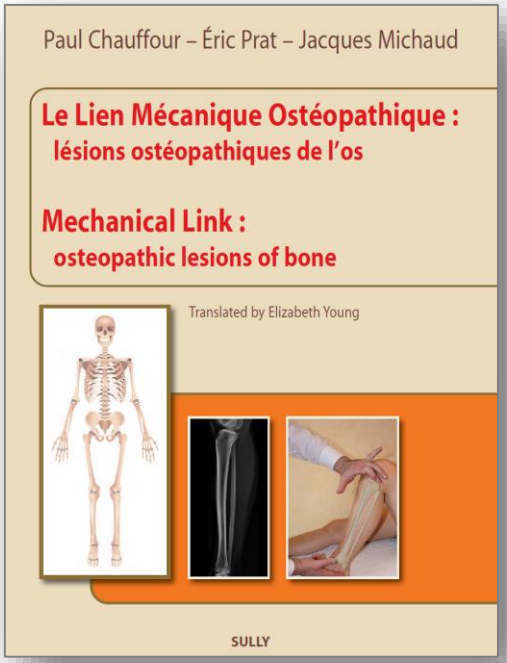

*P. Chauffour, E. Prat, LMO Théorie et Pratique, Sully, 2003.*

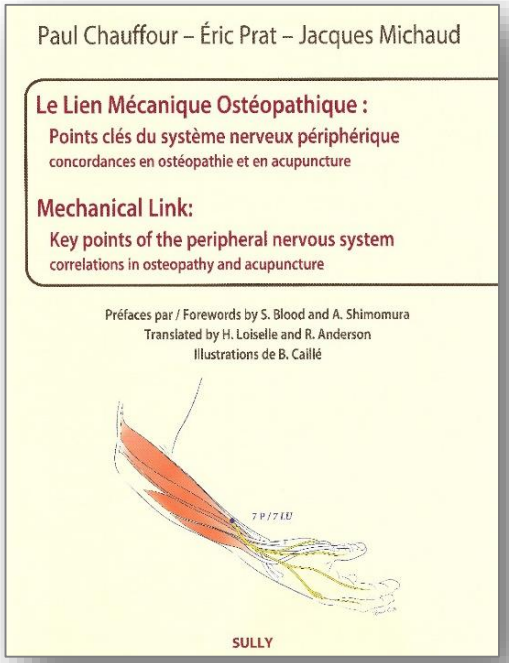
# 2. Development

From 2005 to today, several osteopaths also have actively participated in the progression of Mechanical Link.

Paul Chauffour, Eric Prat and Jacques Michaud have published textbooks on the bony system, the vascular system and the nervous system.



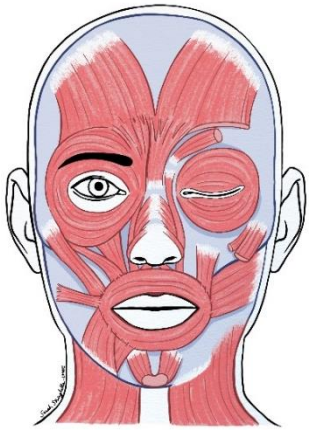

*P. Chauffour, E. Prat, J. Michaud, Sully, 2009-2012-20017.*

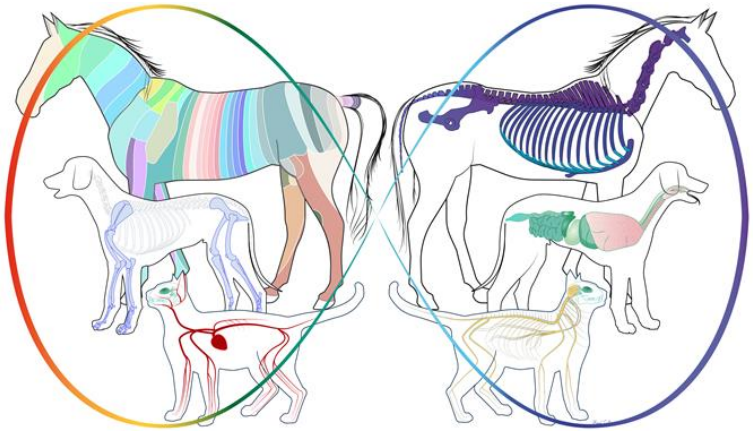
# 3. Transmission

With more and more practionners through the world, Mechanical Link, Africa and Asia open up to LMO teaching.

# 4. Evolution and prospects

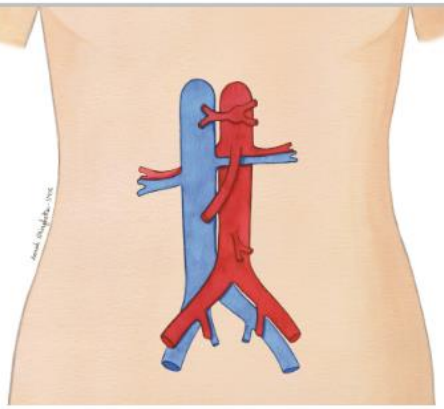
The LMO continues its research with new fields of application, in animal osteopathy, somatoemotional facial tensions, etc.





# 5. Blog

## Neueste Artikel



### Osteopathische Behandlung von vaskulären Kompressionssyndromen im Bauchbereich

21.11.2022

Während Still der Arterienregel stets große Bedeutung beimaß, richte ...

### OSTEOPATHISCHE RAUCHSTOPP-BEHANDLUNG Rasch und einfach mit rauchen aufhören dank LMO

22.02.2022

Es gibt mittlerweile eine Vielzahl an mehr oder weniger effektiven Meth ...

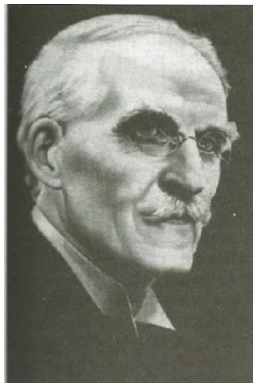
With more articles in English or French

# Mechanical Link in the osteopathic world

AT Still

WG Sutherland

Functional tissue osteopathy
Global vision



JM Littlejohn

Structural articular osteopathy
Analytical treatment

Mechanical Link

Gentle structural tissue ostoepathy
Global vision
Analytical treatment

# Mechanical Link in the osteopathic world

**Mechanical Link is osteopathy!**

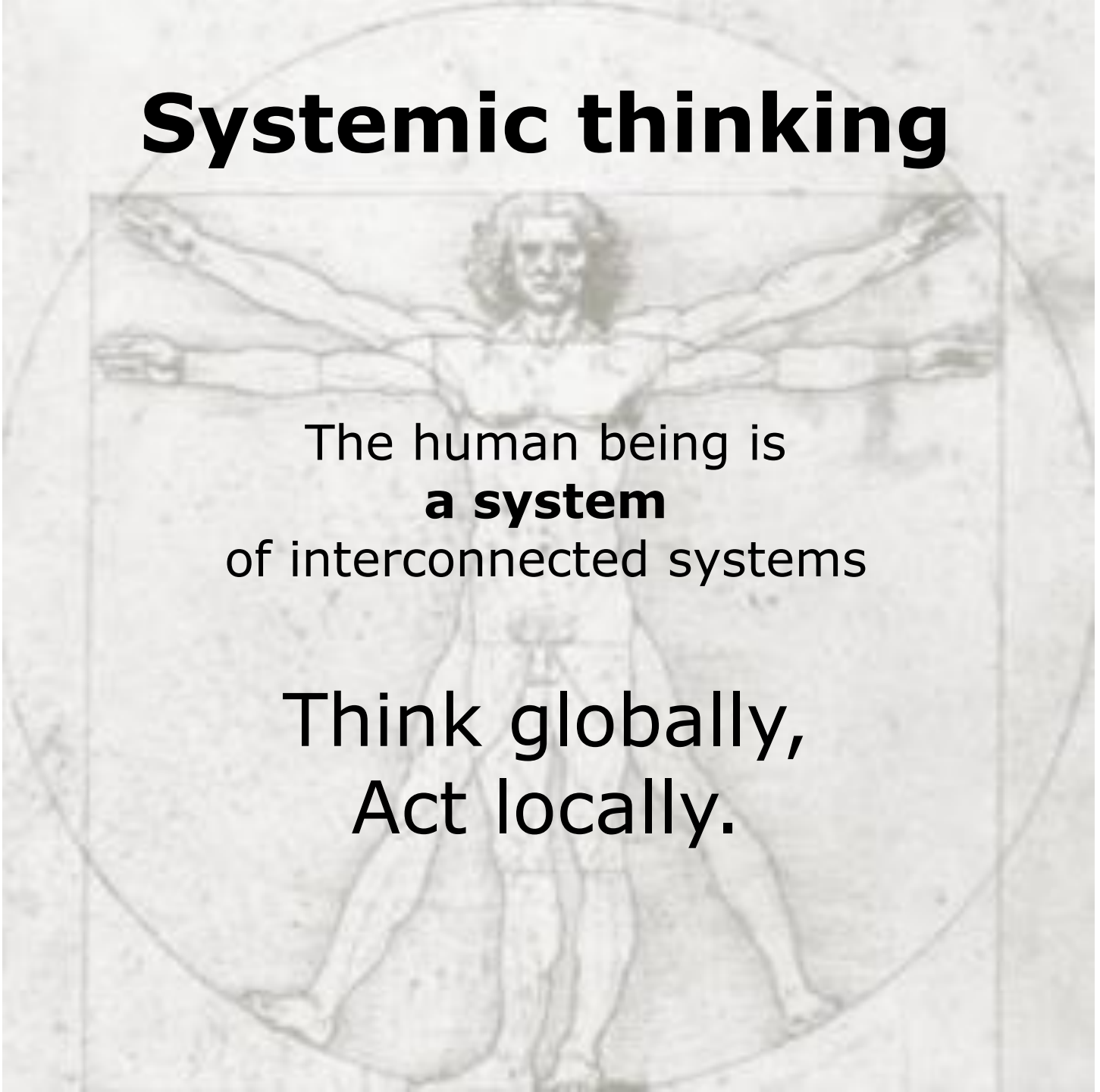
Mechanical Link is based on fundamental osteopathic concepts: find the lesion, treat it and leave it alone; releasing the structure to normalise function; the rule of the artery…

Mechanical Link is a simple tissue-based approach that works for all practitioners.

Mechanical Link bypasses the opposition between structural and functional.

One can use Mechanical Link on its own or combine it with other osteopathic techniques.

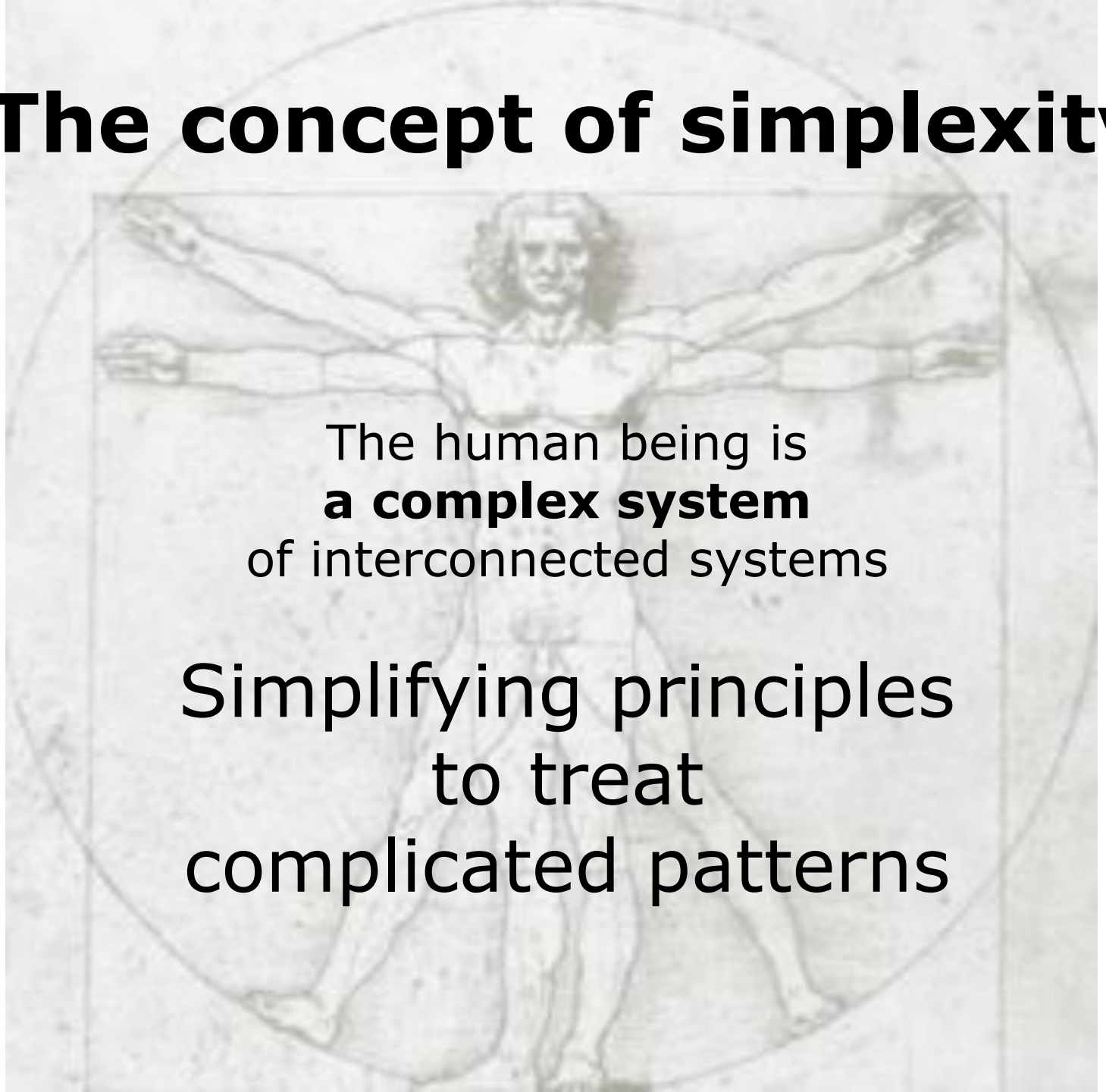
# Systemic thinking



The human being is
**a system**
of interconnected systems

Think globally,
Act locally.

# The concept of simplexity



The human being is
**a complex system**
of interconnected systems

Simplifying principles
to treat
complicated patterns

# The Mechanical Link method

**Three essential concepts**

- The total lesion
- The primary lesion
- The specific treatment

**Three original techniques**

- The tension test
- The inhibitory balance test
- The recoil

# The Mechanical Link method

Is the answer to **3 important questions** concerning the osteopathic treatment :

- **Where** to begin the treatment ?
- **How** to proceed with the treatment ?
- **When** to end an osteopathic treatment ?

# The advantages of Mechanical Link

- **An osteopathic diagnosis and treatment that is clear, reproducible** and covering all possible reasons for consultation.

- **An approach that patients appreciate** because it is efficient and comfortable.

- **A method that does not exhaust the practitioner** while allowing him to progress technically by the repetition of tests.

# The advantages of Mechanical Link

- **A precise osteopathic diagnosis** as a result of a checklist of tests covering every possible and conceivable lesion pattern.

- **A customised treatment protocol** which is always different from one patient to another and from one consultation to another.

# The advantages of Mechanical Link

- **Taking into account osteopathic lesions that are not widely acknowledged**

Intra-osseous lines of force, articular diastasis and ligamentous lesions, epiphyseal lines, disc herniation, filum terminale, osteopathic lesion of the artery, key points of the peripheral nervous system, encephalon, scars and fixation of the dermis, external gynecological as well as coccyx and perineal approach, etc.

# The advantages of Mechanical Link

- **A supple and open method** that may easily be integrated to your current osteopathic practice and to other approaches: energetic, acupuncture, somatoemotional approach, posturology, etc.

- **A proven method** with over 30 years of clinical experience and hundreds of practitioners worldwide.

# The advantages of Mechanical Link

- **Effective solutions in daily osteopathic practice**

Back pain and neuralgia (disc herniation), scoliosis, dysmorphosis associated to growth, sport trauma, adjunct to orthodontic treatment, restless leg syndrome, carpal tunnel, migraines, sinusitis, concussion, hiatal hernia, digestive issues, cystitis, infertility, pregnancy, neonates, bedwetting, treatment to quit smoking, vascular issues, geriatrics, etc.

# Concept 1

# THE TOTAL LESION

- **The total lesion** corresponds to **all the osteopathic lesions** presented by a patient.

- This total lesion is more than the simple sum of all lesions. It reveals in a palpable way the entire history of the patient, a history embedded in the tissues of the body and upon which the symptomatology, expressed or not, depends

- *We look at the body in health as meaning perfection and harmony, not in one part, but **in the whole**.*

  *AT Still—Philosophy and Mechanical Principles of Osteopathy*

- We voluntarily use the precise term **osteopathic lesion** rather than the more conventional term, somatic dysfunction.
- The osteopathic lesion is an anatomical-pathological reality, i.e. an injury, a **modification of connective tissue** following a **scarring** process: inflammation, fibrosis, sclerosis.
- We may look at the lesion/dysfunction couple as **fire** and **smoke**

## Smoke

manifestation of the fire, dysfunction

## Fire

lesion of the structure: inflammation and fibrosis

# There is no smoke without fire

Any dysfunction is caused by an osteopathic lesion, local or remote.

# ☐ The tension test

The tension test is a gentle osteopathic way of **appreciating the tissue elasticity** of a particular segment of the body

It is simple but must be precise.

It may be applied using pressure, traction, circumduction, torsion…

or a combination of several of these parameters.

# ☐ The tension test

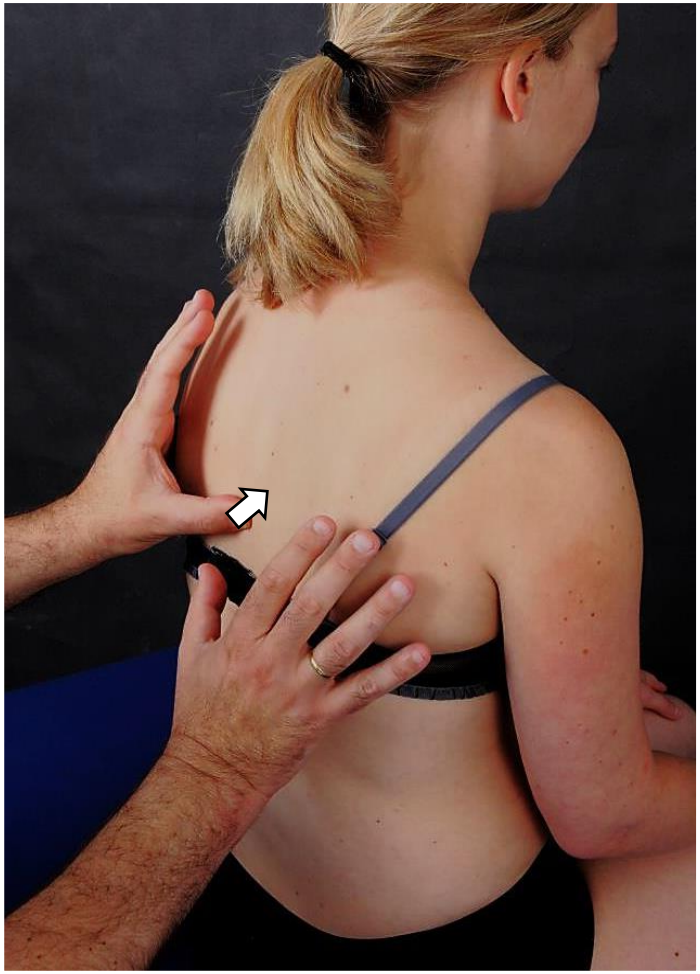
When applying the tension test, **3 possible responses** are felt by the hand:

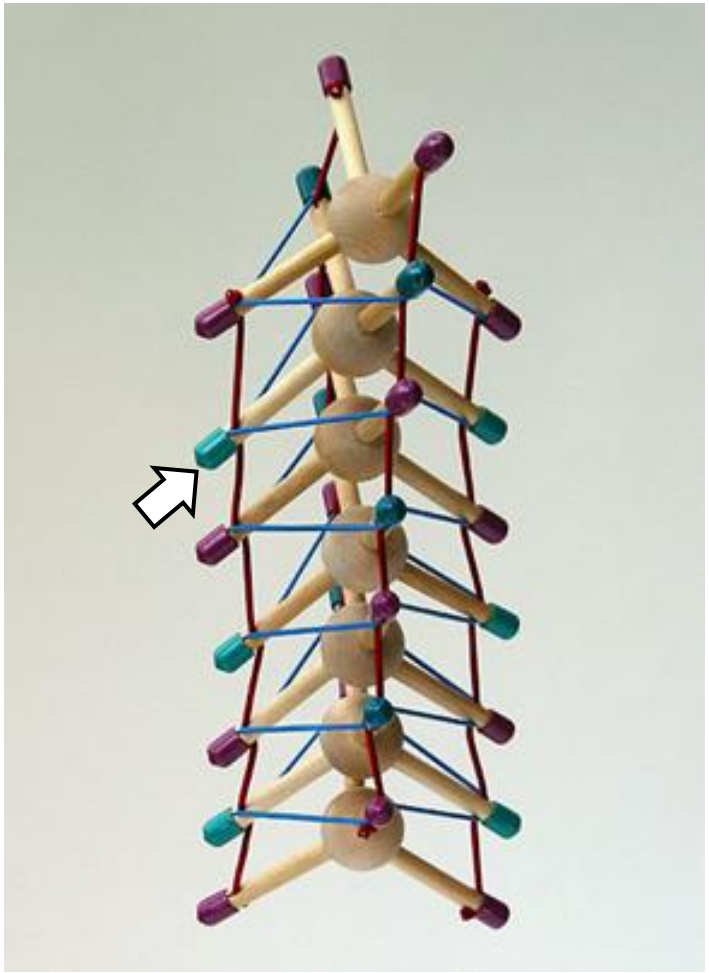
1) tissue suppleness and elasticity is evidence of a free structure (negative test)

2) moderate resistance (passive lesion)

3) clear and marked tissue resistance is a sign of true osteopathic lesion (positive test).

# Tension test of a vertebral segment through pressure along the axis of the spinous process.





The tension tests are:

- precise
- objective
- reliable
- reproducible

Three theses have proven the reliability and reproducibility of the Mechanical Link diagnostic tension tests.

**RELIABILITÄTSSTUDIE ÜBER DIE BEFUNDERHEBUNG DER WIRBELSÄULE NACH DER METHODE DER LIEN MÉCANIQUE OSTÉOPATHIQUE**

Master Thesis zur Erlangung des Grade "Master of Science" in Osteopathie an der Donau Universität Krems – Zentrum für chin. Medizin & Komplementärmedizin.

***By Claudia Hafen-Bardella, 10.2009***

**RELIABILITÄTSSTUDIE DES BEFUNDS NACH DEM MECHANICAL LINK**

Reliabilitätsstudie über die Befunderhebung der Knochen und Gelenke der Extremitäten nach der Methode des Mechanical Link

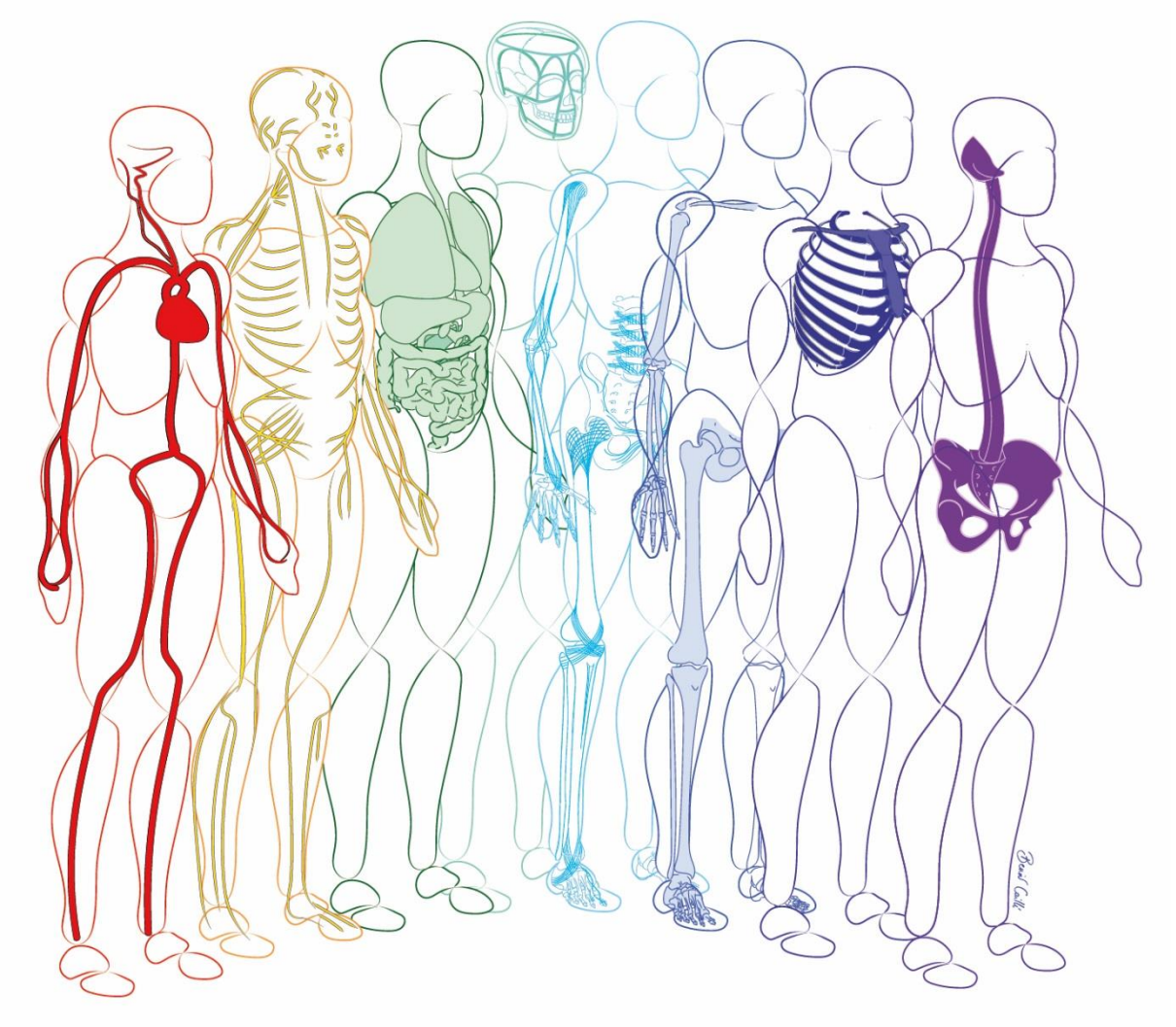
***By Gina Hafen, 01.2018***

**FOLLOW-UP-STUDIE EINER RELIABILITÄTSSTUDIE NACH DEM MECHANICAL LINK**

Follow-up-Studie über die Reliabilität der Befunderhebung der Wirbelsäule nach der Methode des Mechanical Link

***By Laura Kühn, 01.2018***

# 8 functional units



*LMO course, E. Prat DO, B. Caillé DO*

With these tension tests we systematically assess the patient through **8 functional units**.

1. The occipito-vertebro-pelvic axis
2. The thorax
3. The articular periphery
4. The lines of force
5. The cranium
6. The viscera
7. The vascular system
8. The nervous system and the dermis

# Concept 2

# THE PRIMARY LESION

- **The primary lesion** is not necessarily the lesion that is the oldest (first lesion) or the most manifest (symptomatic lesion) but the one that presents **the greatest degree of tissue resistance**
- Concept of **prioritisation**.
- The osteopathic lesions will be classified into **secondary, dominant** (the greatest restriction within a functional unit) and **primary** (the greatest of all dominant lesions).

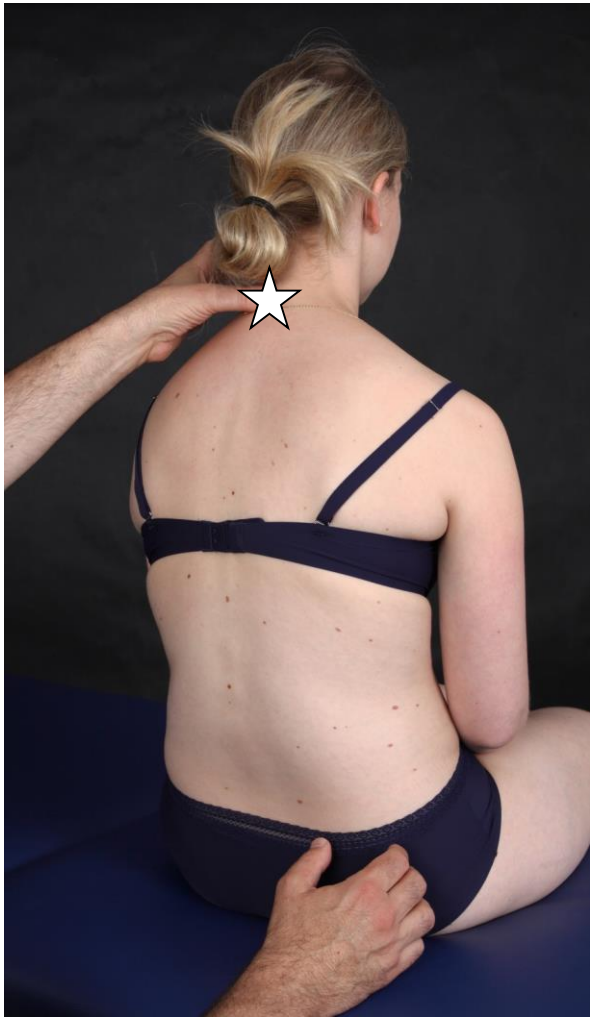
# □ The inhibitory balance test

The inhibitory balance test consists in **comparing two osteopathic lesions** in order to define which of the two proves to be most important.

To this end, the practitioner **applies light and simultaneous tension to both fixations**. A curious phenomenon then occurs: one of the two lesions releases whereas, conversely, the other resists.

# Inhibitory balance test between C7 and the right ilium.

# Inhibitory balance test between C7 and the right ilium.



- Any osteopathic lesion may be balanced with any other osteopathic lesion.
- The osteopathic lesion presenting the most resistance on examining a functional unit is **the dominant lesion**.
- The most resistant lesion on general examination of the entire body is **the primary lesion**.

# Concept 3

# THE SPECIFIC TREATMENT

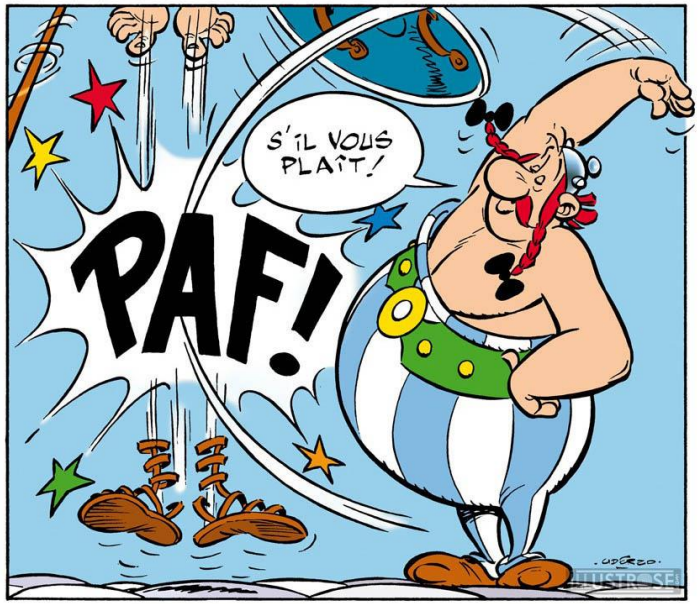
# Recoil

*The French touch !*

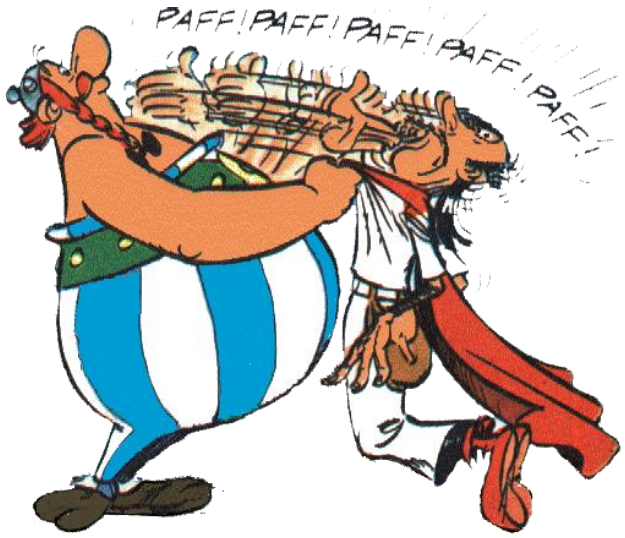
# ☐ The recoil

- Recoil means rebound, rapid withdrawal.
- The recoil technique is little known and the term is not even listed in the Glossary of Osteopathic Terminology, published by the American Association of Colleges of Osteopathic Medicine (AACOM), that defines all osteopathic techniques.
- We know that A.T. Still occasionally used a technique whose description would correspond to the recoil, and this technique was occasionally used by a few of his successors (A. Becker, R. Miller) but was ultimately forgotten.

The recoil developed by Paul Chauffour circa 1977-1979 is at the onset an adaptation of the *toggle-recoil* of chiropractors and the *thrust technique* of osteopaths.




Thrust




Recoil

# ☐ The recoil

This method is a DIRECT ACTION technique that goes up against the restriction or engages the tightness of specific tissues and then rapidly releases the built-up elastic force causing a recoil that reflexively releases the dysfunction.

It is also an old Osteopathic technique that has recently been revitalized.

It is a gentle technique that is used with anatomic precision to treat dysfunctions in muscle, bone, arteries, veins, nerves, and the various connective tissues.

*Steve Paulus DO*

# The 3 steps of the recoil

**1) Applying tension**

Stacking of tissue resistance to find the maximal point of blockage (barrier).

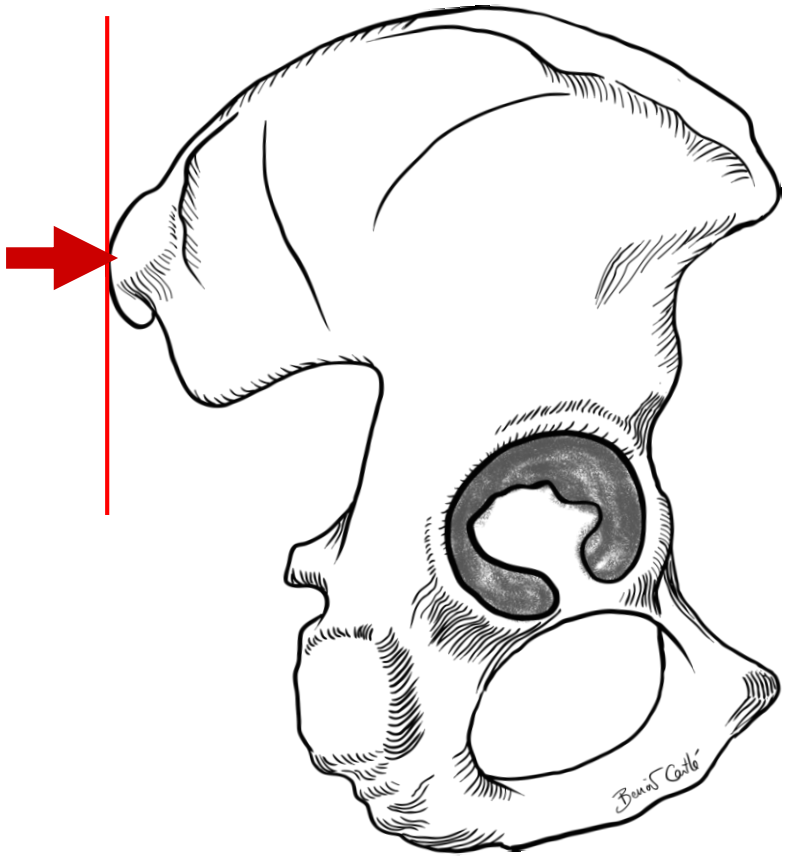
**2) Impulse**

Extremely rapid and dynamic impulse against the barrier (without pushing it) to « break » the lesion.

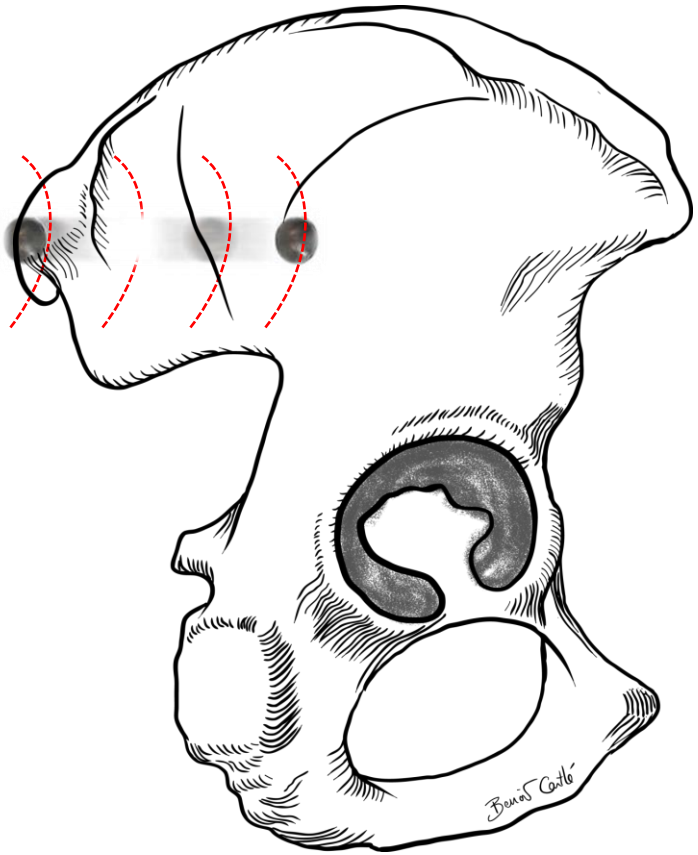
**3) Withdrawal**

The hands withdraw immediately to let the « shockwave » (vibration) produced by the impulse go through…

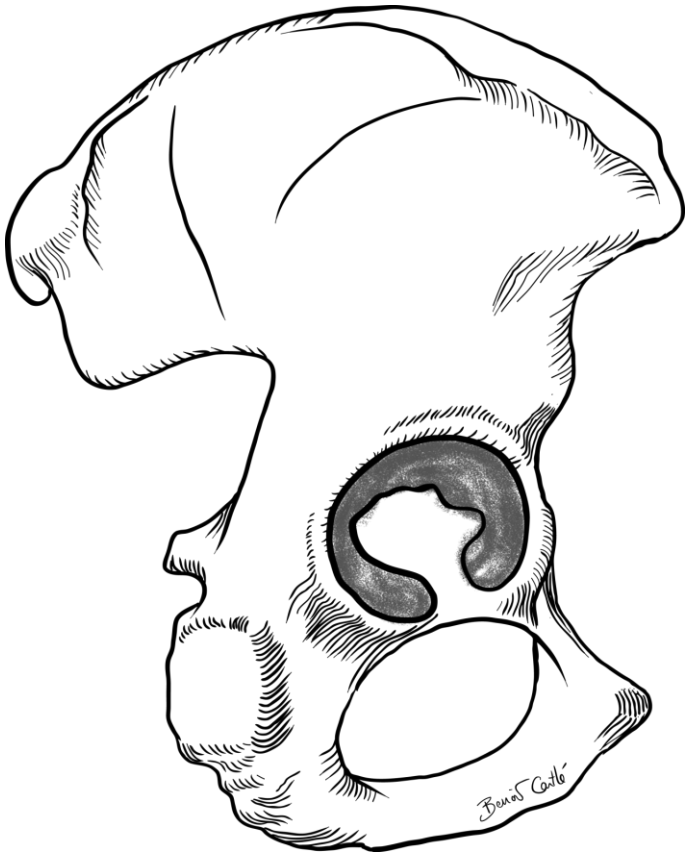
# 1) Applying tension



# 2) …impulse



# 3) withdrawal.

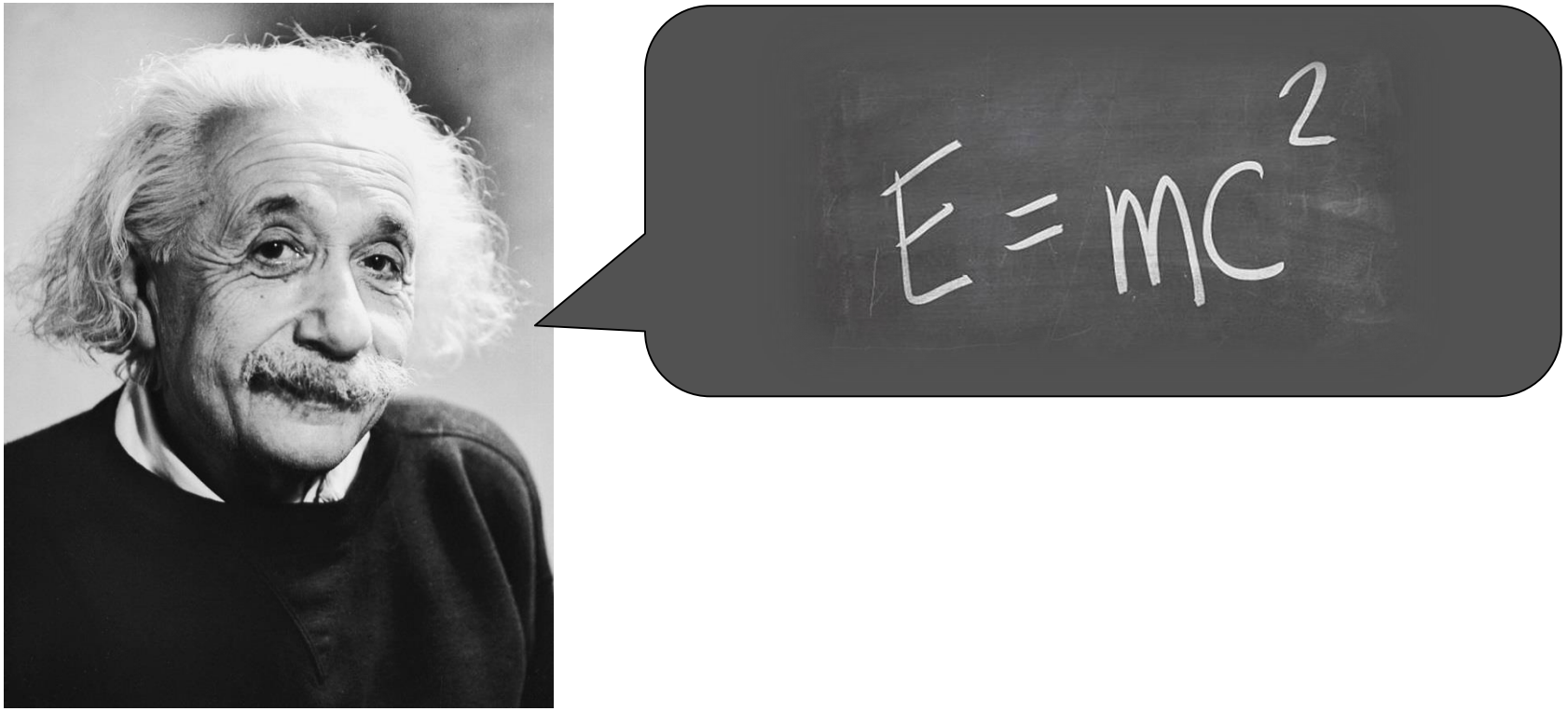


*Find it,*
*fix it,*
*and leave it alone.*

***Find it*** corresponds to **applying tension**

***Fix it*** corresponds to the **impulse**

***Leave it alone*** corresponds to the **withdrawal**




The application of tension must be precise

The impulse is very quick, dynamic (E=mc2)

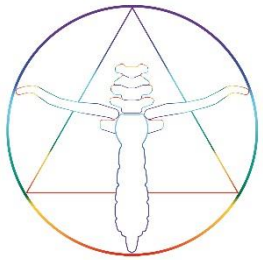
The withdrawal lets the vibration through

# Neurological effect

- **Golgi tendon organs:** respond to the applied tension
- **Ruffini corpuscles :** respond to pressure
- **Paccini corpuscles :** sensitive to acceleration and deceleration and vibration
- **Meissner corpuscles:** sensitive to dynamism vibrotactile
- **Merckel discs**: sensitive to static balance

# KEY POINTS OF THE SHOULDER

## Osteopathic Mechanical Link diagnosis and treatment



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# THE SHOULDER

**The shoulder is a very adaptive articulation**.
The shoulder must be considered within the context of the total lesion along with the spine, the cranium, the viscera, the arteries and nerves, etc.

**The shoulder is an intricate articular complex.**
A detailed investigation of all possible lesions is required: bony elements, muscles, periarticular soft tissue, etc.

**The shoulder is a very mobile joint.**
Stabilization is necessary: intraosseous lines of force and articular diastases.

# MECHANICAL LINK PROTOCOL OF EXAMINATION AND TREATMENT

- **Tension test**
  diagnosis of osteopathic lesions

- **Inhibitory balance test**
  diagnosis of dominant lesions

- **Recoil**
  treatment of lesions

# EXAMINATION PROTOCOL

In practice, we distinguish between 2 steps:

**A) Seated tests**
With 15 key points

**B) Supine tests**
With 9 key points

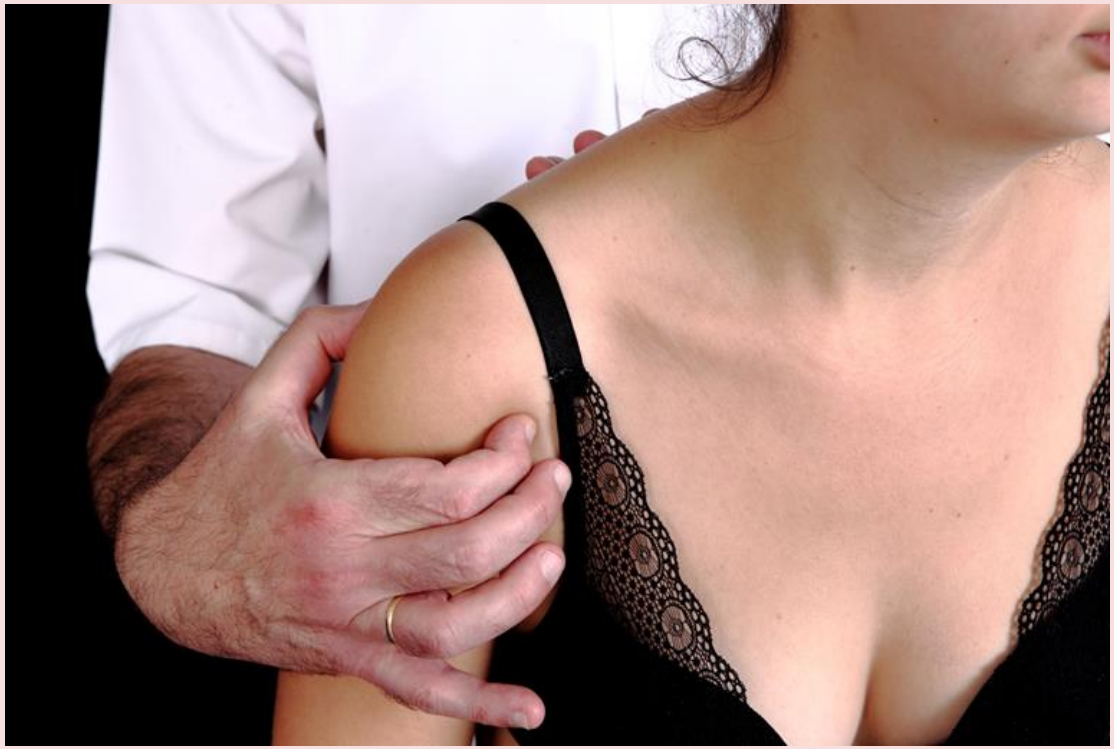
# A) SEATED PATIENT

- **Key points of the scapula**
- **Head of humerus**
- **Acromion**
- **Lateral extremity of clavicle**
- **Coracoid process**

# B) SUPINE PATIENT

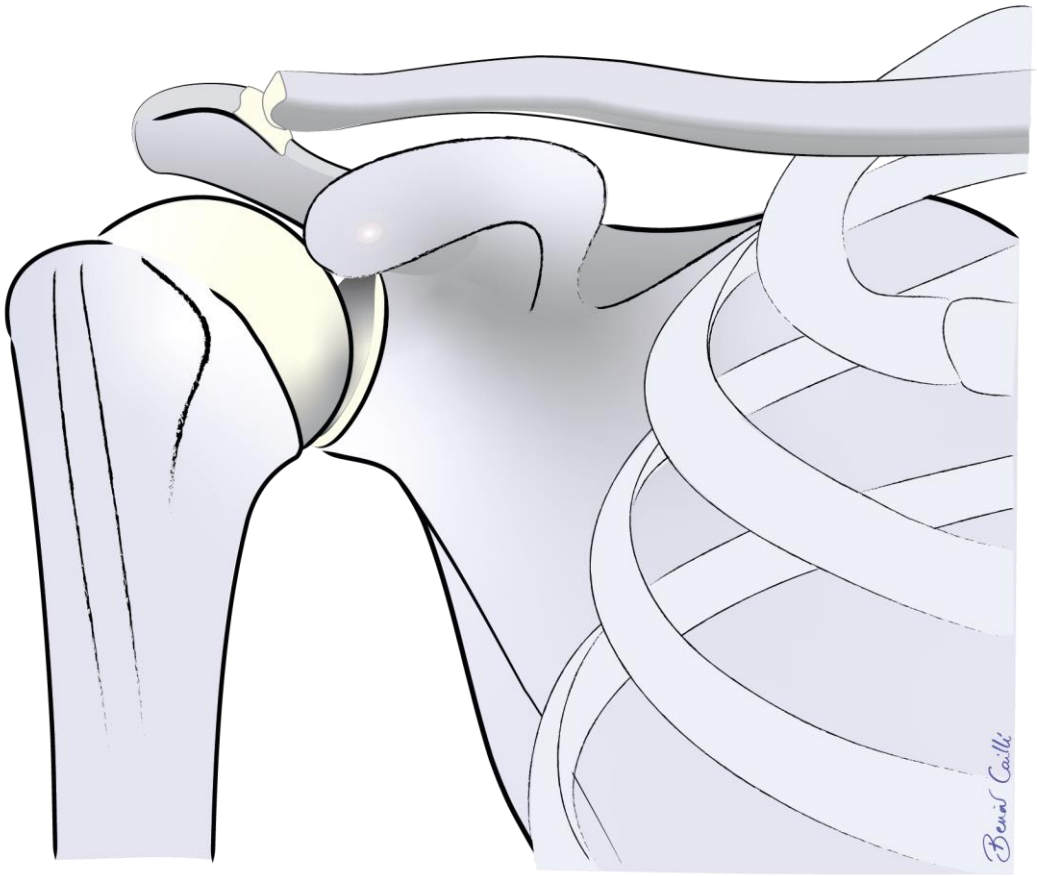
- **Scapular notch** (suprascapular nerve)
- **Tendon of long head of biceps**
- **Rotator interval**

# A) SEATED PATIENT

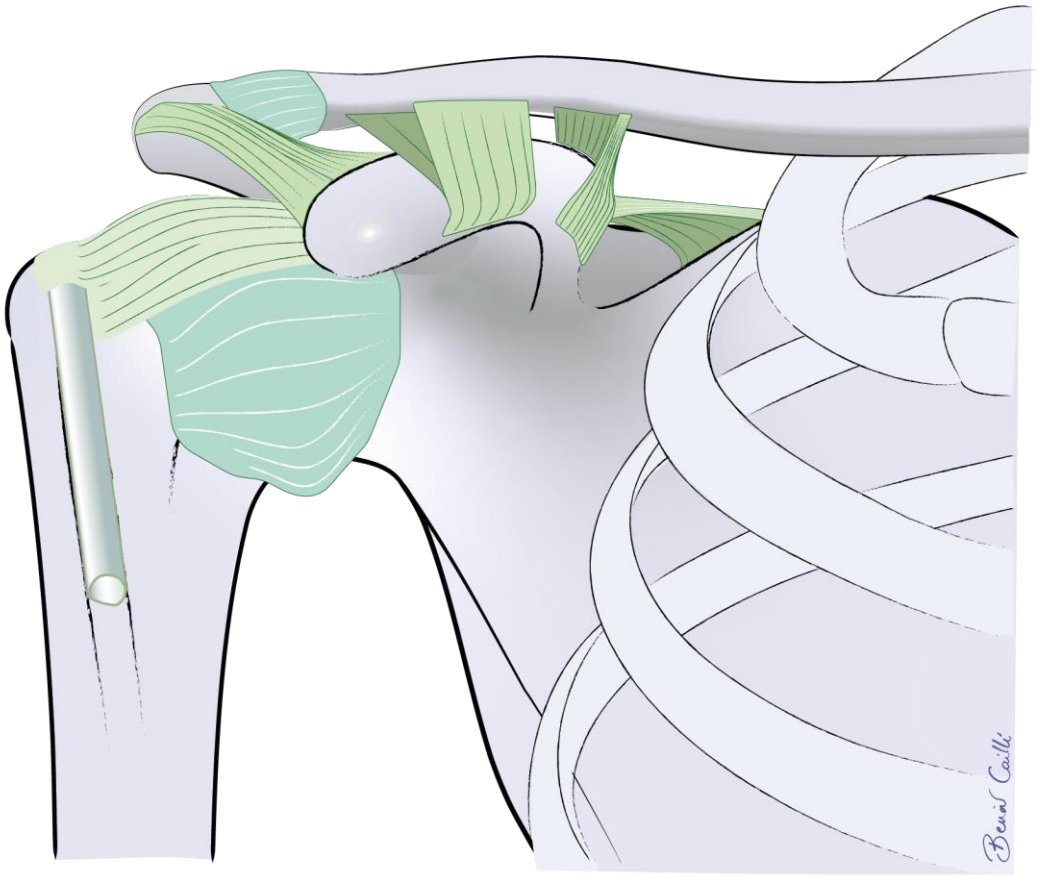


*Patient seated, practitioner behind, on the side of shoulder to be treated*

# Bony elements



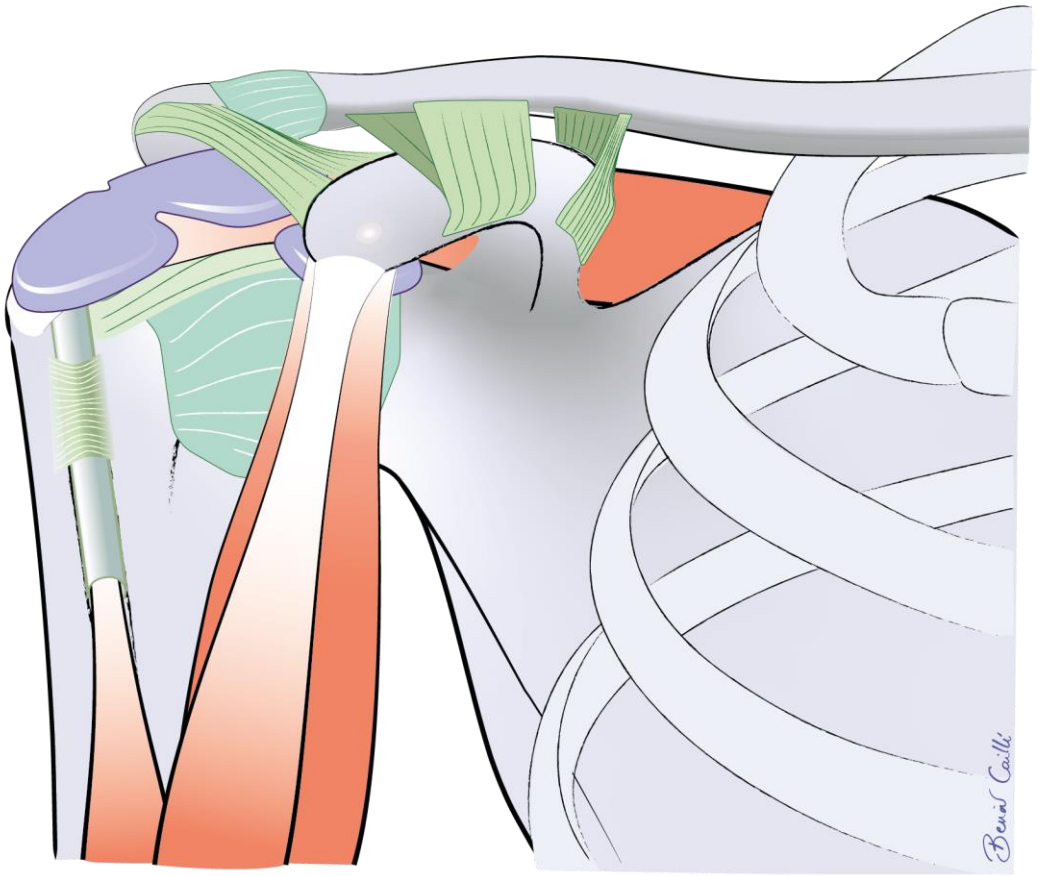
# Ligaments



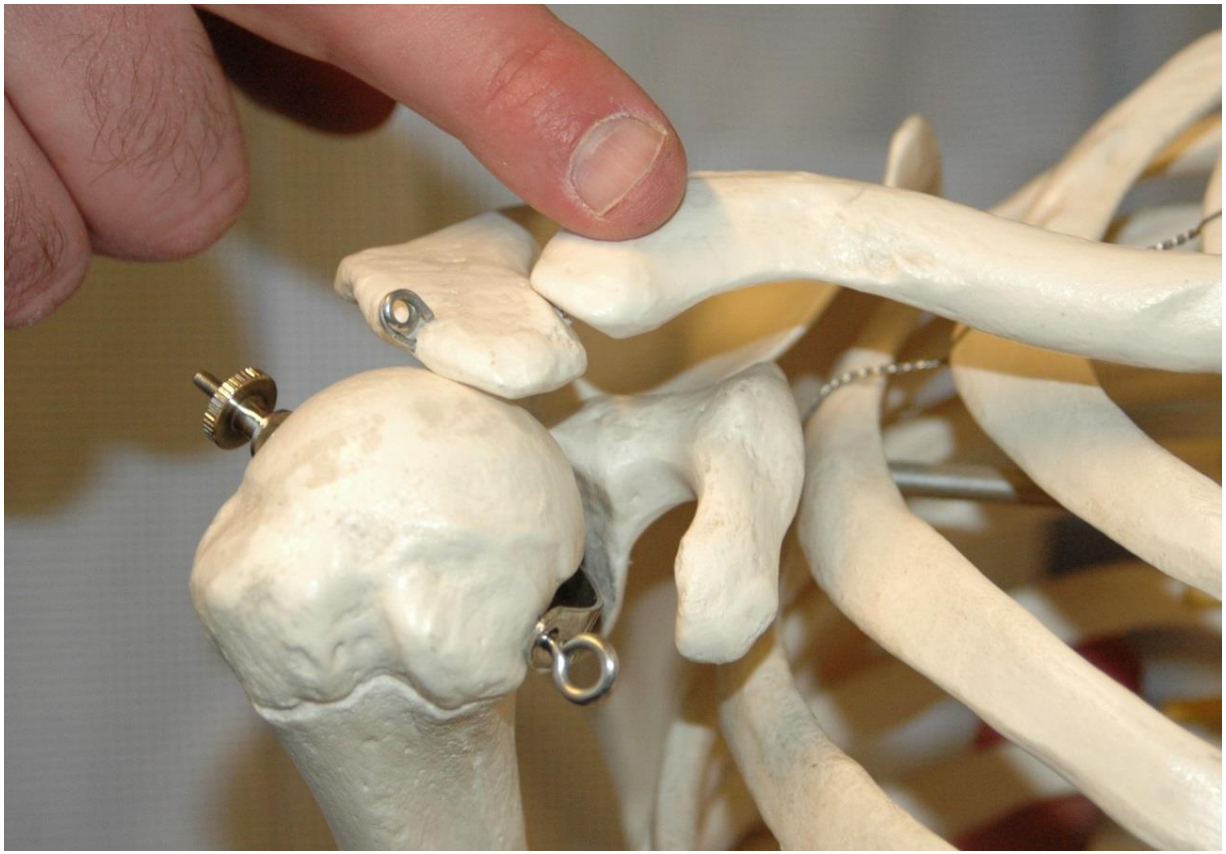
# Bursae

*LMO course, E. Prat DO, B. Caillé DO*

# Muscles



# Finding the bony landmarks



Clavicle

# Finding the bony landmarks

Acromion

# Finding the bony landmarks

Head of humerus

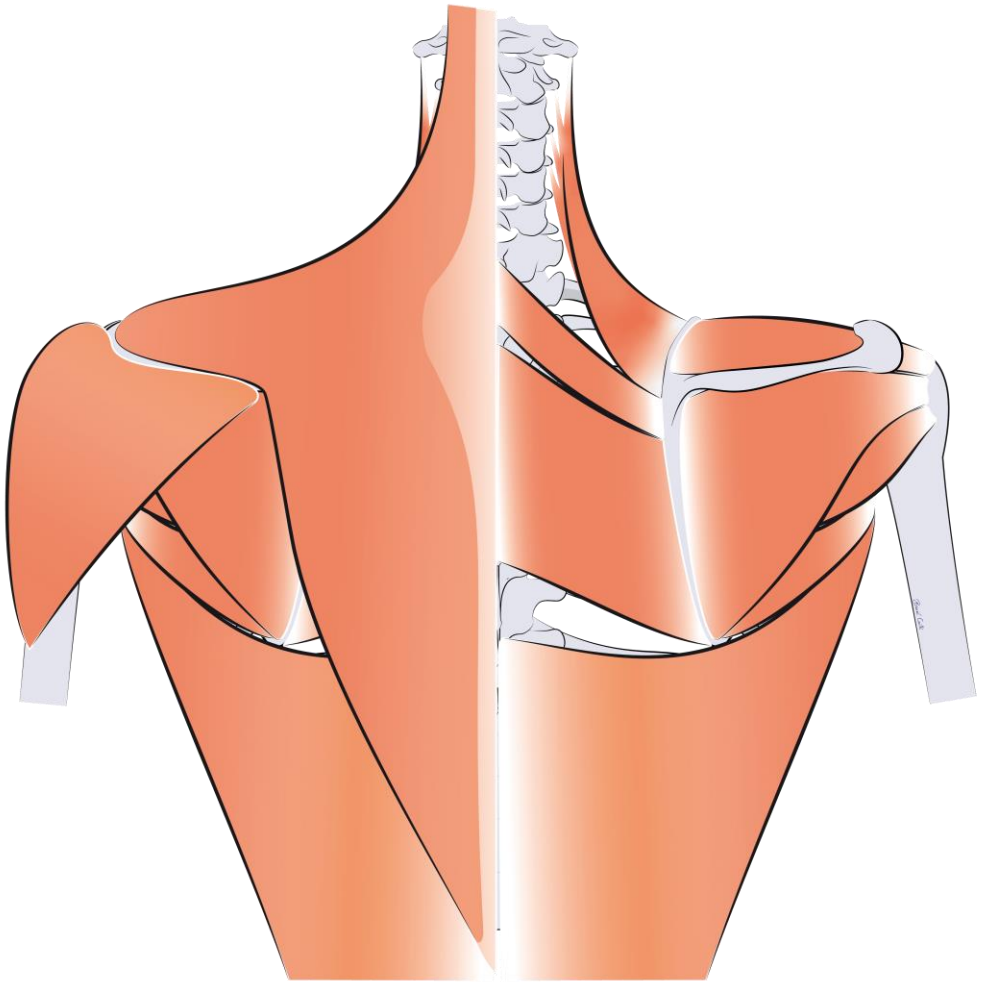
# Finding the bony landmarks

Coracoid process

# A) SEATED PATIENT

- Key points of the scapula
- Head of humerus
- Acromion
- Lateral extremity of clavicle
- Coracoid process

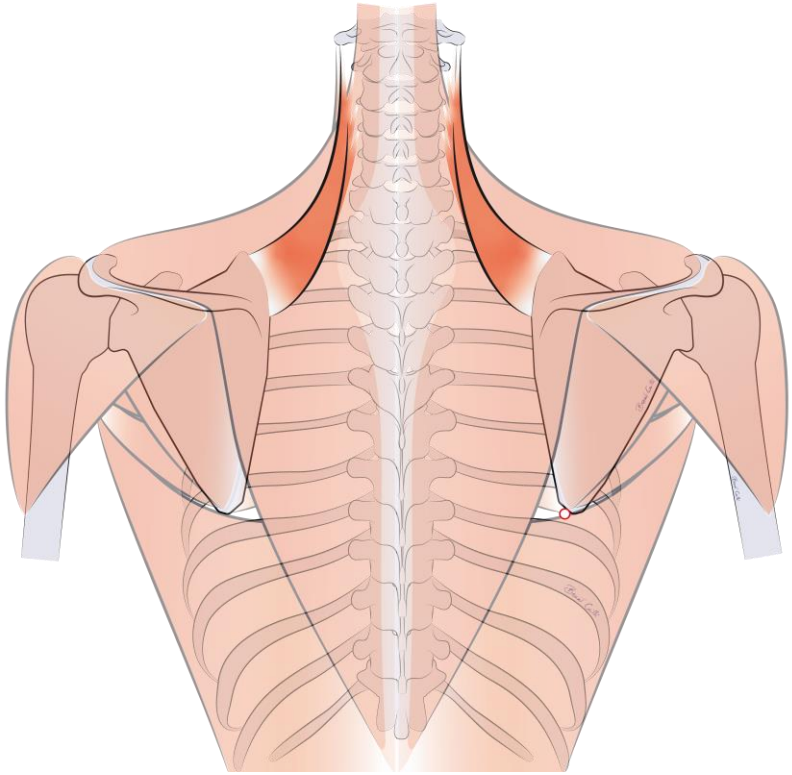
# Key points of the scapula



# Key points of the scapula

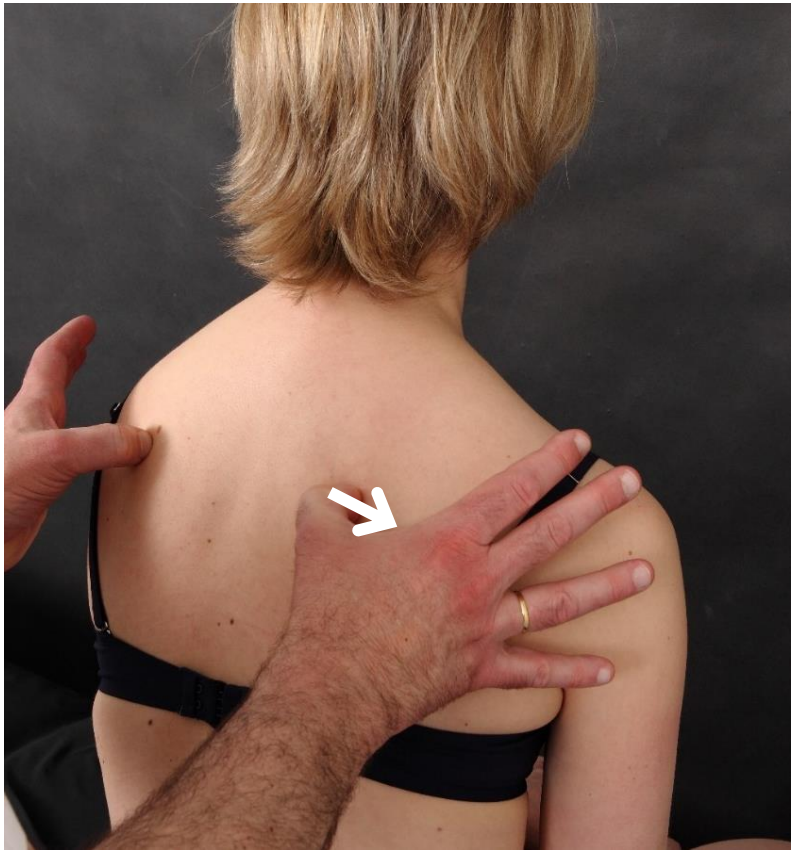
1. Test of the superior angle (levator scapulae)
2. Test of the medial border (rhomboid minor)
3. Test of the medial border (rhomboid major)
4. Test of the inferior angle (latissimus dorsi)
5. Test of the lateral border (teres major)
6. Test of the lateral border (teres minor)

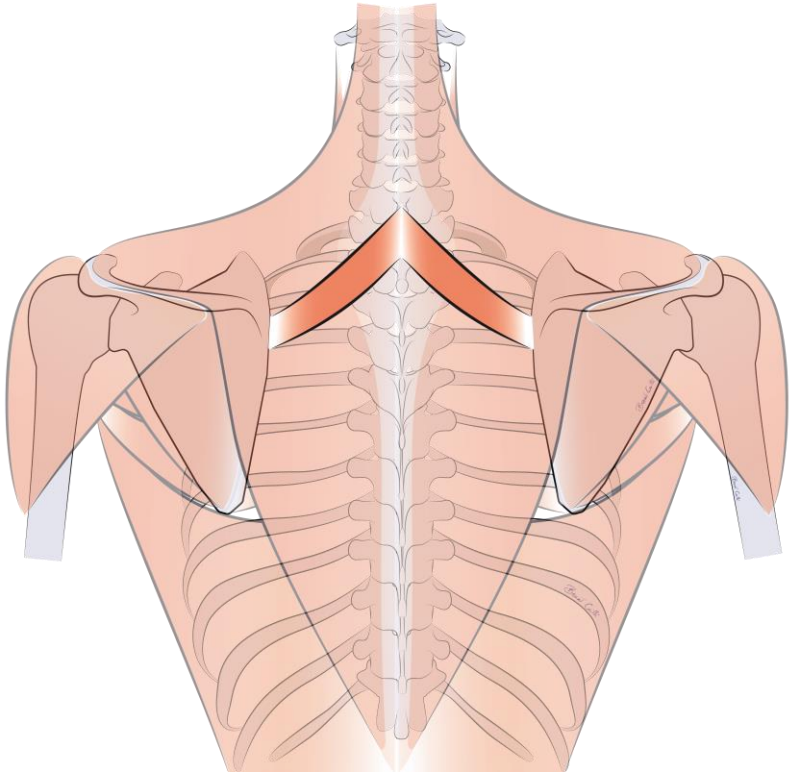
# 1. TEST OF THE SUPERIOR ANGLE OF THE SCAPULA



*Contact: insertion of levator scapulae*
*Test: pressure-circumduction*

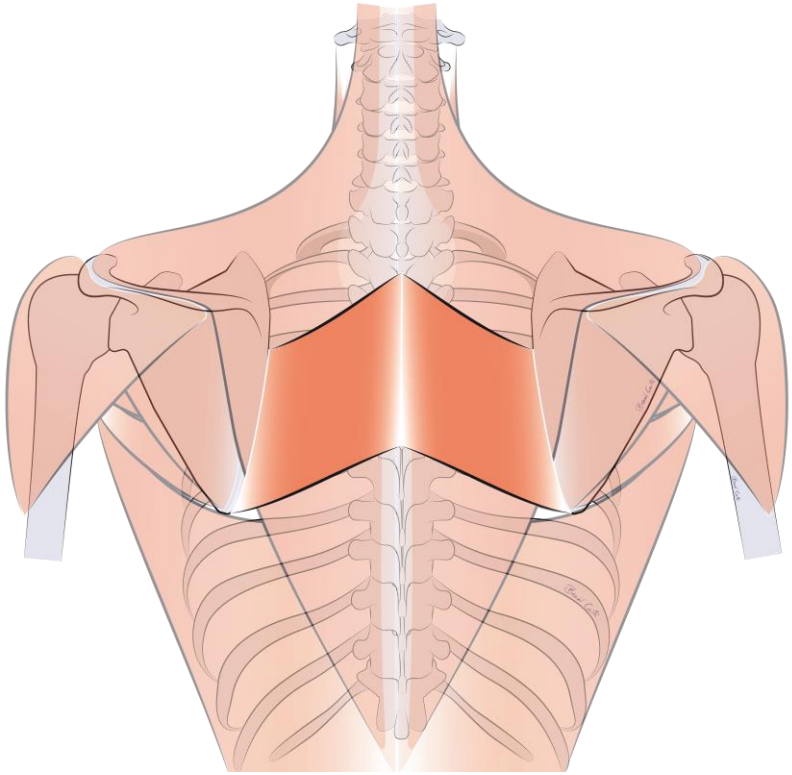
# 2. TEST OF THE MEDIAL BORDER OF THE SCAPULA (1)





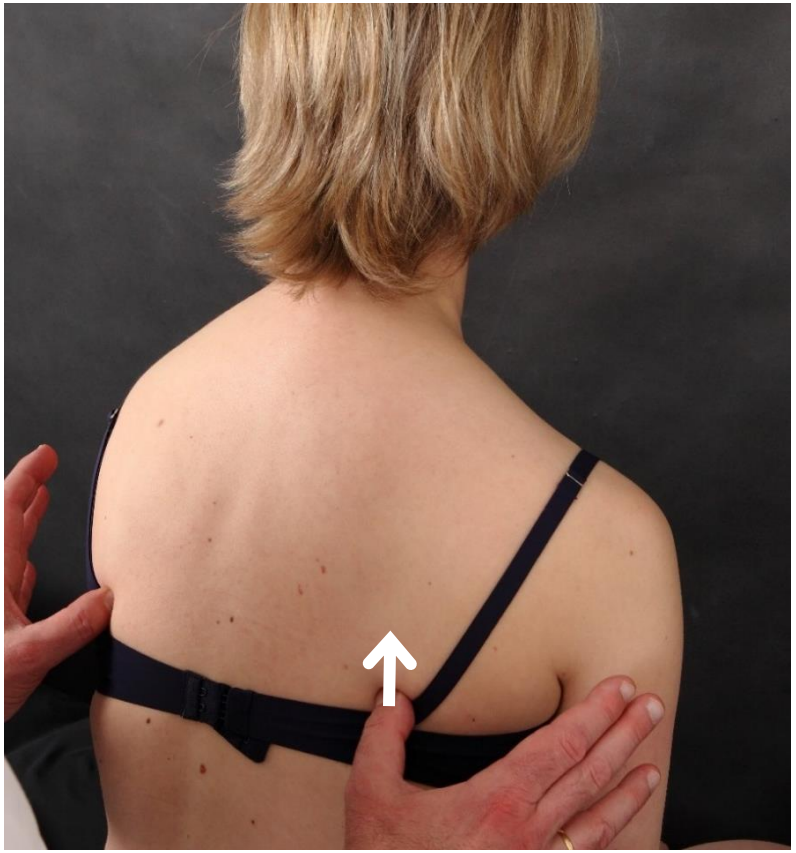
*Contact: insertion of rhomboid minor*
*Test: pressure-circumduction*

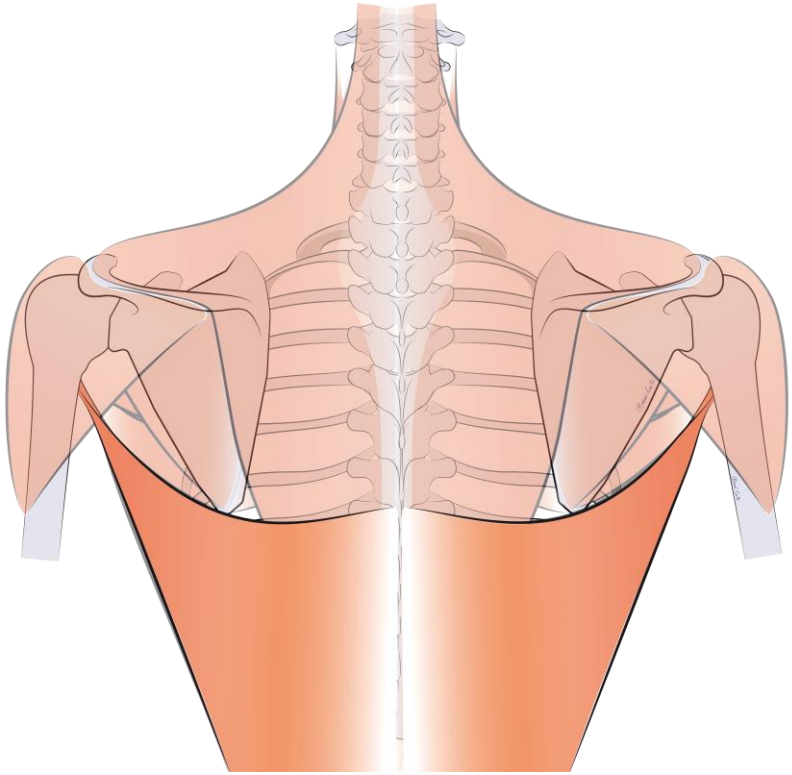
# 3. TEST OF THE MEDIAL BORDER OF THE SCAPULA (2)



*Contact: insertion of rhomboid major*
*Test: pressure-circumduction*

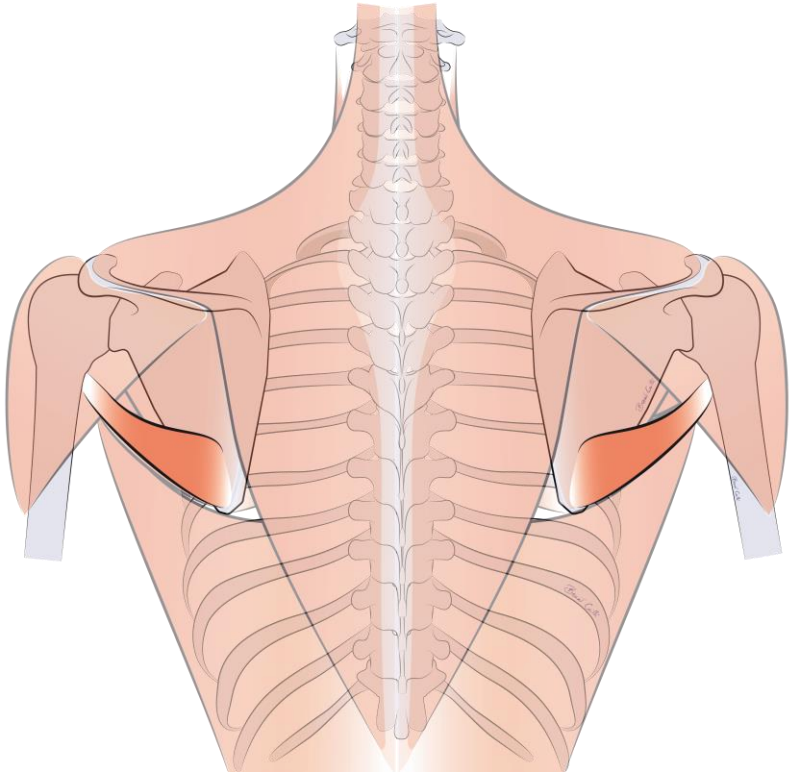
# 4. TEST OF THE INFERIOR ANGLE OF THE SCAPULA





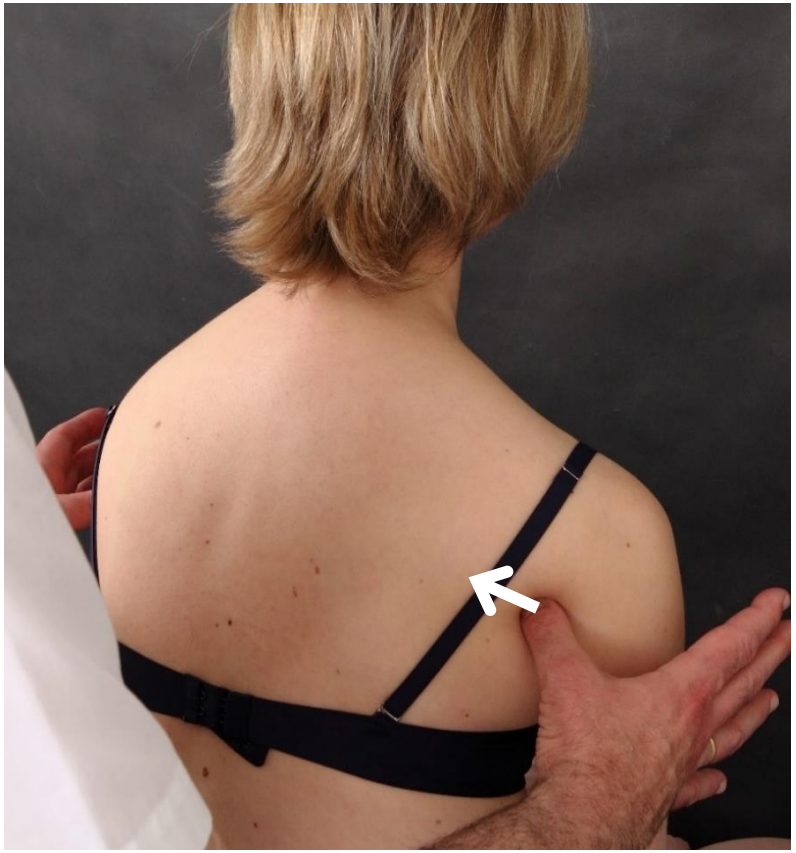
*Contact: insertion of latissimus dorsi*
*Test: pressure-circumduction*

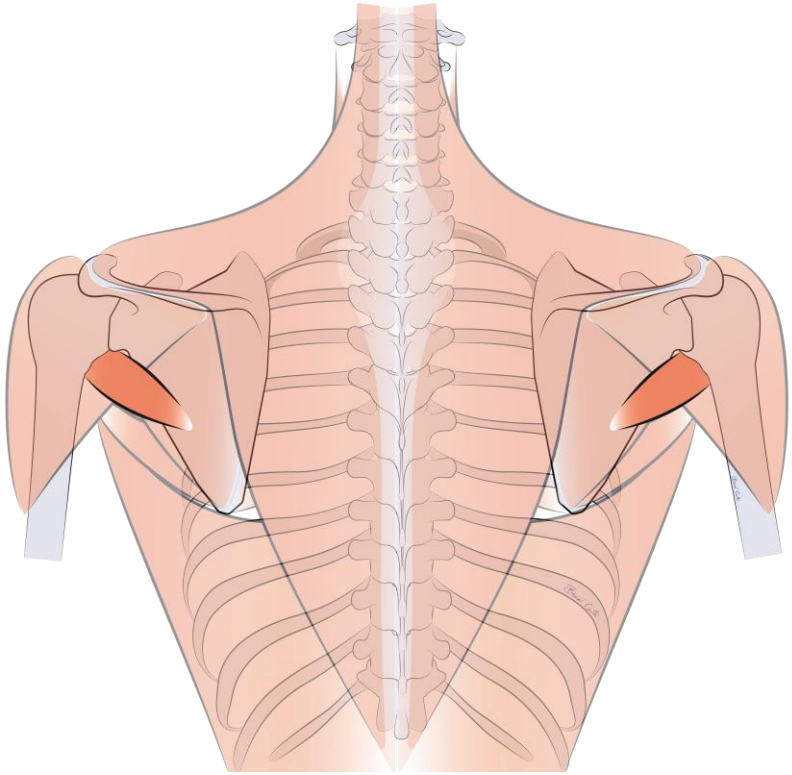
# 5. TEST OF THE LATERAL BORDER OF THE SCAPULA (1)



*Contact: insertion of teres major*
*Test: pressure-circumduction*

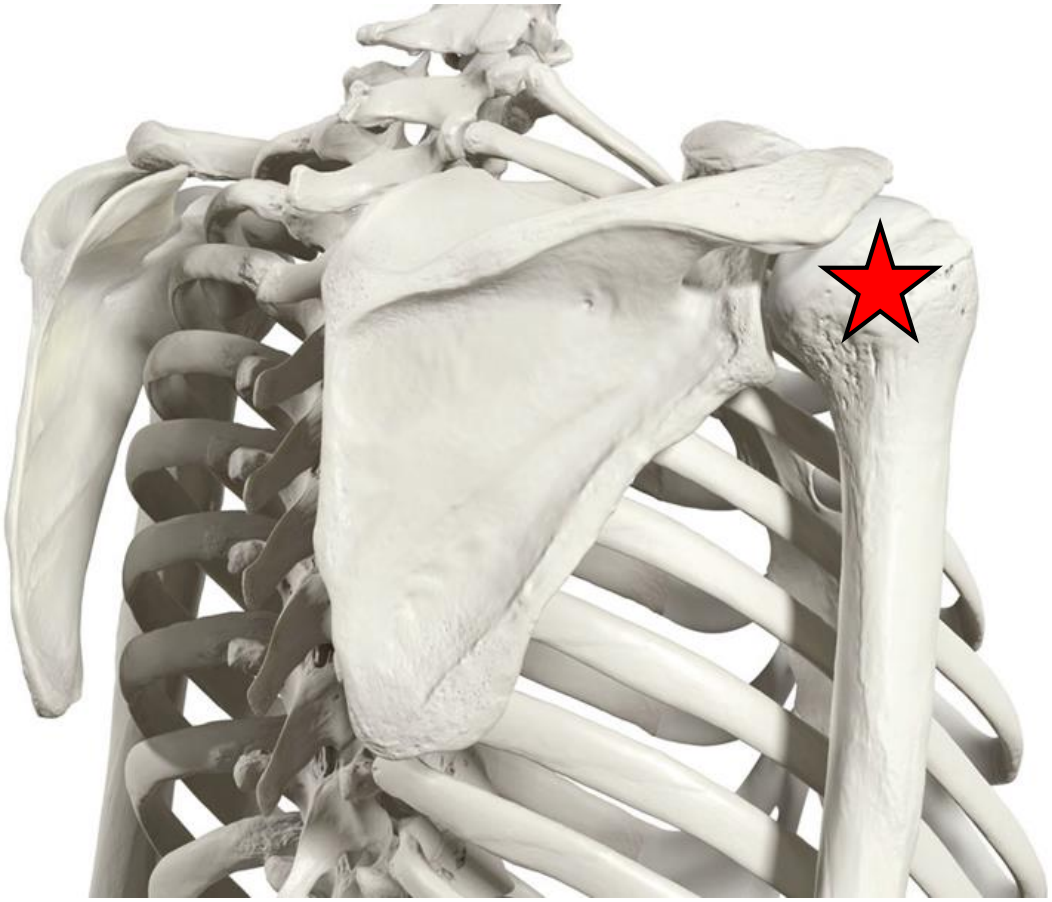
# 6. TEST OF THE LATERAL BORDER OF THE SCAPULA (2)



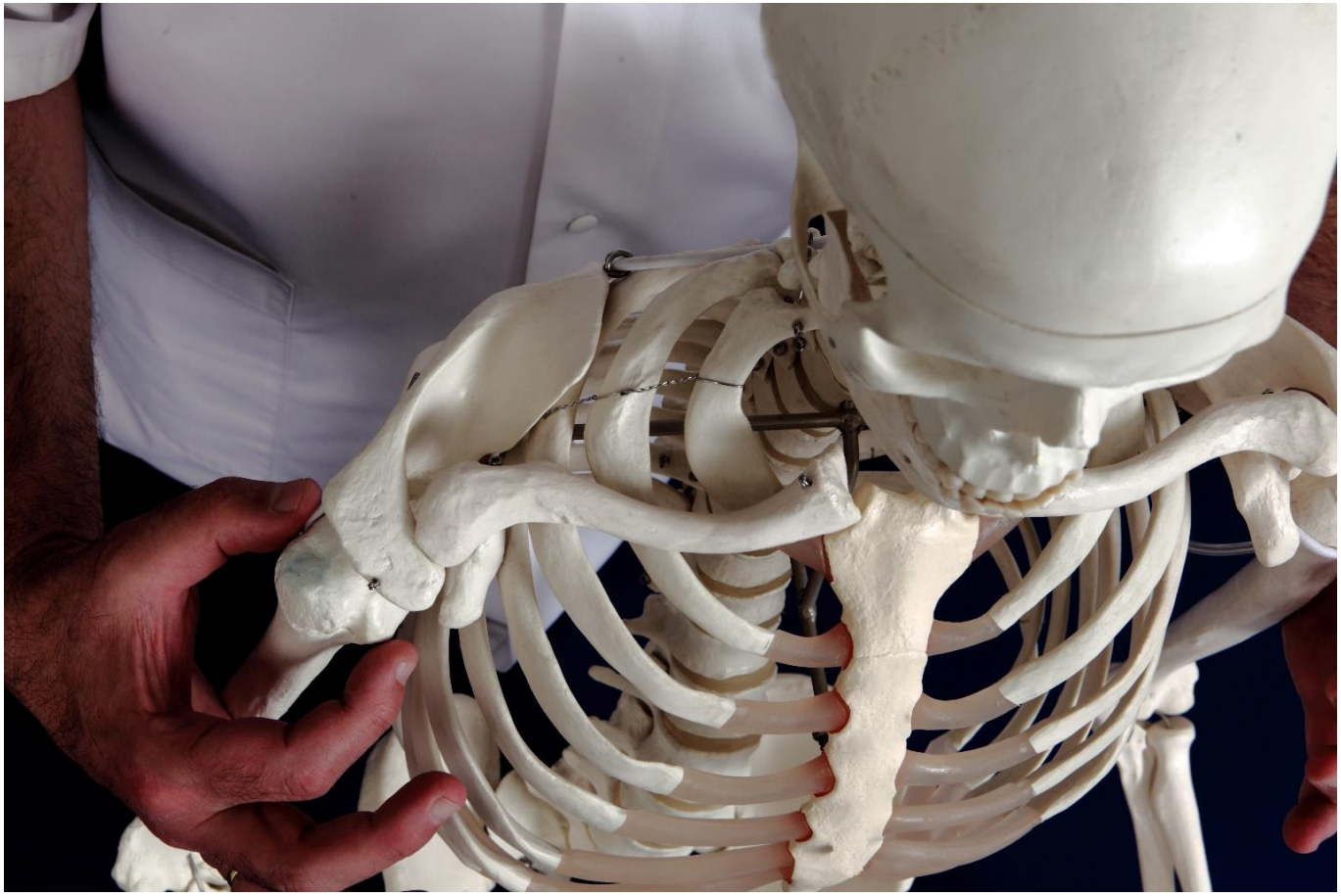


*Contact: insertion of teres minor*
*Test: pressure-circumduction*

# The head of the humerus

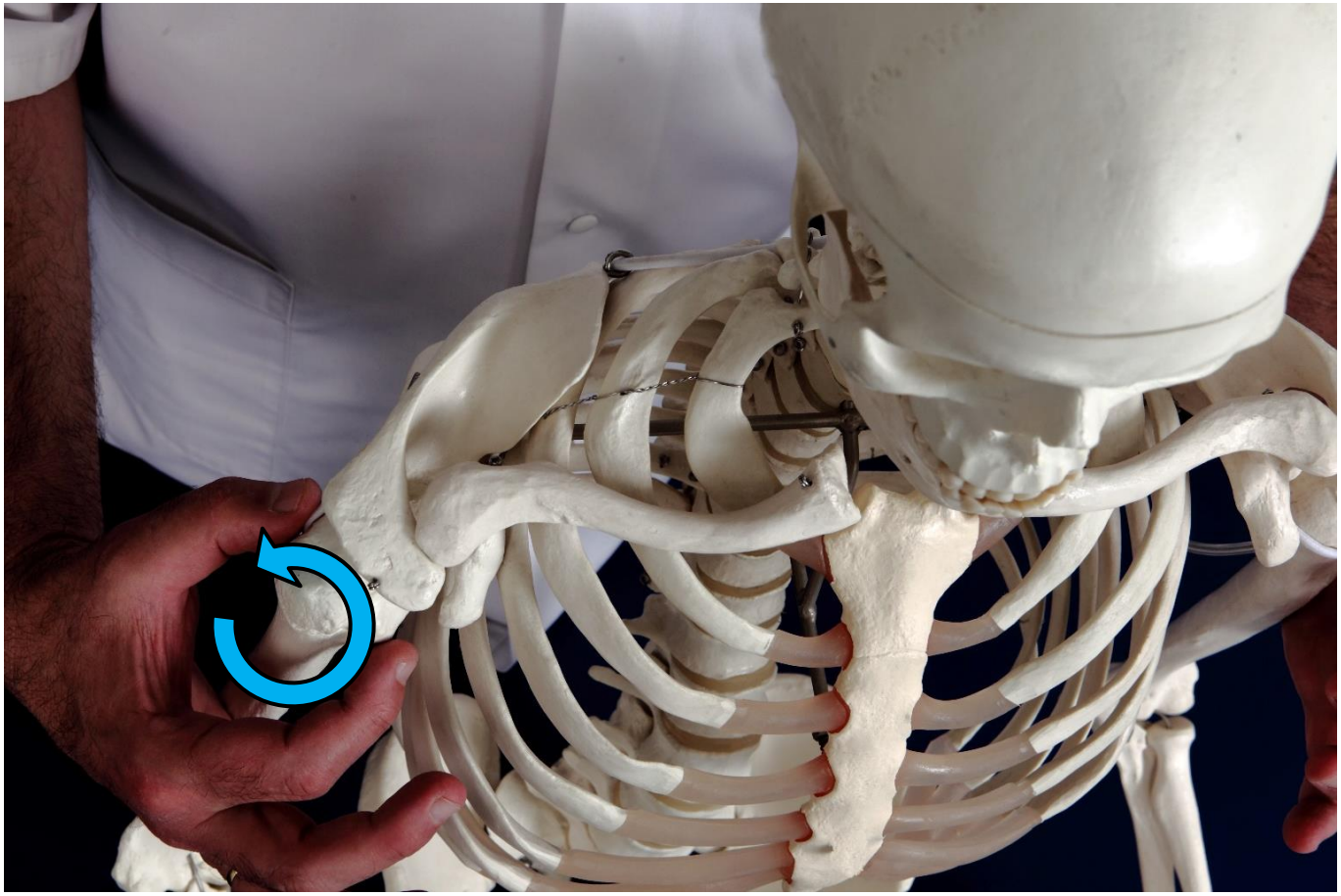


# TEST OF THE HEAD OF THE HUMERUS



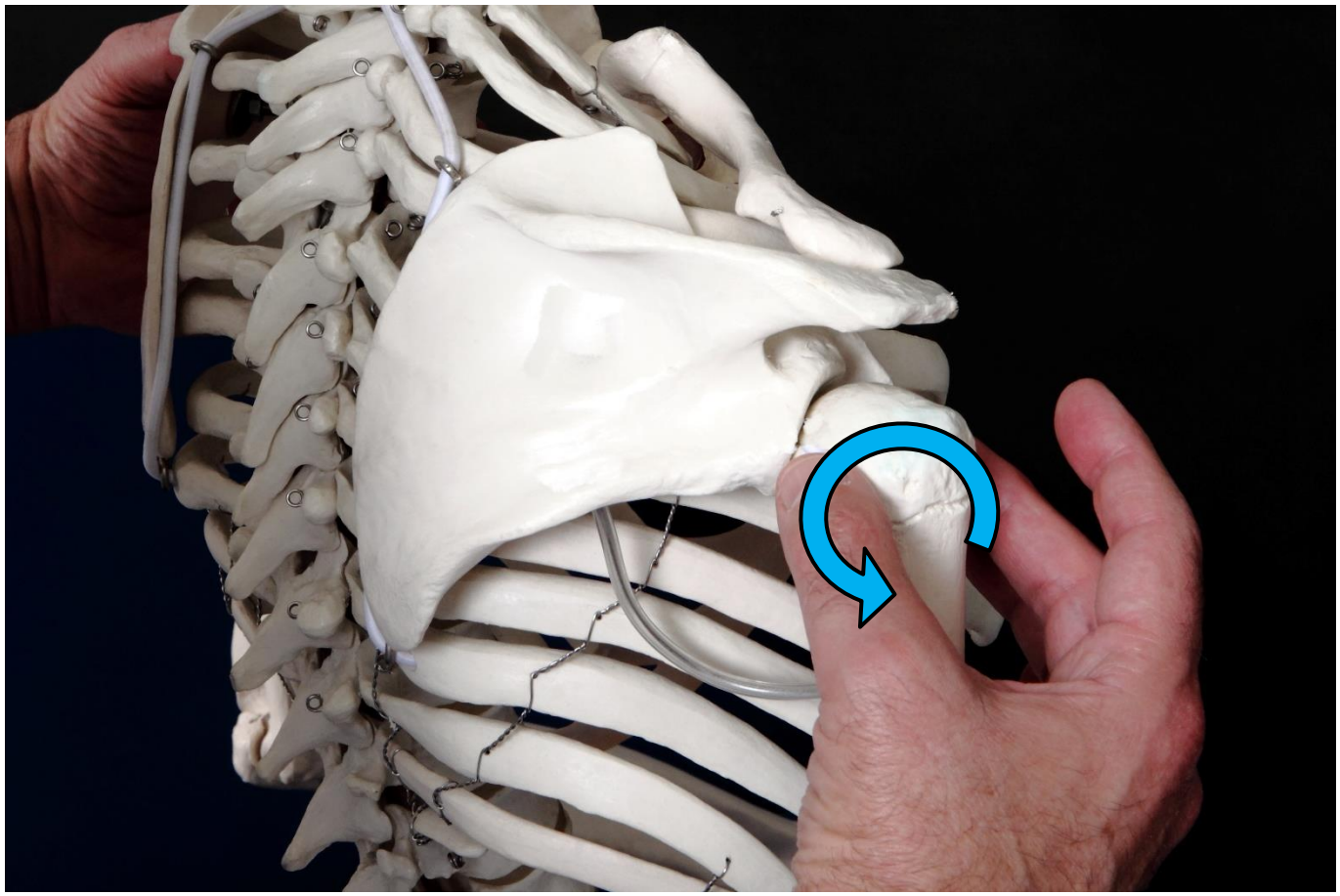
*Contact: head of the humerus between thumb and index*

# TEST OF THE HEAD OF THE HUMERUS



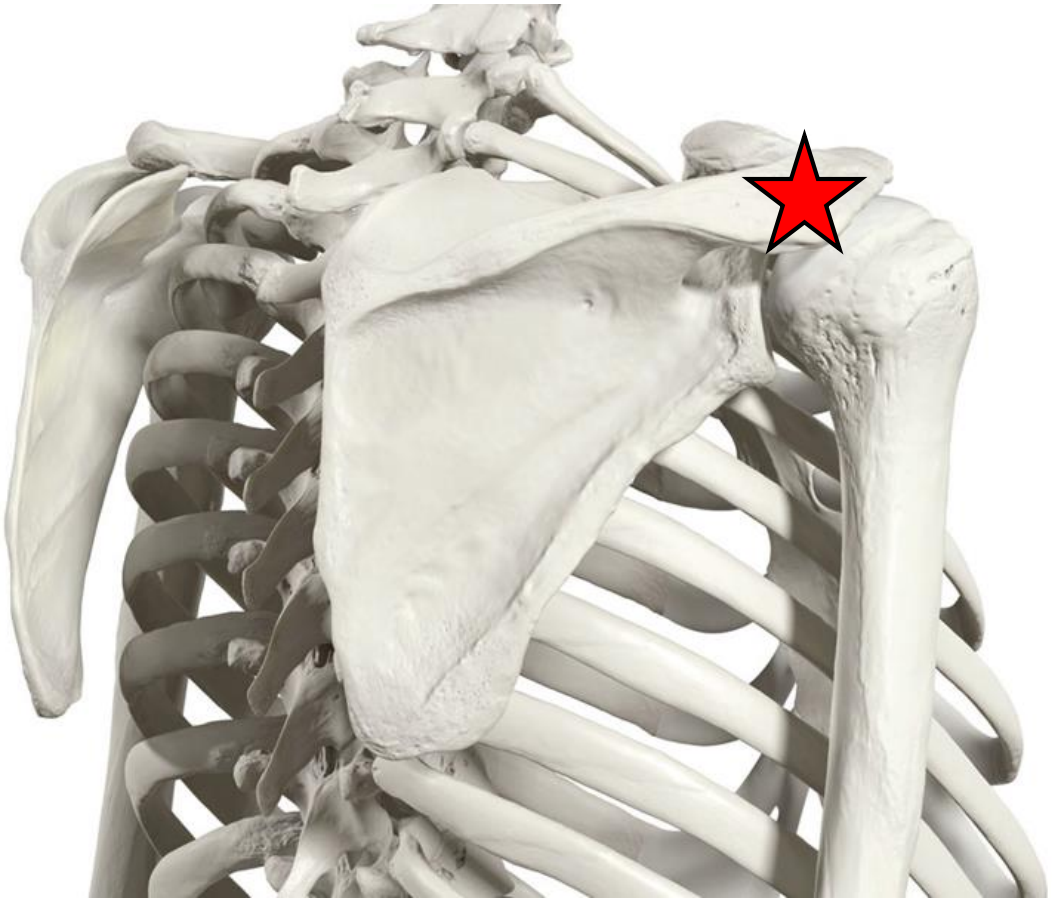
*Pressure-decompression test of glenohumeral joint and circumduction in the sagittal plane*

# TEST OF THE HEAD OF THE HUMERUS

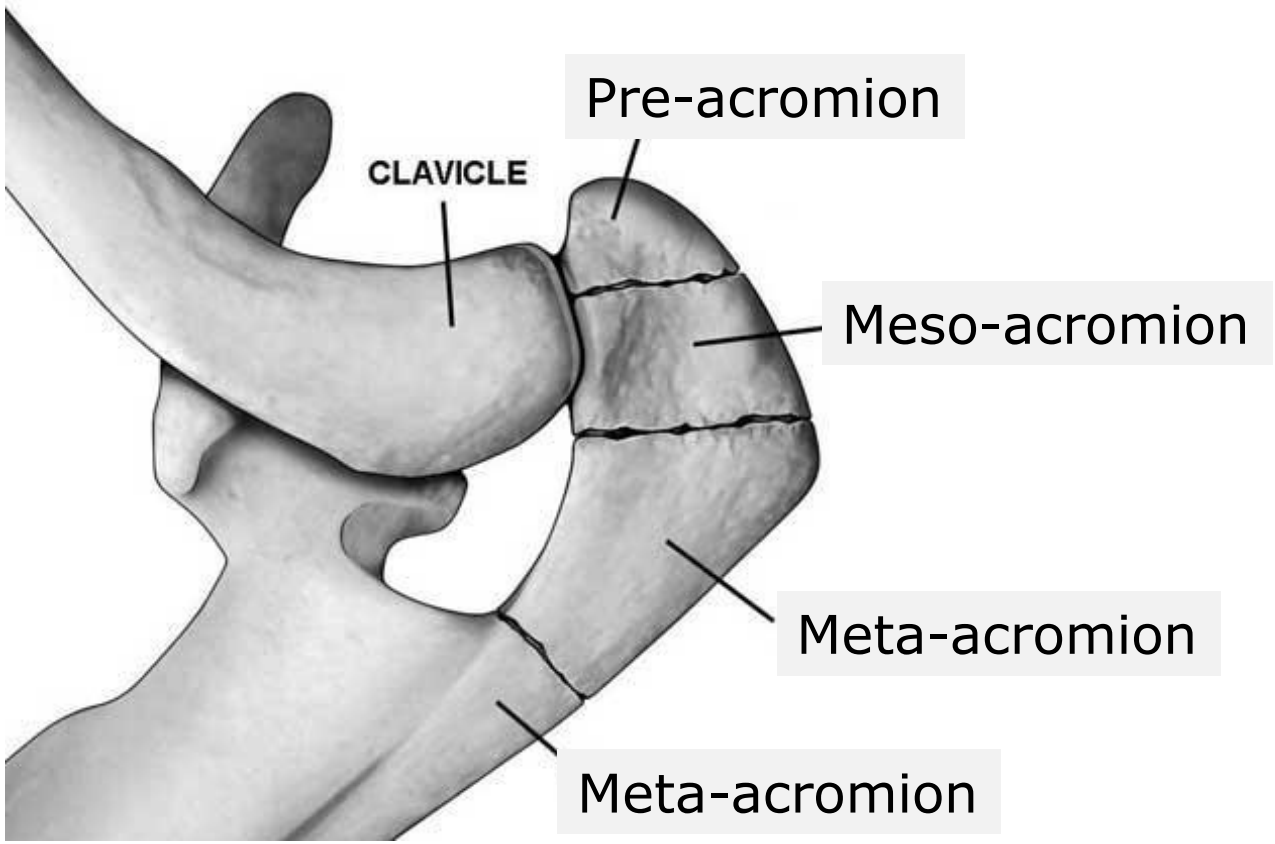


*Pressure-decompression test of glenohumeral joint and circumduction in the sagittal plane*

# The acromion



# Epiphyseal lines of the acromion




*Fusion of the different ossification centers only occurs after 25 years of age.*

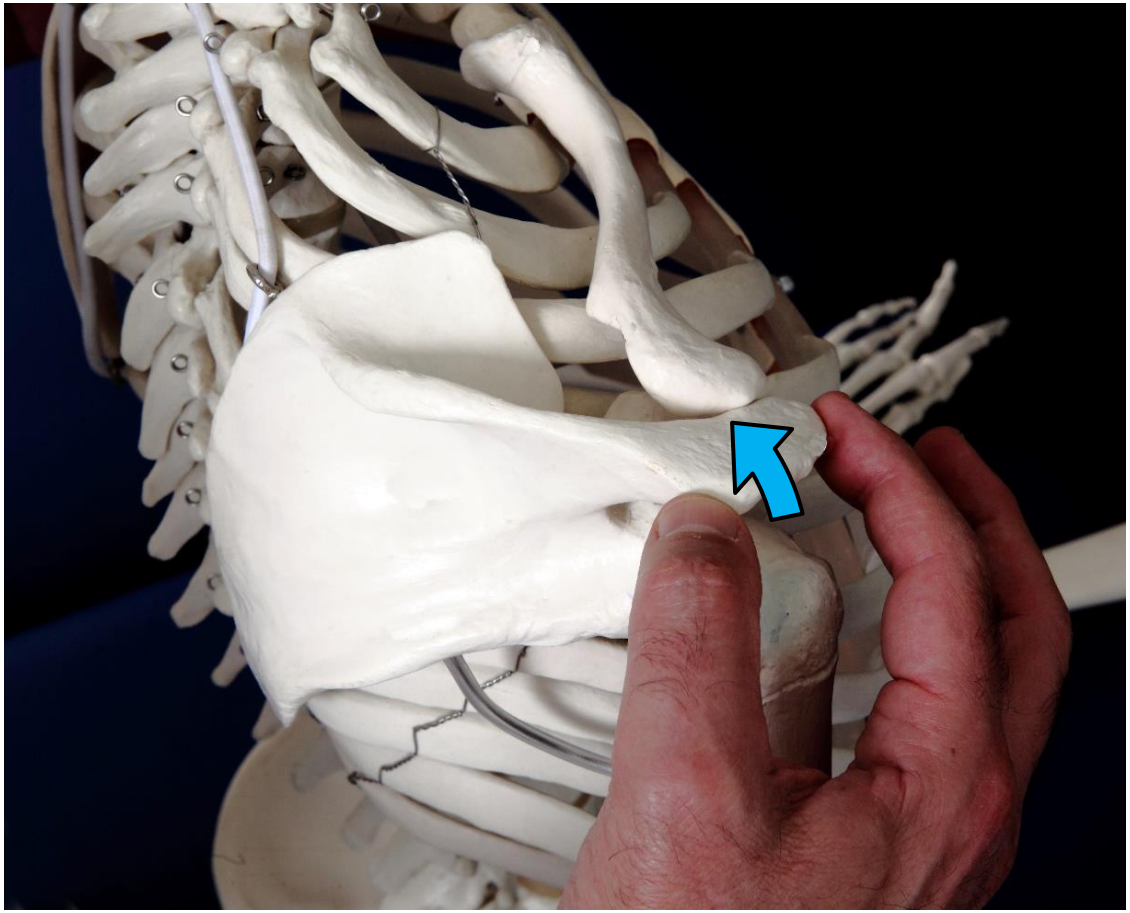
# Aggressive acromial spur

*Lowering of preacromion*

# TEST OF ACROMION

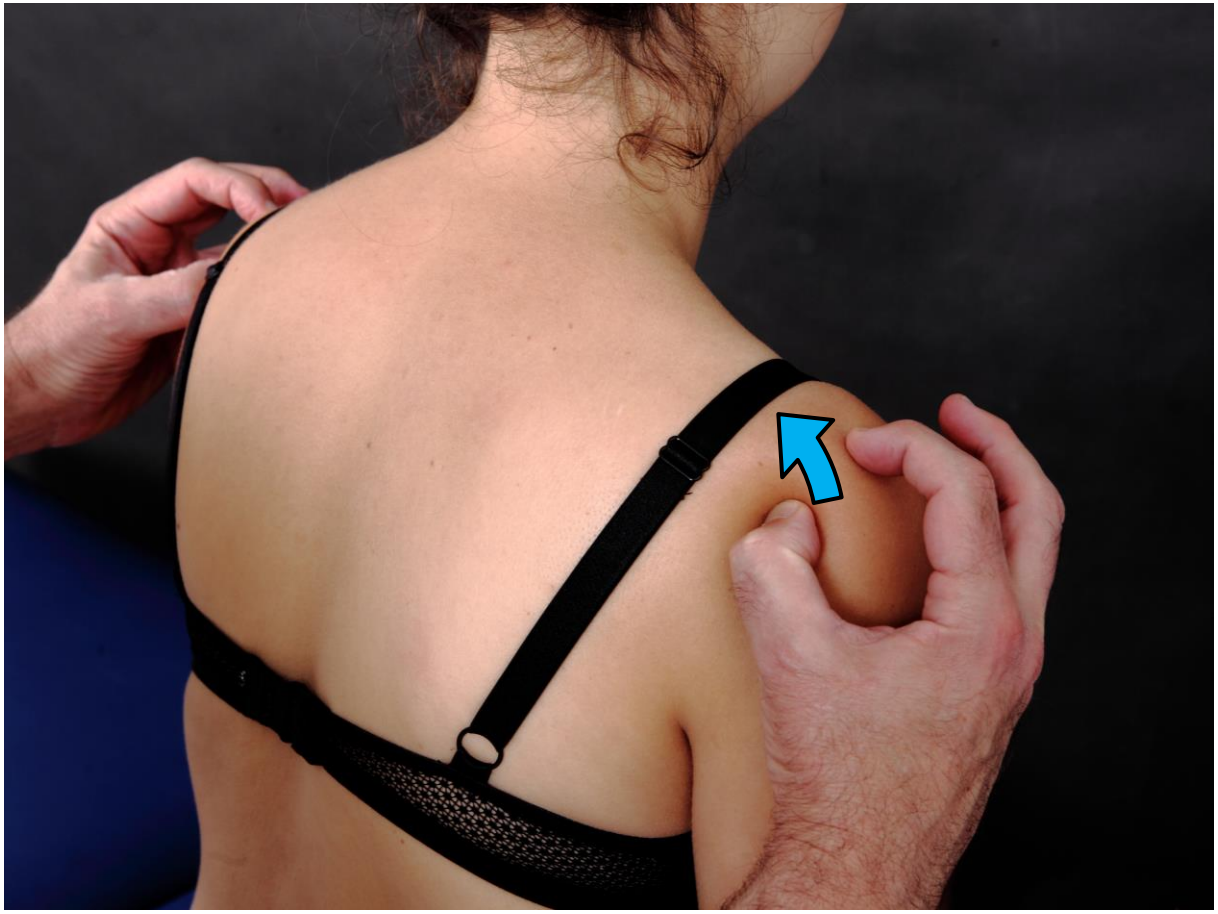
*Contact: thumb-index inferior to acromion*
*Test: superior traction and circumduction*

# TEST OF ACROMION



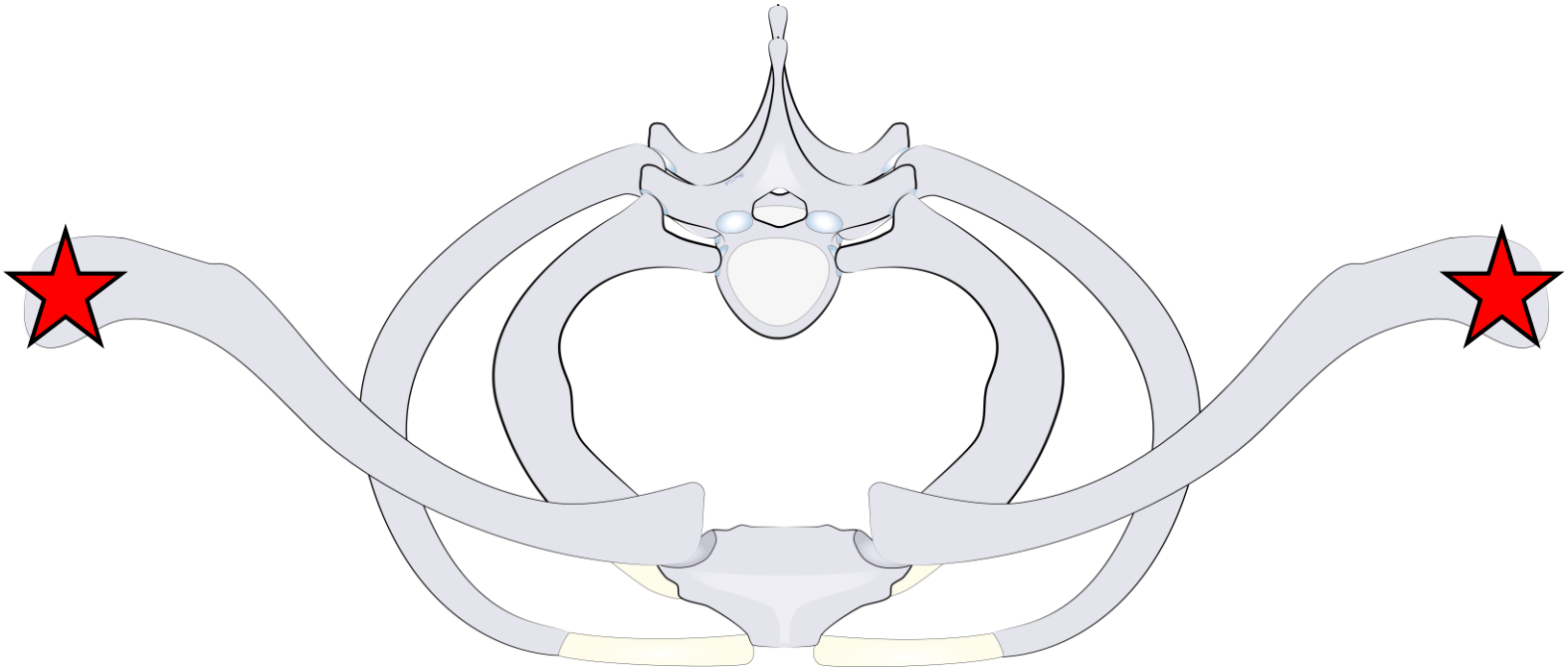
*Contact: thumb-index inferior to acromion*
*Test: superior traction and circumduction*

# TEST OF ACROMION

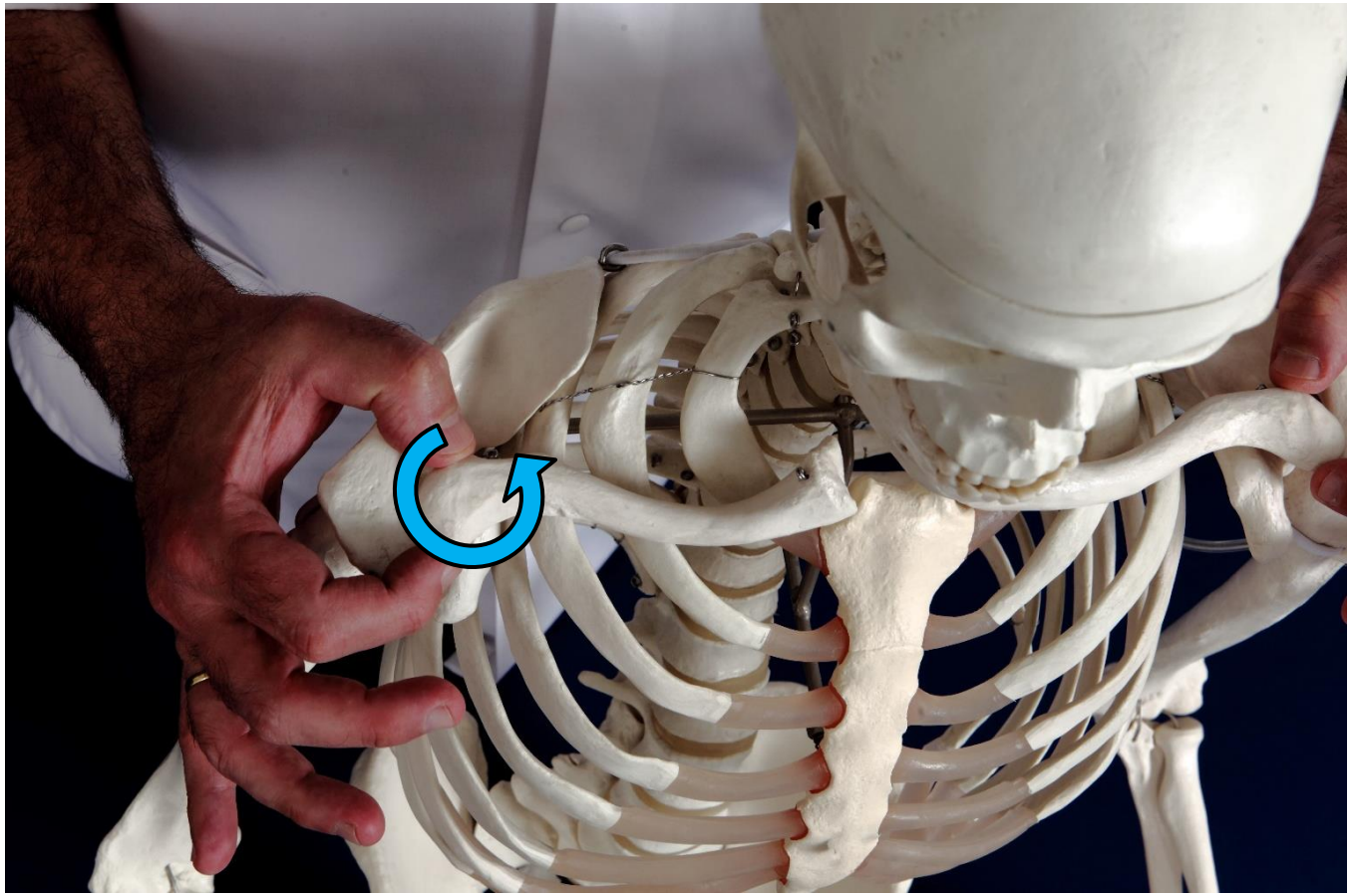


*Contact: thumb-index inferior to acromion*
*Test: superior traction and circumduction*

# Lateral extremity of the clavicle

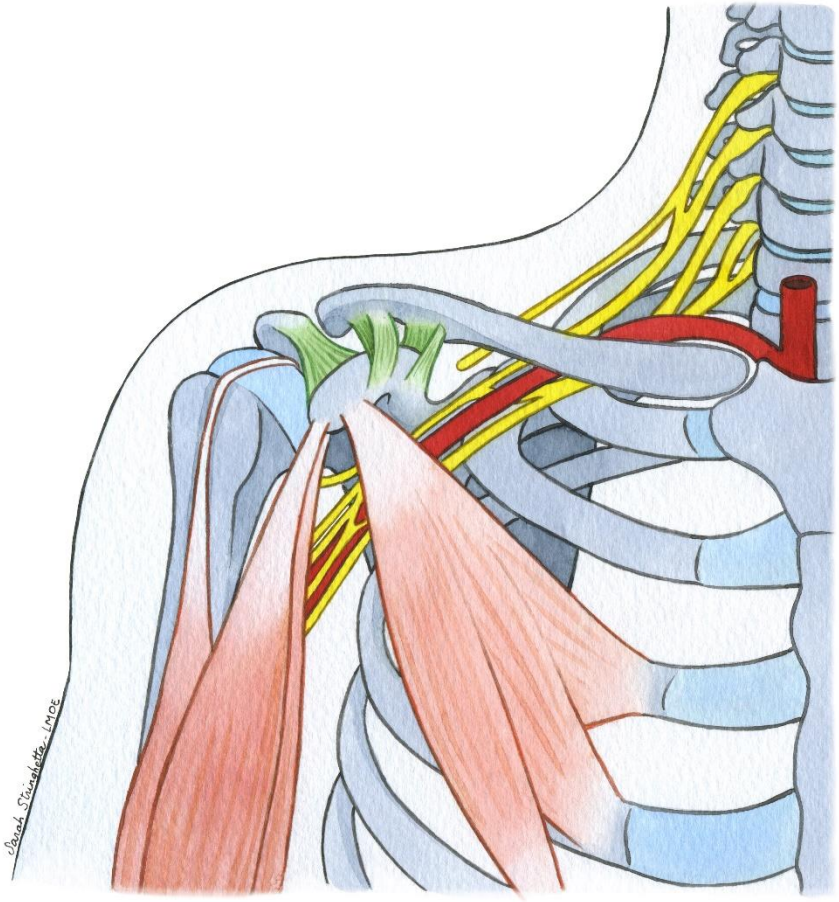


# TEST OF LATERAL EXTREMITY OF CLAVICLE



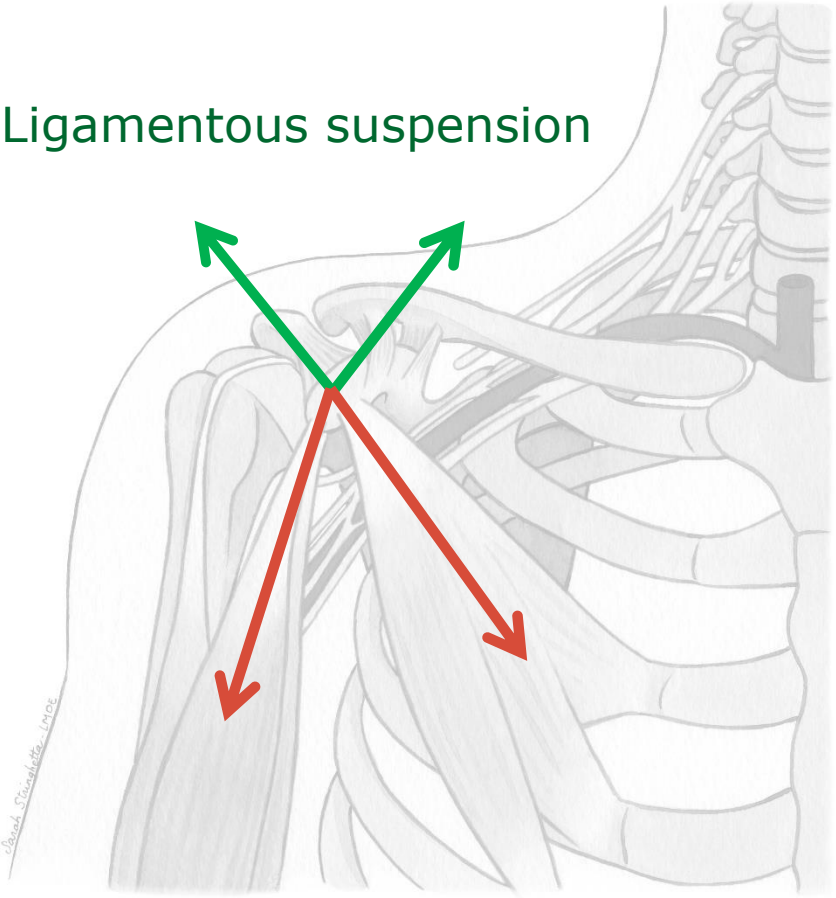
*Contact: lateral extremity of clavicle*
*Test: circumduction in the horizontal plane*

# The coracoid process



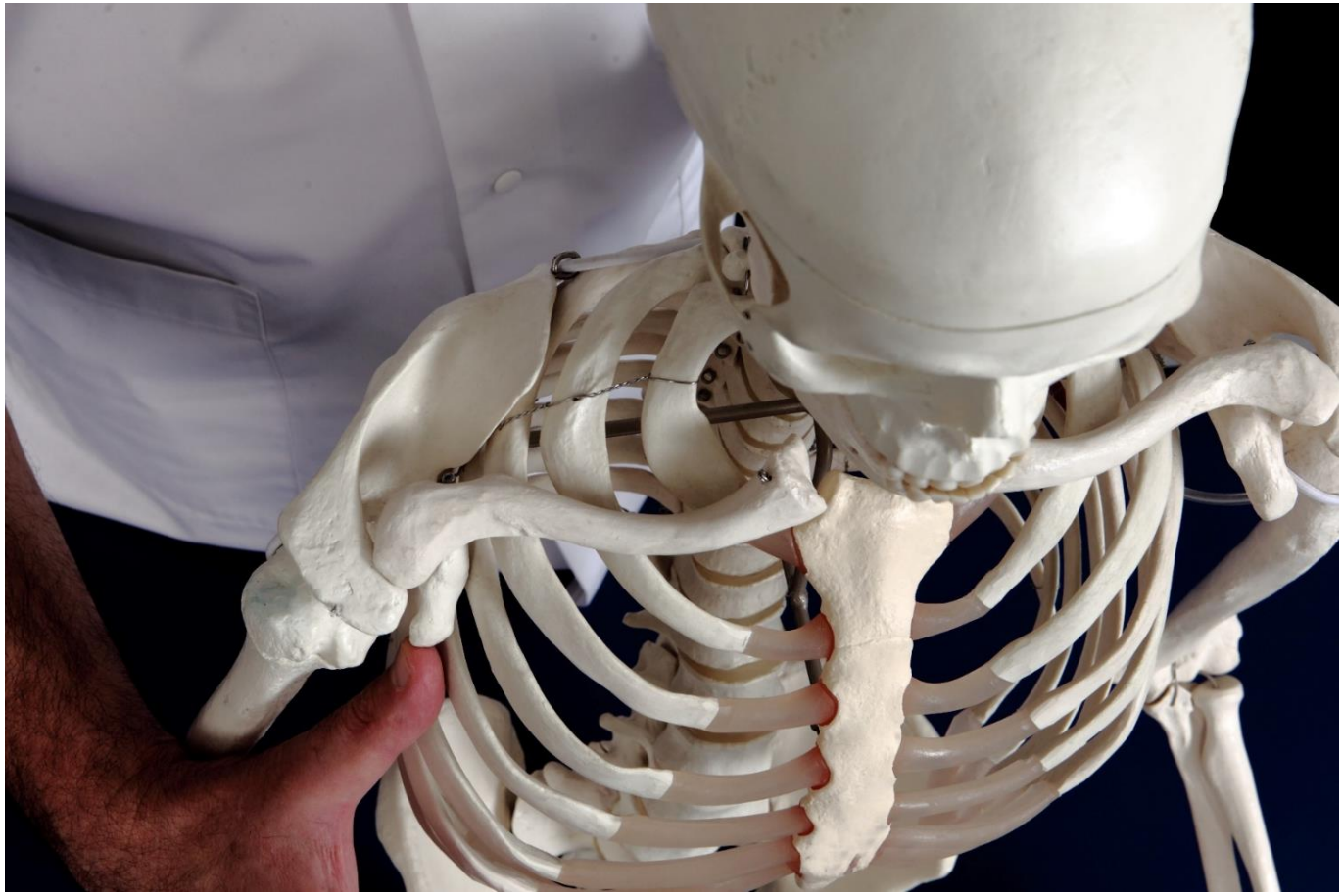
*LMO course, E. Prat DO, S. Stringhetta*

# The ligamentous and muscular cross



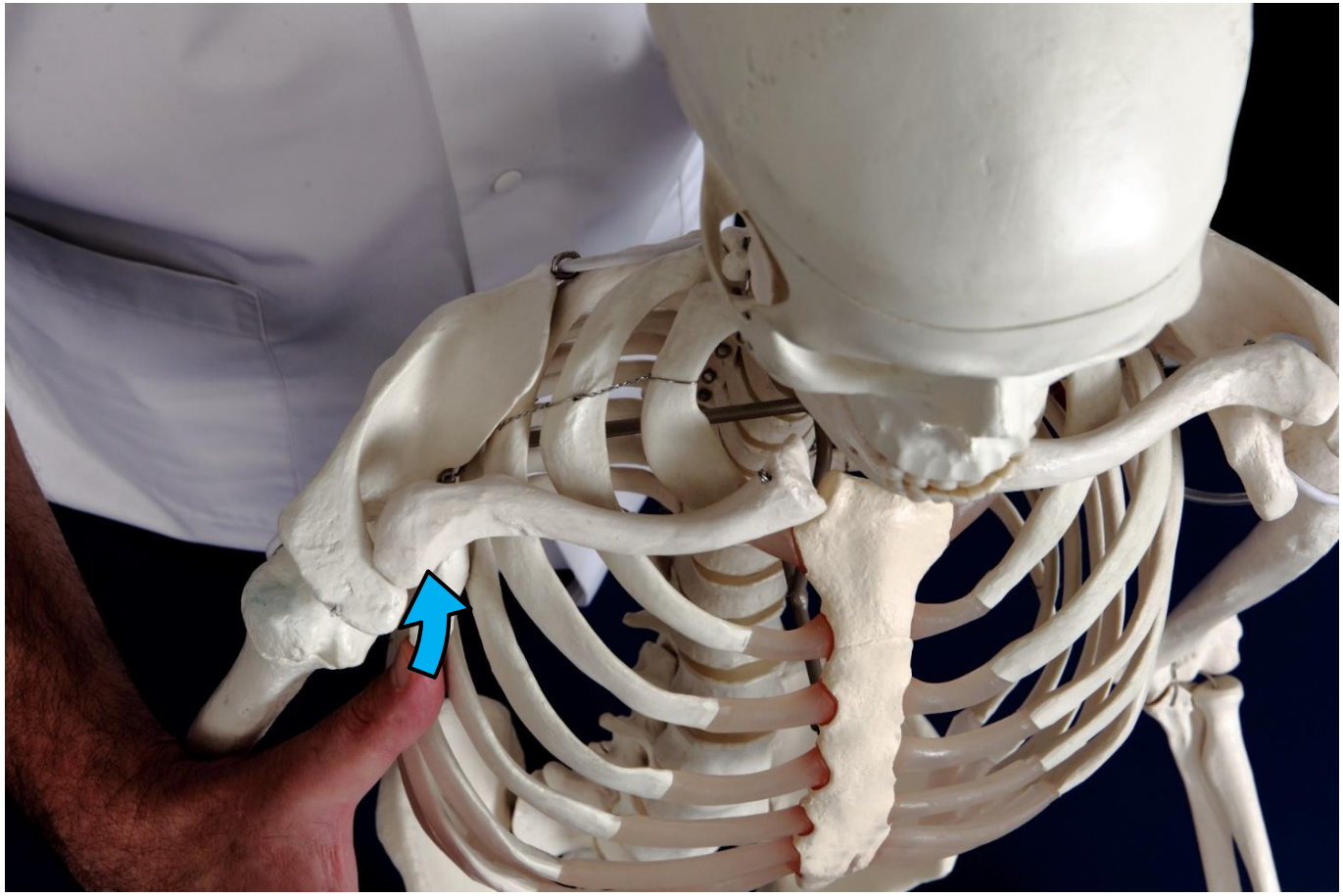

*LMO course, E. Prat DO, S. Stringhetta*

# 13. TEST OF THE CORACOID PROCESS



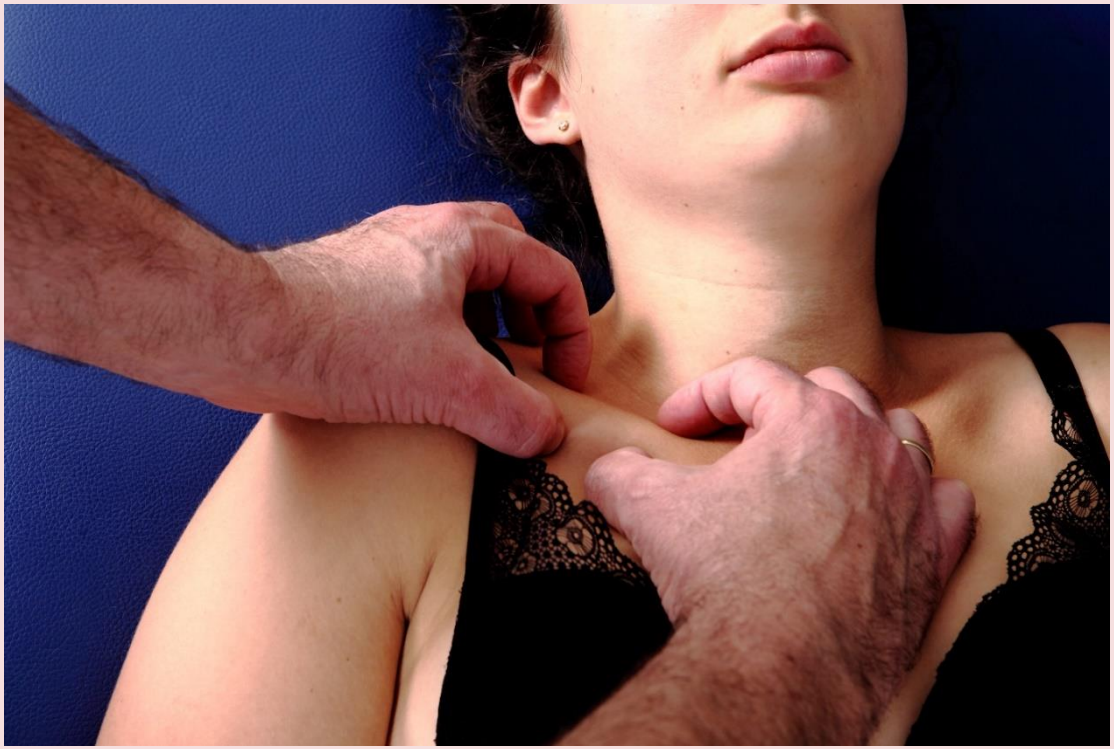
*Contact: thumb on tip of coracoid process*

# 13. TEST OF THE CORACOID PROCESS



*Test: posterior pressure*
*and circumduction in the frontal plane*

# B) PATIENT SUPINE

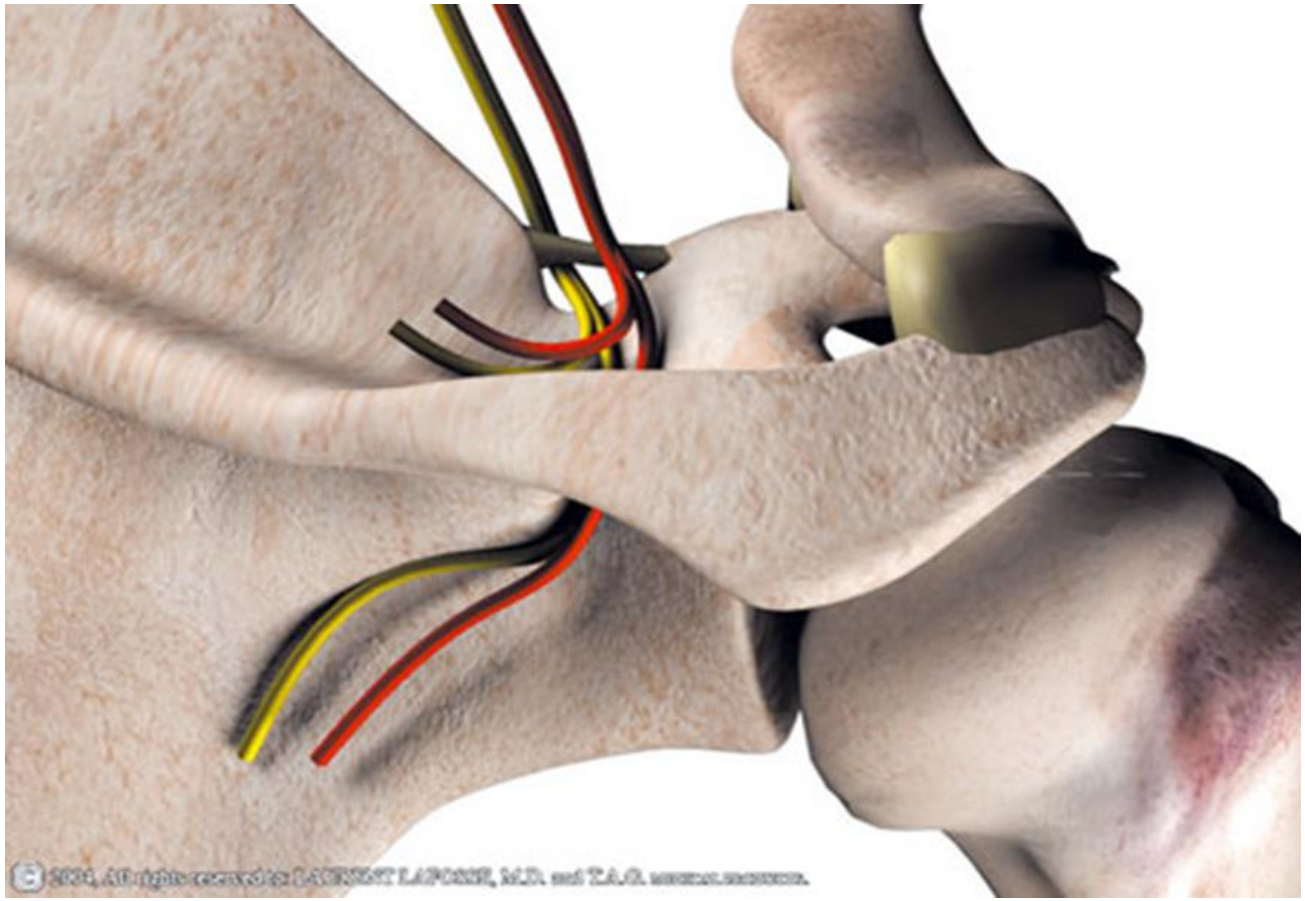


*Patient lying supine, practitioner standing, on the side of the shoulder to be treated*

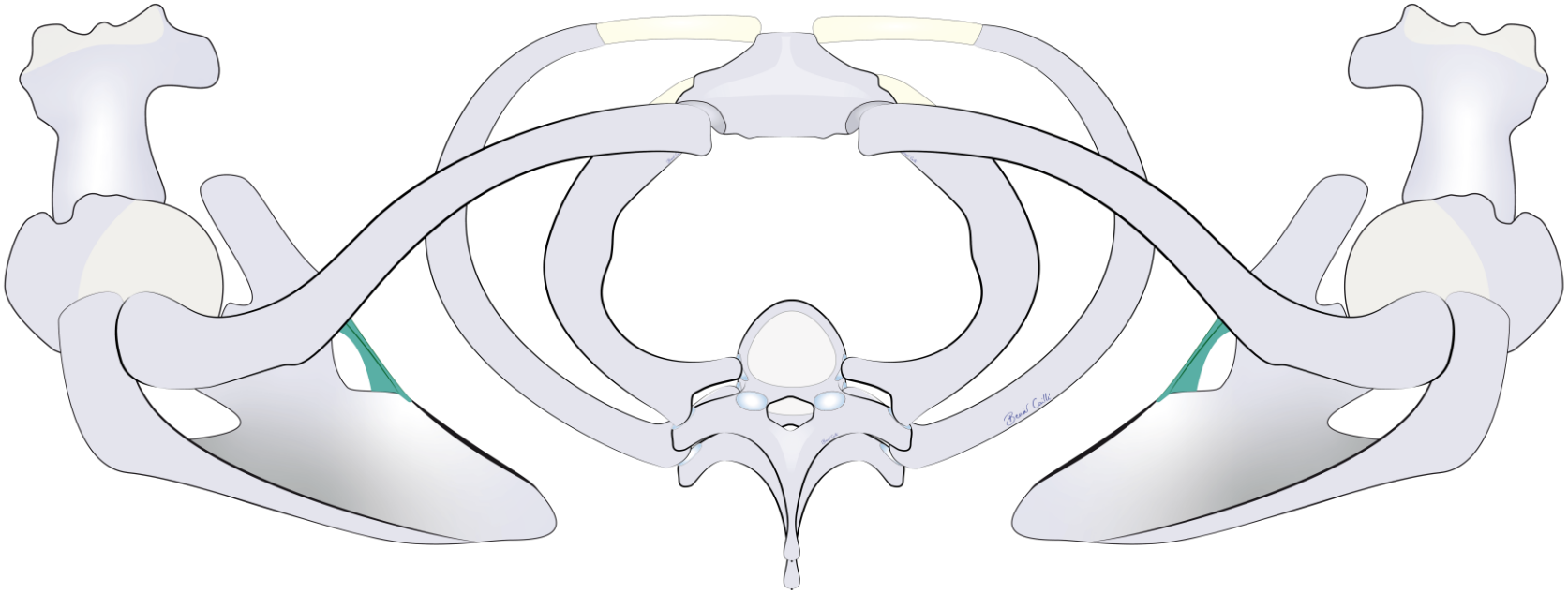
# B) SUPINE PATIENT

- **Scapular notch** (suprascapular nerve)
- **Tendon of long head of biceps**
- **Rotator interval**

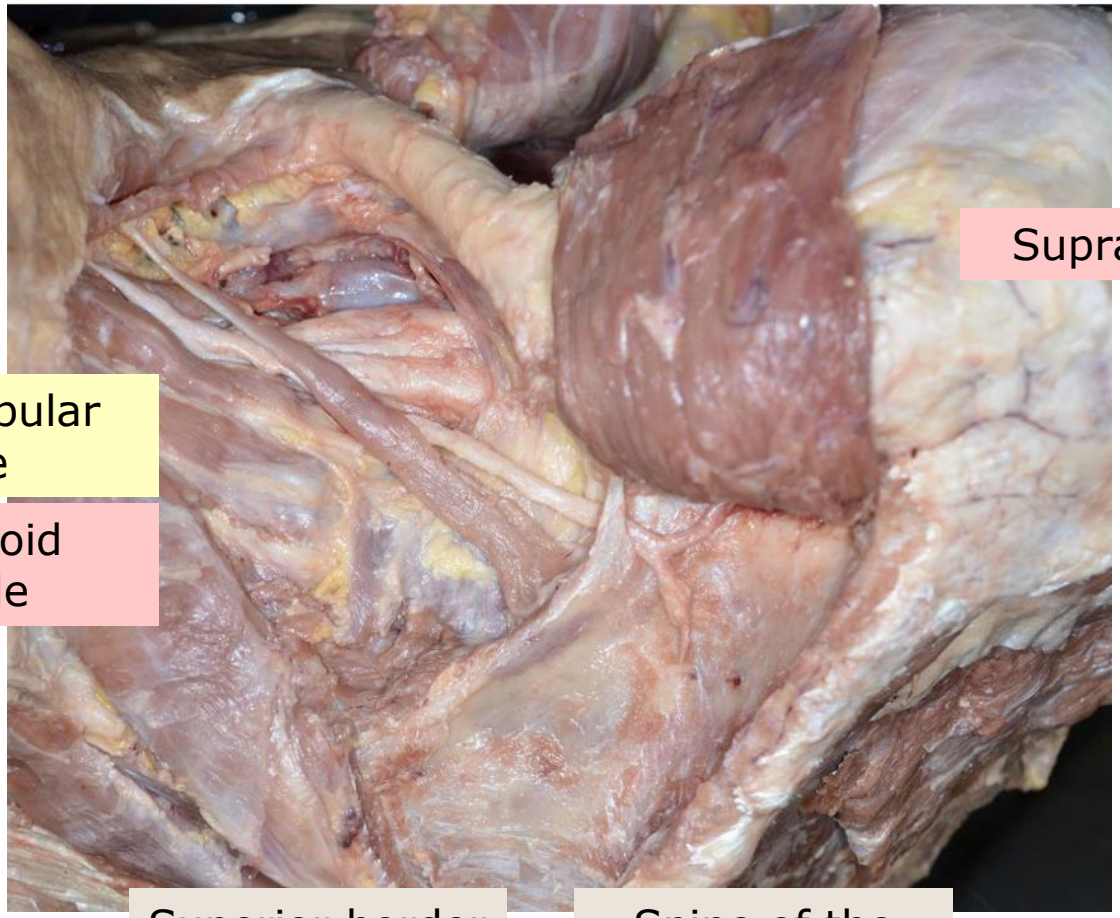
# The scapular notch



# The scapular notch

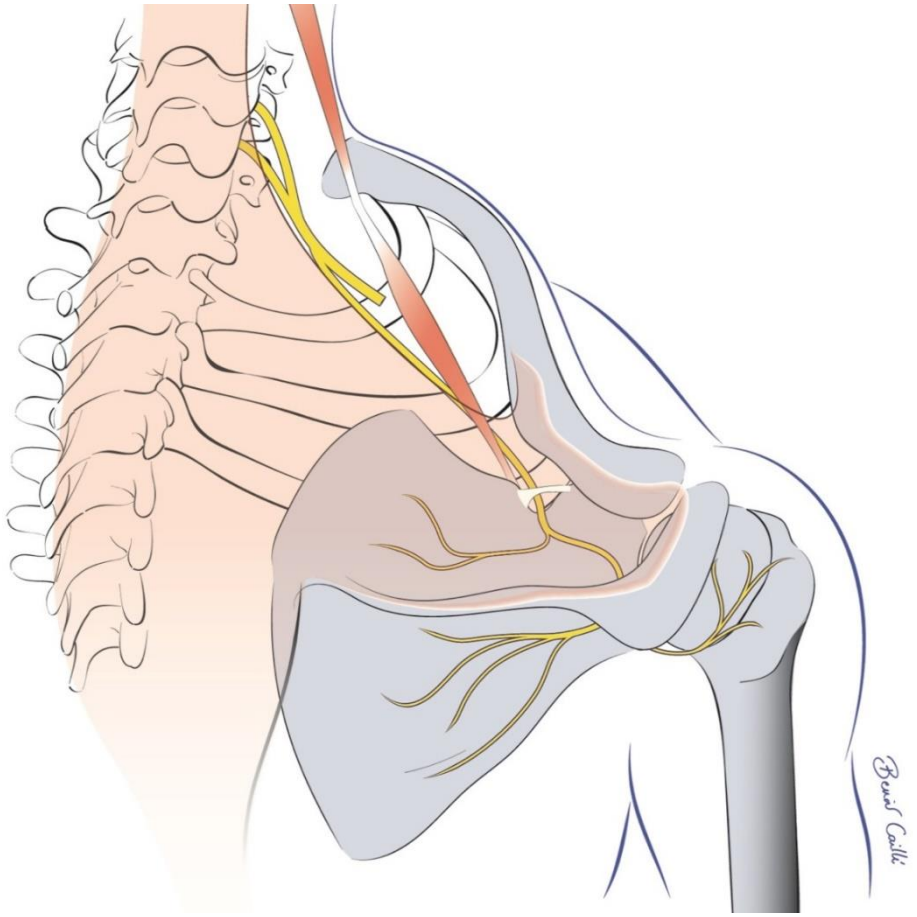


# The scapular notch



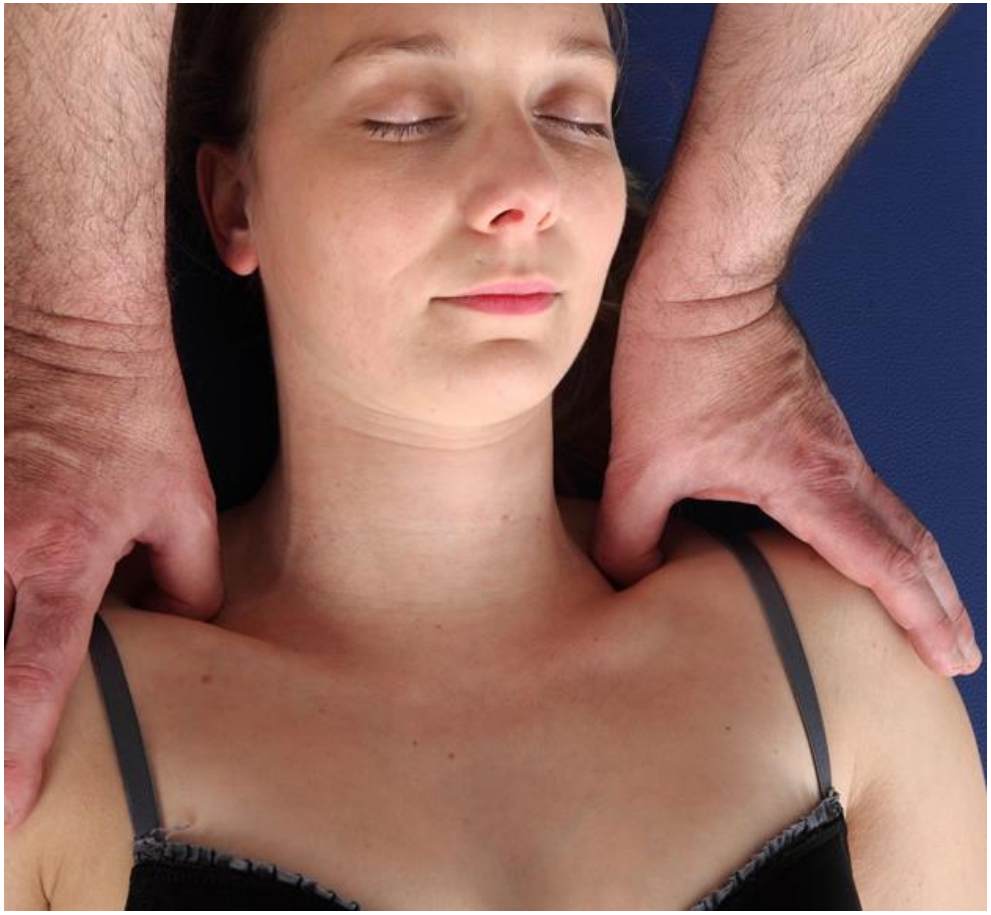

*Chauffour, Prat, Michaud, OML, key points of the peripheral nervous system, Sully*

# The scapular notch



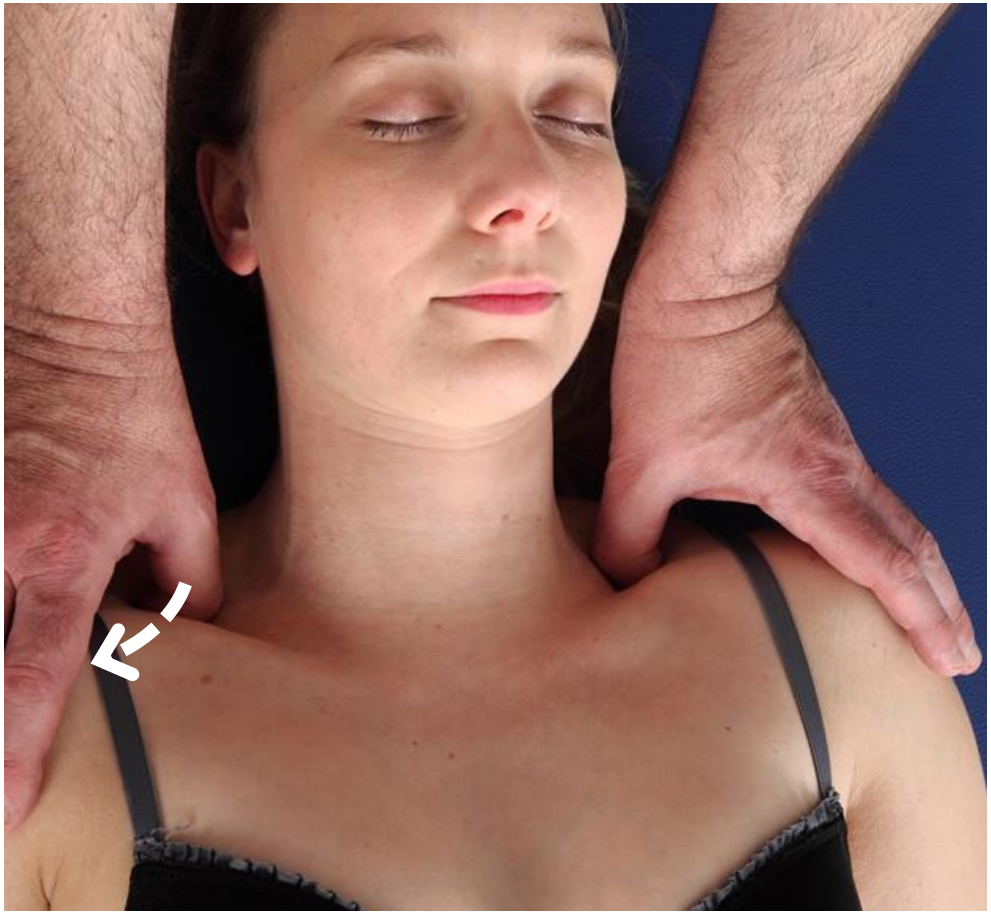
*Chauffour, Prat, Michaud, OML, key points of the peripheral nervous system, Sully*

# TEST OF THE SCAPULAR NOTCH



*Contact: superior border of the scapula, lateral to omoyoid muscle*

# TEST OF THE SCAPULAR NOTCH

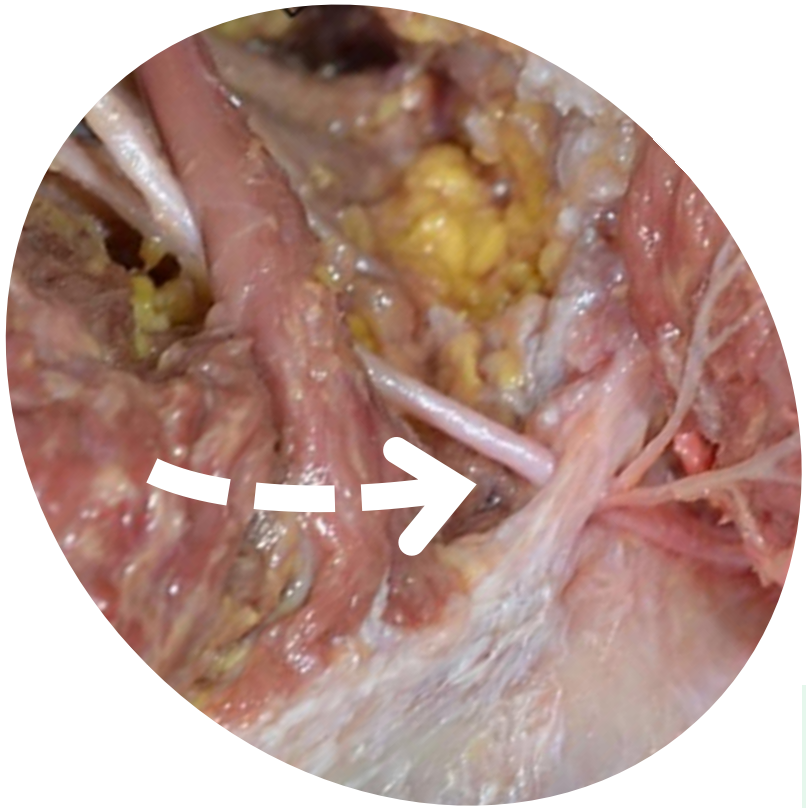


*Test: pressure-circumduction, in an inferolateral direction*

# TEST OF THE SCAPULAR NOTCH

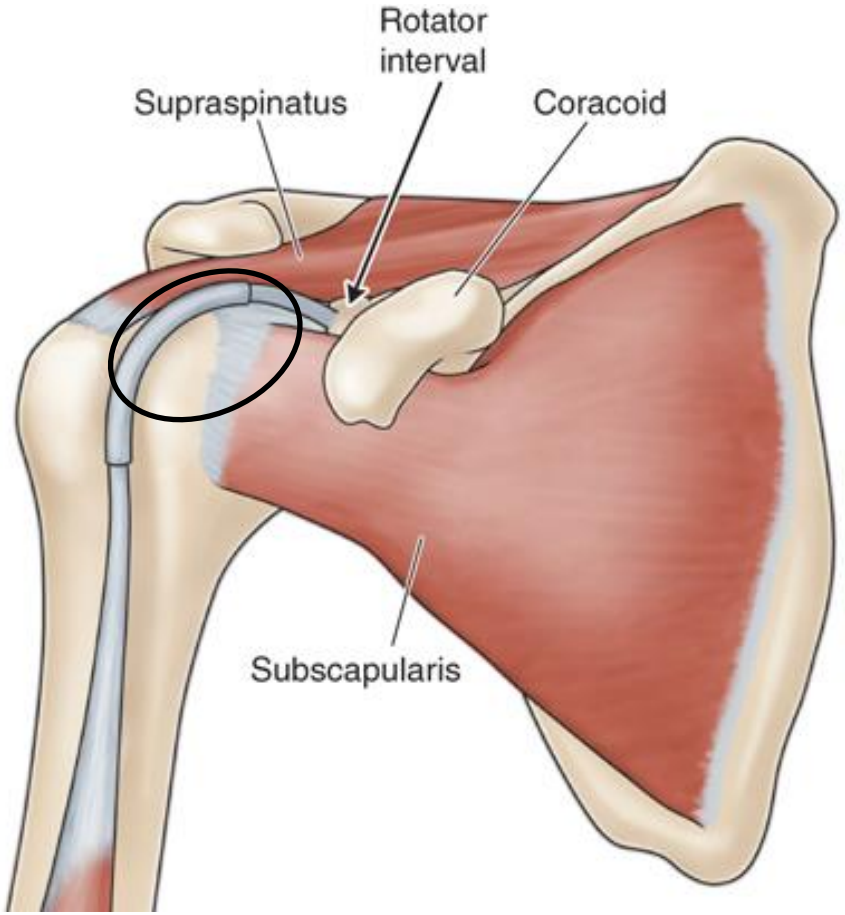
Suprascapular nerve

Omohyoid muscle



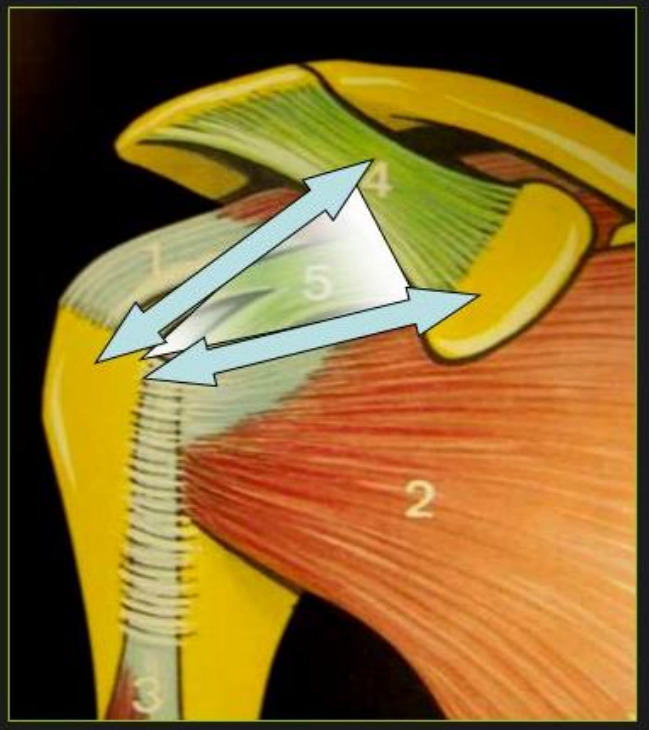
Transverse ligament

# Rotator interval and long head of biceps

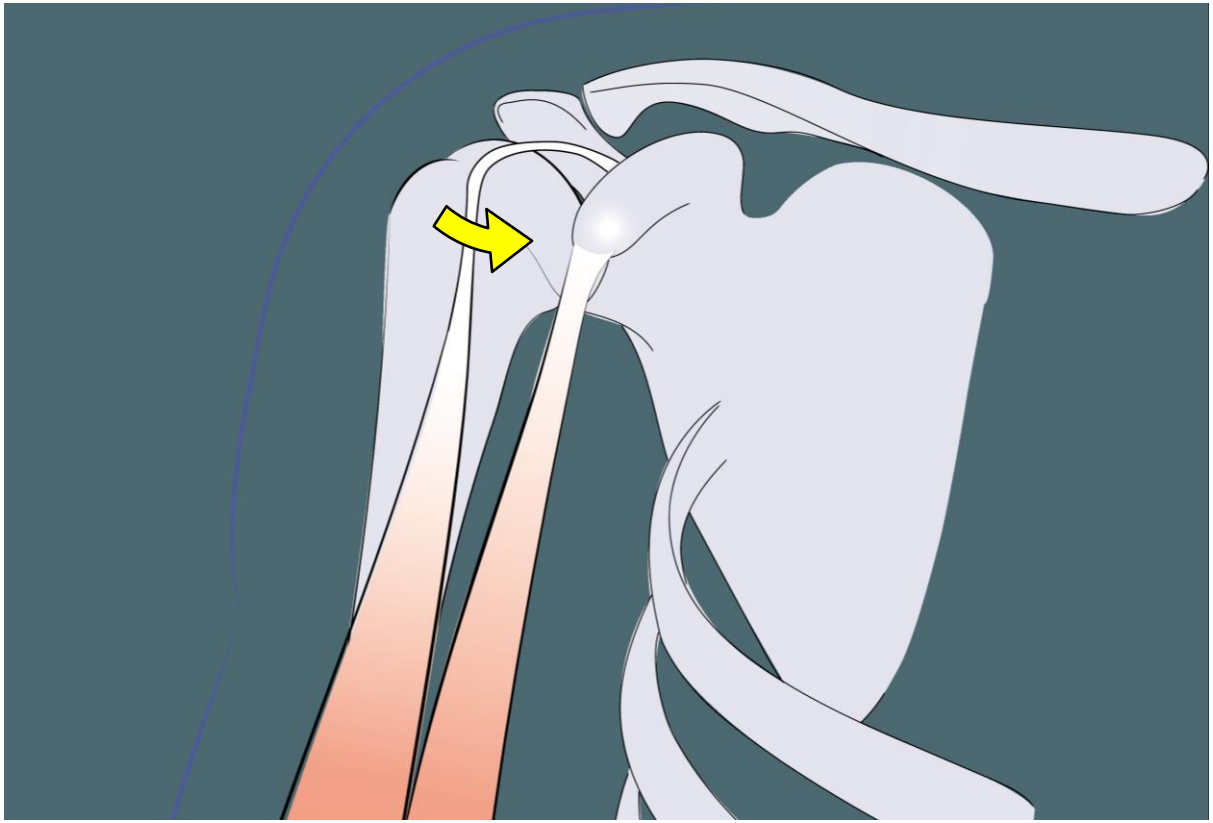


# The rotator interval

- Triangular space where the apex is located at the transverse humeral ligament and the base at the coracoid process
- The superior limit is formed by the anterior border of supraspinatus and the inferior limit, by the superior border of subscapularis
- Entirely covered by the anterosuperior joint capsule and reinforced superficially by the coracohumeral ligament and more deeply by the superior glenohumeral ligament (pulley for the long biceps tendon)



# The long head of biceps



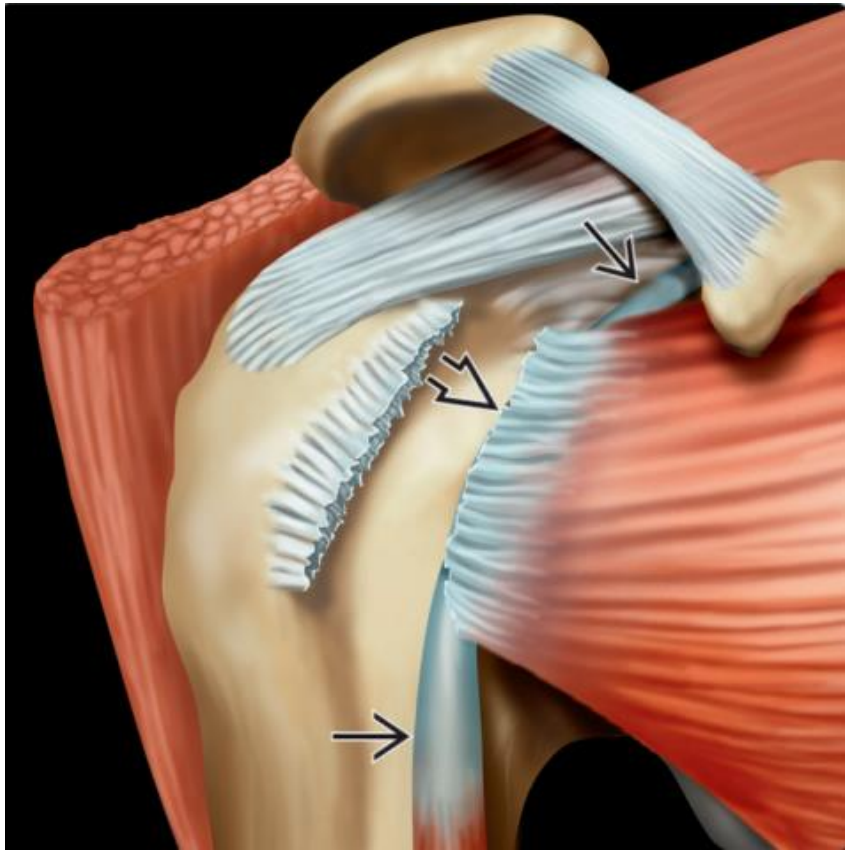
*The long head of biceps is prone to elongation and subluxation medially to its groove*

*LMO course, E. Prat DO, B. Caillé DO*

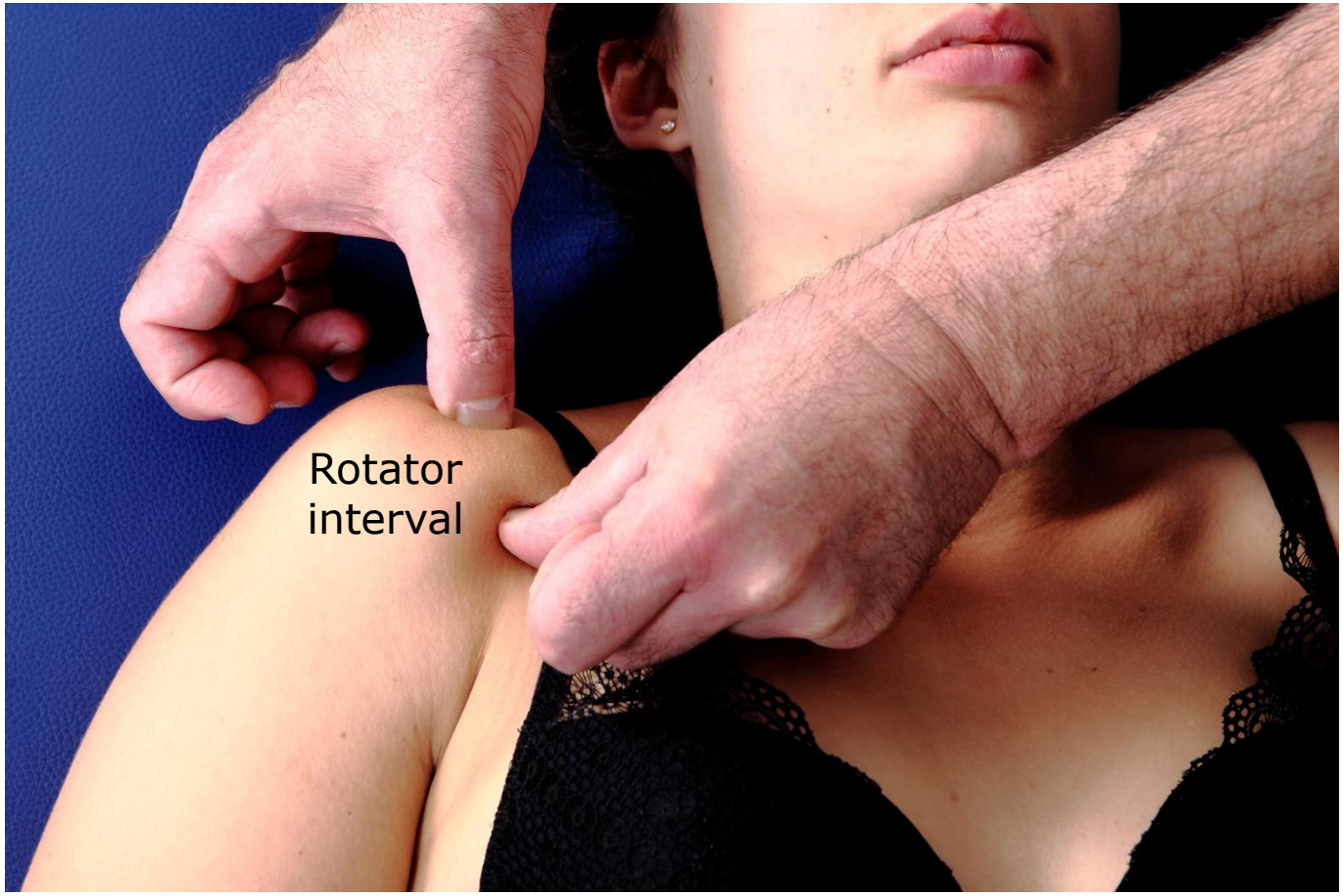
# Rotator interval and long head of biceps

Rotator interval opening

Medial subluxation of the long head of biceps

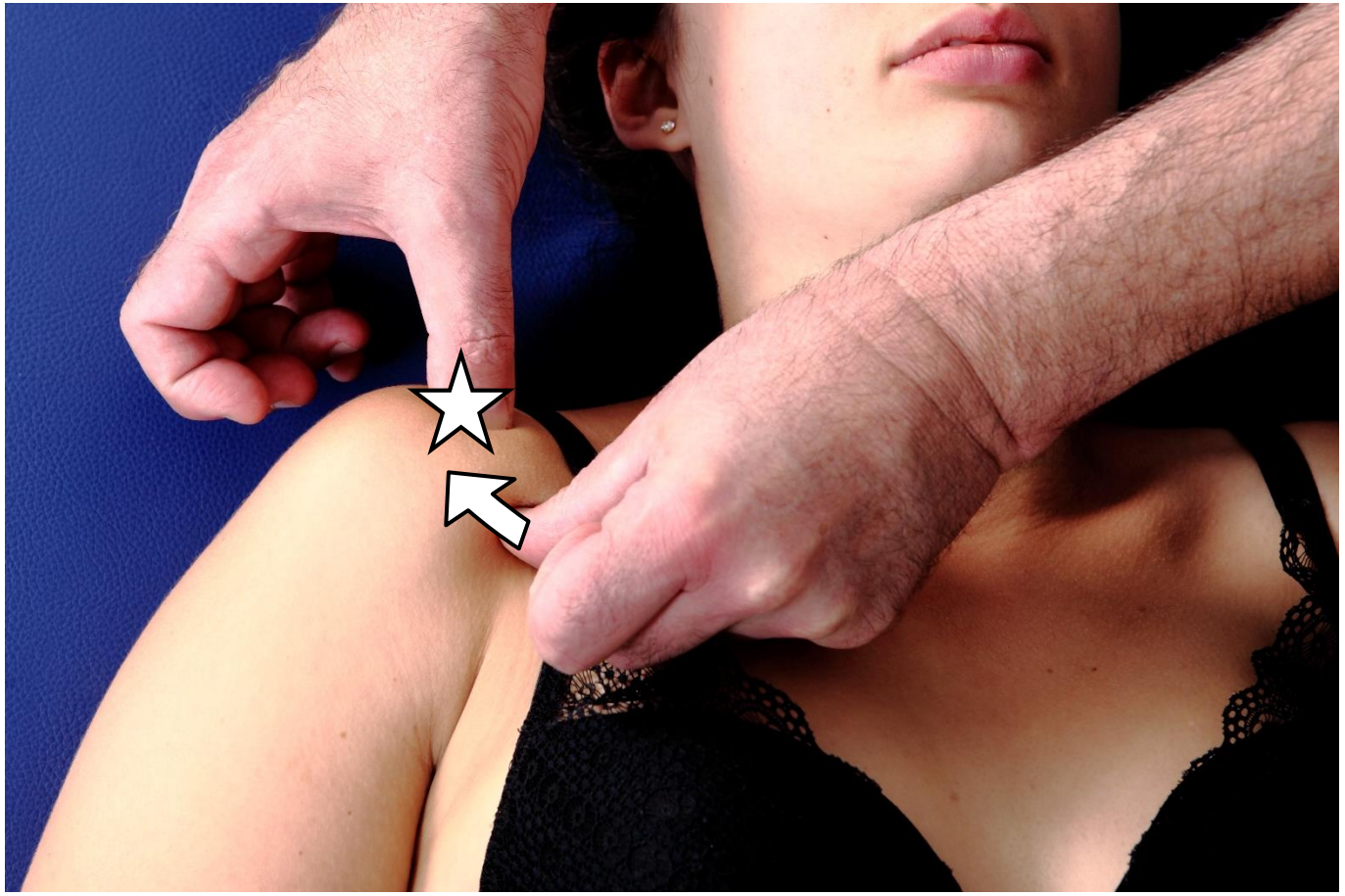


# TEST OF THE ROTATOR INTERVAL



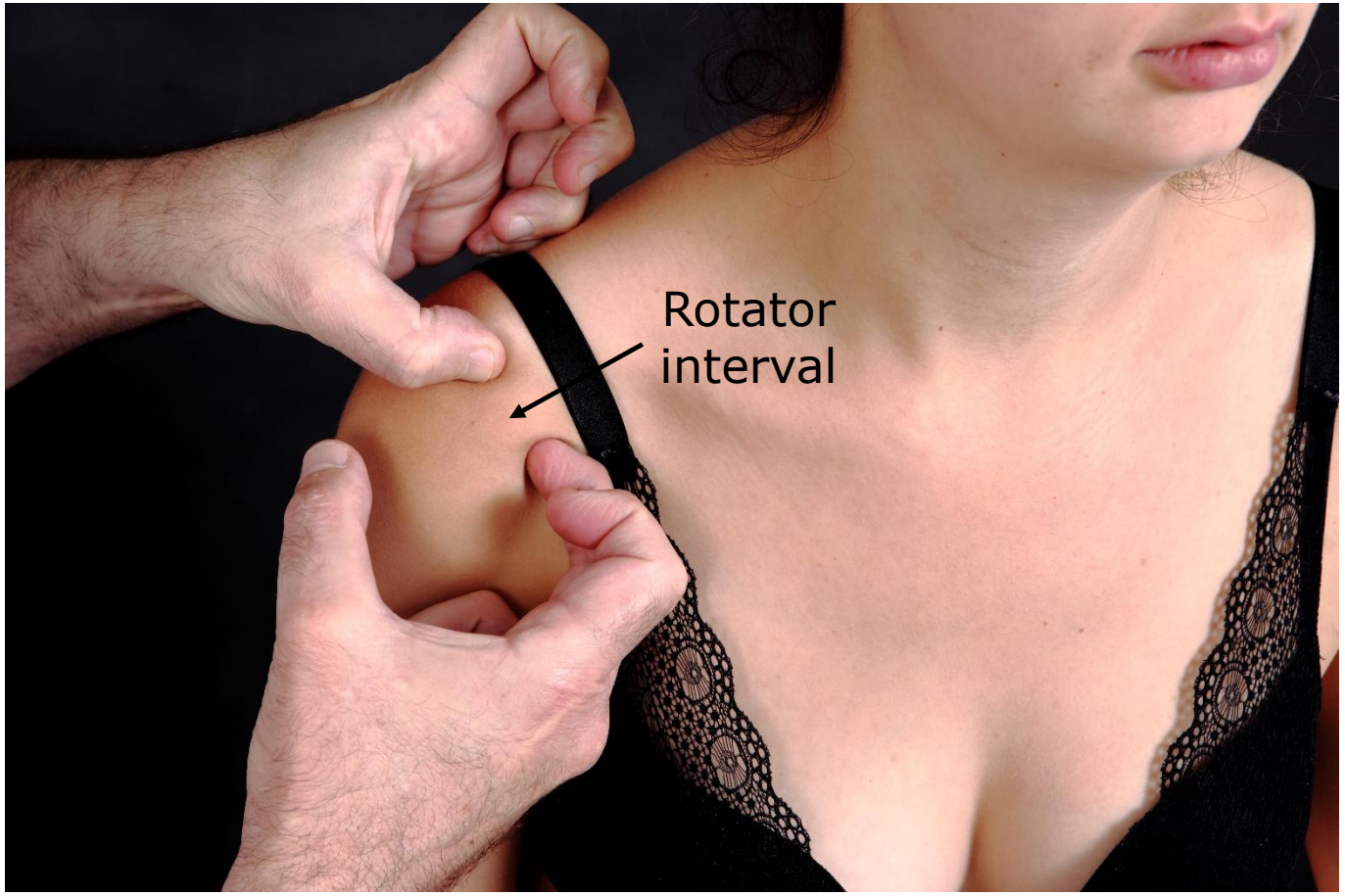

*Contact: on the supraspinatus tendon and medial to the long head of biceps*

# TEST OF THE ROTATOR INTERVAL



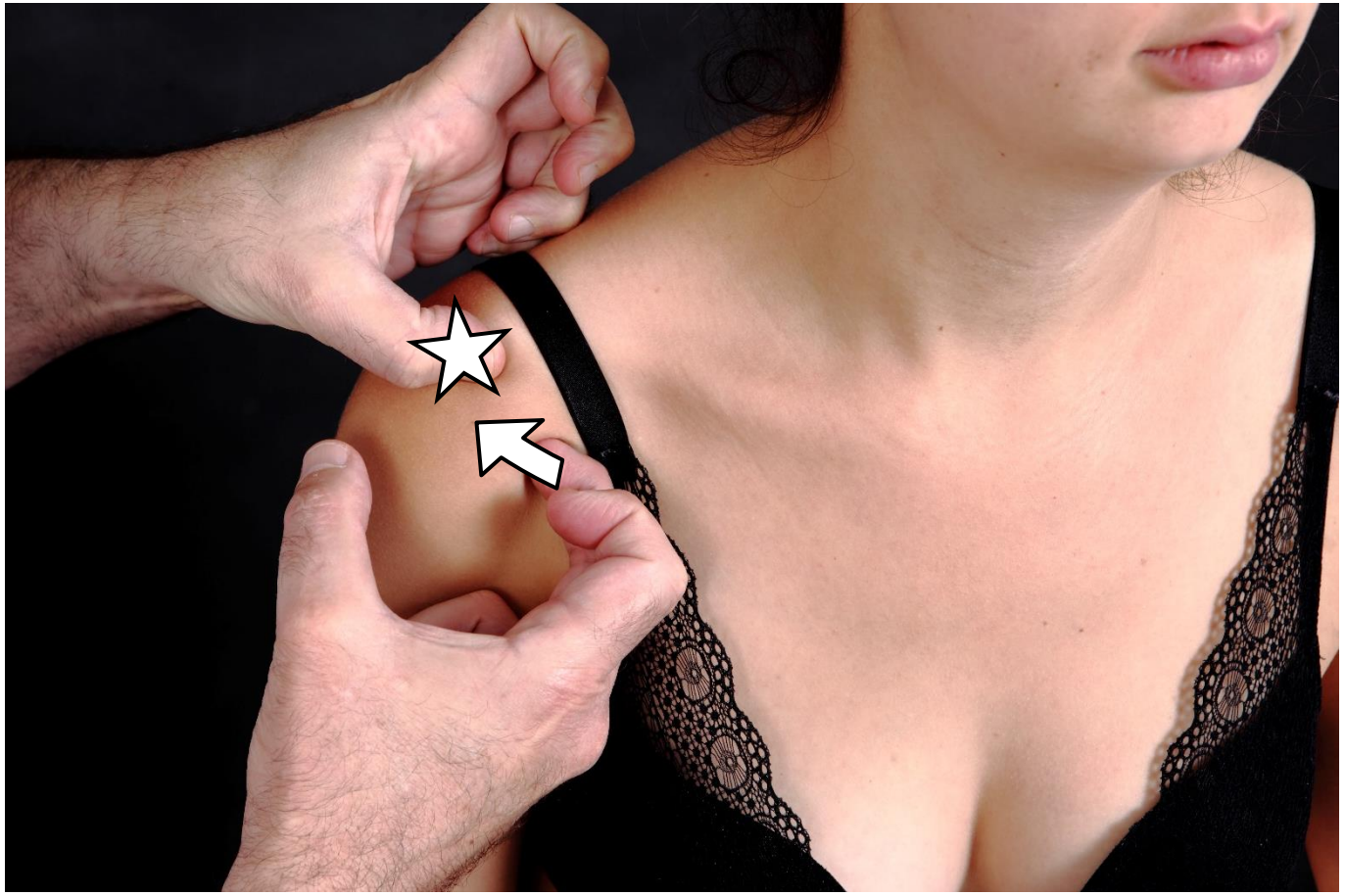
*Test: going up and medial the long head of biceps and closing the rotator interval*

# TEST OF THE ROTATOR INTERVAL




*Other variation in seated position*

# TEST OF THE ROTATOR INTERVAL



*Test: going up and medial the long head of biceps and closing the rotator interval*