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Presents

47

Muscles

With

TrP's

(Anterior)

By

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Scalenus Anterior (skay-LEE-nus) - Triangular with unequal sides

Scalenus Medius (skay-LEE-nus) - Triangular with unequal sides

Scalenus Posterior (skay-LEE-nus) - Triangular with unequal sides

TrP Location – The TrP's are just posterior and under the SCM.

FUN FACTS

Thoracic Outlet Syndrome - Scaleni or Pectoralis Minor

Back Pain (Upper) - Scaleni, Levator scapulae, Rhomboids, Latissimus dorsi, Serratus posterior superior, Thoracic paraspinals

Breathing problems - Tight Innercostals, Pectoralis Major, and or Scalenes.

Scalene

Scalenus posterior
O: Transverse processes C4-C6
I: Lateral surface of the 2nd rib
A: Elevates 2nd rib

Scalenus medius
O: Transverse processes of C2-C7
I: Superior surface of 1st rib
A: Bilateral contraction, elevates 1st rib, unilateral contraction, assists in rotation and lateral flexion

Scalenus Anterior
O: Transverse processes of C3-C6
I: Superior surface of 1st rib
A: Bilateral contraction, elevates 1st rib, unilateral contraction, assists in rotation and lateral flexion

*The TrP's are just posterior to the SCM
*If the scalenes are pinching a nerve, then the referral will go to the ring and pinky finger (Thoracic Outlet Syndrome)

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Platysma - Most superficial neck muscle (Covers SCM)

Sternocleidomastoid (STER-no-CLY-do-mas-toyd) - Connecting to sternum, clavicle and mastoid process (Tightness can cause vertigo or torticollis / only muscle that move the head and are not connected to the ribs)

TrP Location – For the SCM you have the client flex their neck and then rotate it to find the SCM and then pinch it (Safest way)

FUN FACTS

Stiff Neck (Acute) - Levator scapulae, Sternocleidomastoid, Upper Trapezius

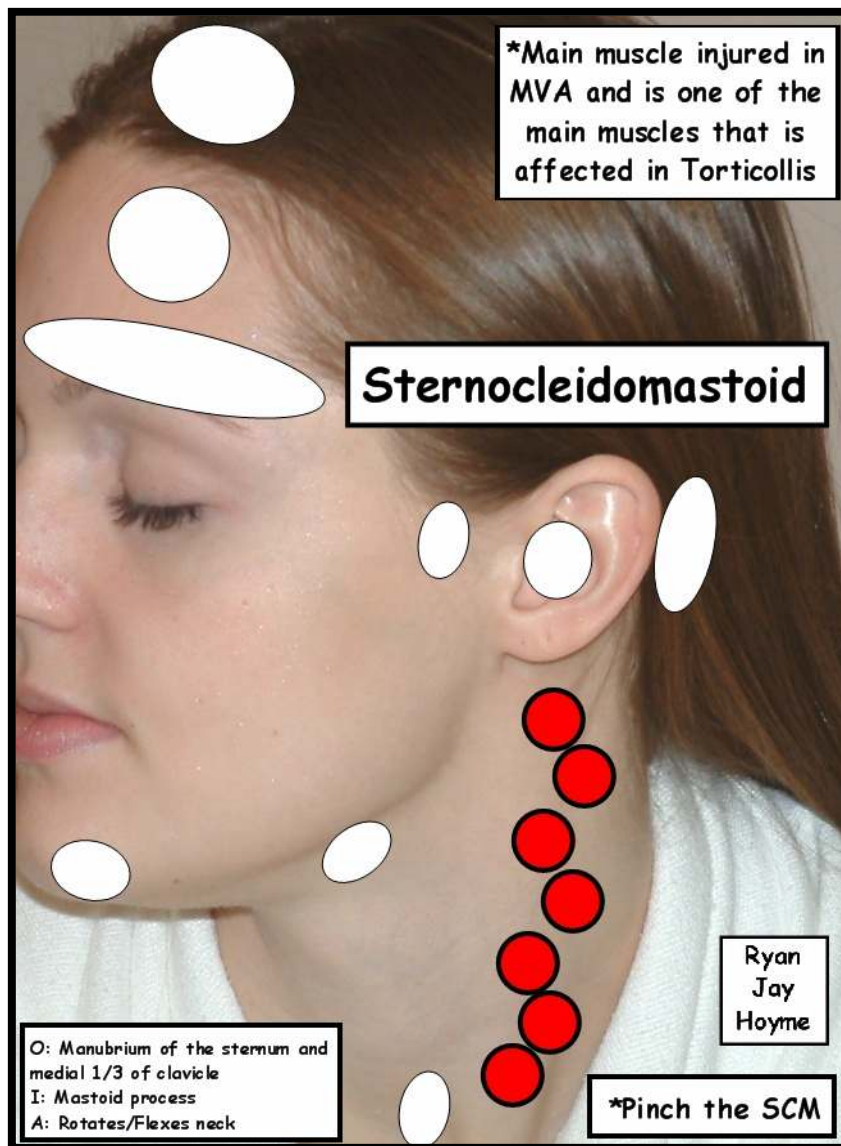
Atypical Facial Neuralgia - Sternocleidomastoid (sternal division), Facial muscles

Headache (Tension/Migraine) - Sternocleidomastoid, Upper trapezius, Posterior cervicals, Temporalis

Earache (Drum normal) - Deep masseter, Sternocleidomastoid (clavicular division)

Wryneck - Tightness and hard to rotate the head could be the Sternocleidomastoid.

Whiplash - Head whipping back and forth or side to side in a fast jerky movement. Could be any of the neck muscles.



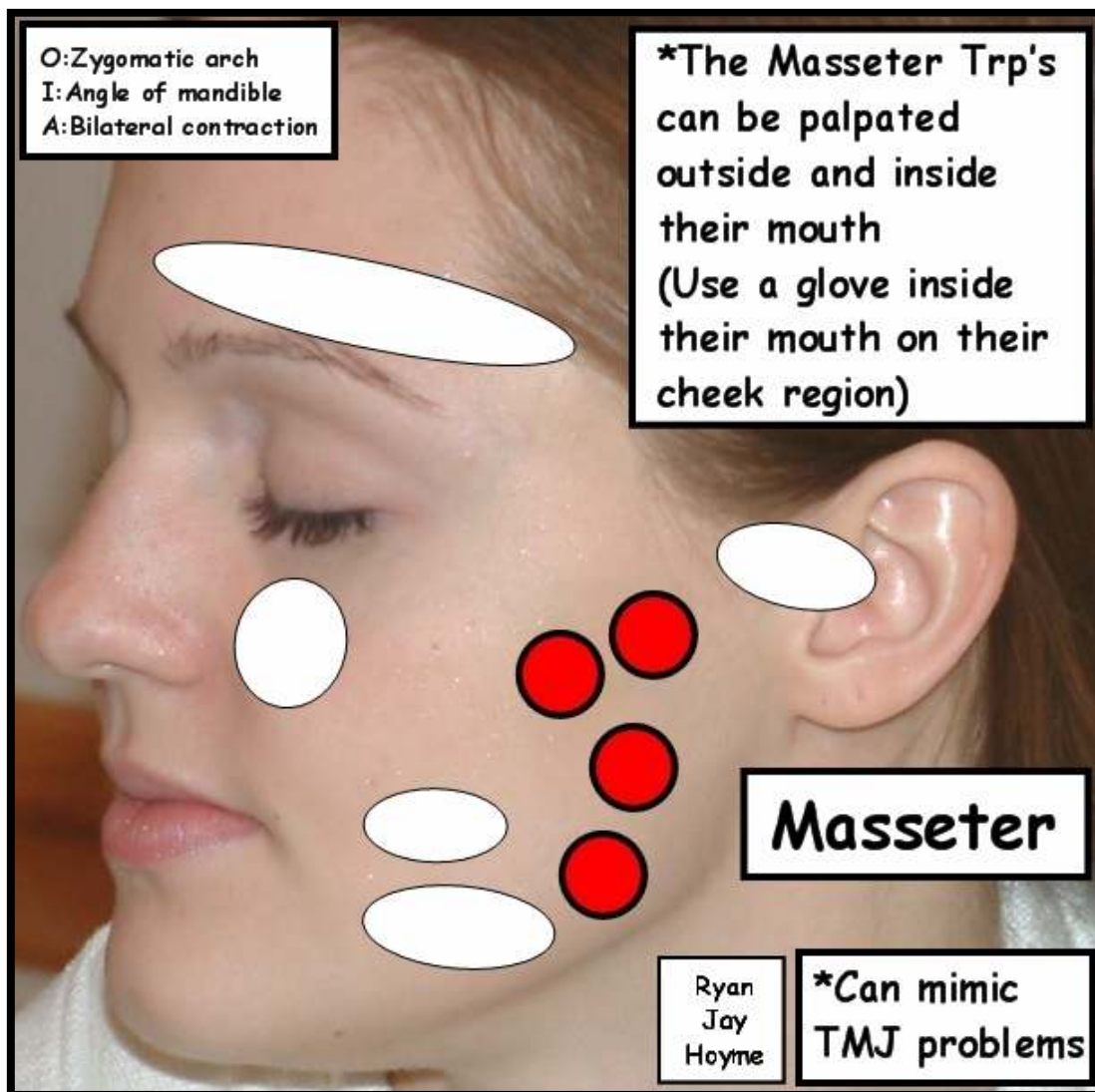
Masseter (MAS-sit-er) - Chew

TrP Location – Place your hand on their cheek region and have them open and close their mouth to feel the muscle

FUN FACTS

Jaw Pain, TMJ Dysfunction - Lateral pterygoid or Masseter

Earache (Drum normal) - Deep masseter, Sternocleidomastoid (clavicular division)



Lateral Pterygoid (TER-ih-goyd) - Wing shaped

Medial Pterygoid (TER-ih-goyd) - Wing shaped

TrP Location – Superior TrP is superior to the Masseter. The inferior TrP is Inferior to the Superior TrP.

FUN FACTS

Jaw Pain, TMJ Dysfunction - Lateral pterygoid or Masseter

Medial & Lateral Pterygoid

Medial
O: Medial surface of the pterygoid plate and sphenoid bone
I: Inner surface of the mandibular angle
A: Bilateral contraction, closes and protracts the jaw

Lateral
O: Lateral surface of the pterygoid plate and sphenoid bone
I: Mandibular condyle
A: Bilateral contraction, closes and protracts the jaw

***Can mimic TMJ problems**

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***The Pterygoid TrP's can be palpated outside and inside their mouth (Use a glove inside their mouth on their cheek region)**

Buccinator (BUK-sin-ate-or) - Trumpeter

Orbicularis Oculi (or-BIK-you-LAR-iss OK-you-li) - Small disk belonging to the ear (Winking muscle)

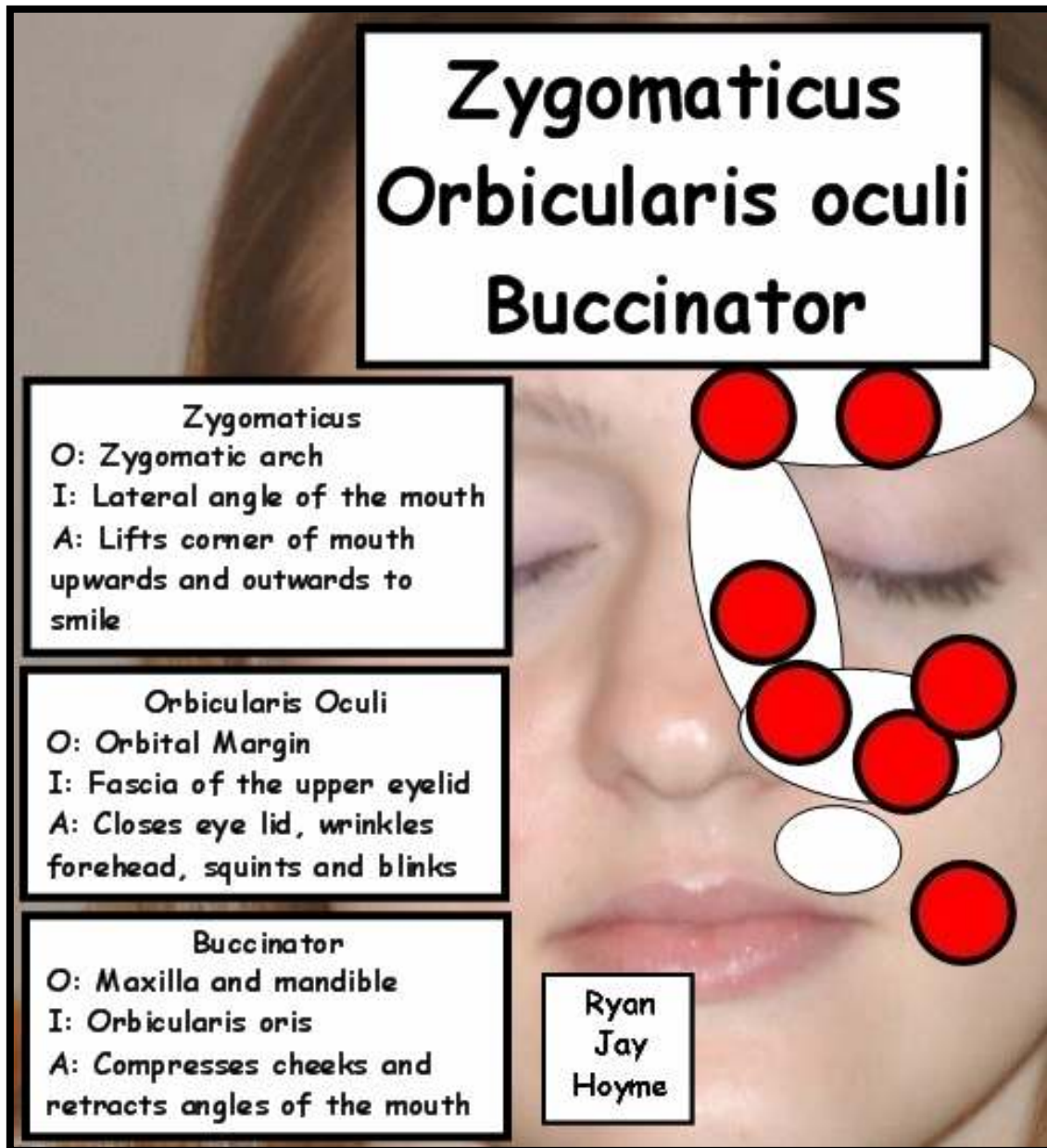
Orbicularis Oris (or-BIK-you-LAR-iss OR-iss) - Small disk belonging to the mouth (Kissing muscle)

Zygomaticus Major (ZYE-go-MAT-ik-us) - Connected to the connector

Zygomaticus Minor (ZYE-go-MAT-ik-us) - Connected to the connector

TrP Location – Buccinator is medial to the Masseter TrP's.

TrP Location – Orbicularis oculi & Zygomaticus ore around the eye socket.

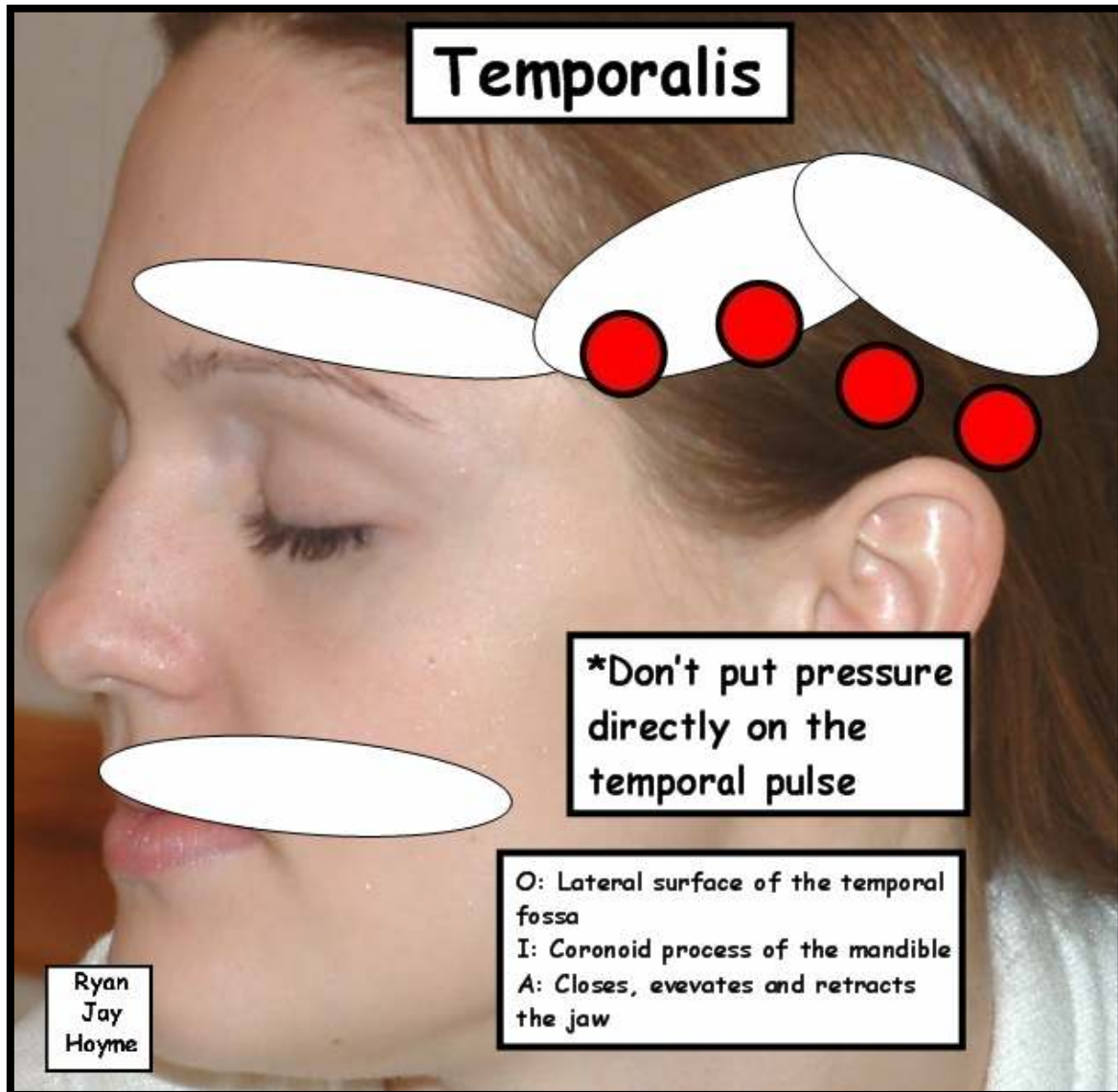


Temporalis (TEMP-OR-al-ISS) - Temple of head

TrP Location – Locate the temporal pulse and keep going posterior to find the TrP's

FUN FACTS

Headache (Tension/Migraine) - Sternocleidomastoid, Upper trapezius, Posterior cervicals, Temporalis



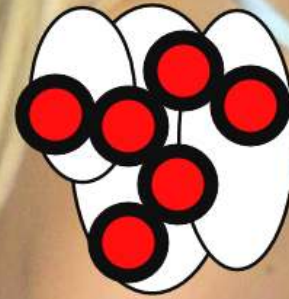
Deltoid (DEL-toyd) - Triangular (Shoulder pad muscle / Anterior, Lateral (or middle) and Posterior / Antagonist to itself)

TrP Location – 4 TrP's are on the lateral deltoid and there is one on each of the other deltoids (Anterior & Posterior)

FUN FACTS

Arthritis of Shoulder - Infraspinatus or Deltoid
Bursitis of shoulder (Subdeltoid) - Infraspinatus, Deltoid, Supraspinatus

Deltoids



O: Lateral 1/3 of clavicle, Acromion and lateral spine of the scapular, lower lip of the spine of the scapula

I: Deltoid tuberosity of humerus

A: Flexion, horizontal adduction, medial rotation, abduction to 90 degrees, extension, horizontal abduction, lateral rotation

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Coracobrachialis (KORE-a-koe-BRAY-kee-AL-iss) - Crows beak of the arm

Subclavius (sub-KLAVE-ee-us) - Below the clavicle

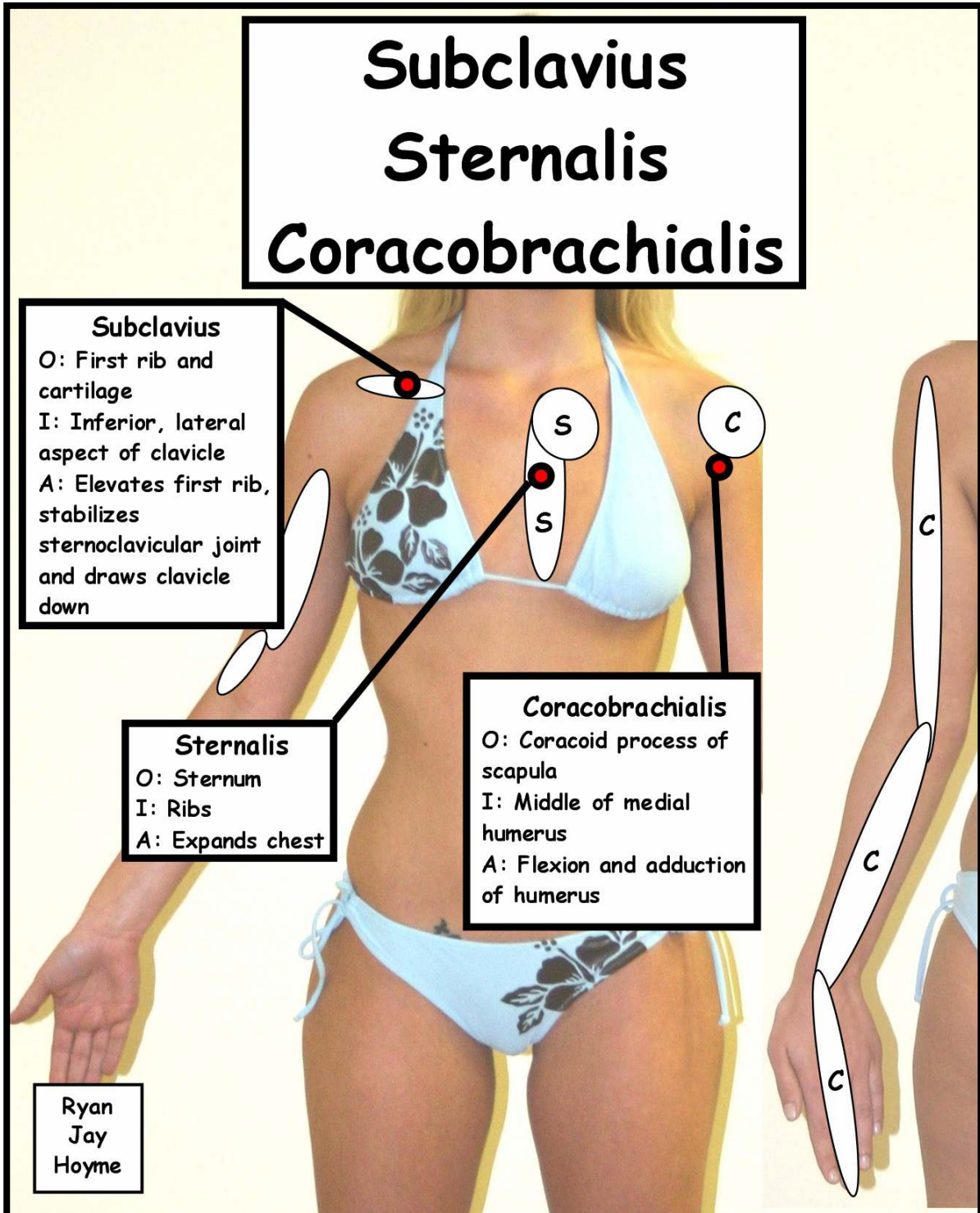
TrP Location – Coracobrachialis; pinch the anterior part of the axillary region

TrP Location – Subclavius; Under the clavicle

TrP Location – Sternalis; ½ way down the sternum and ½ inch off it

FUN FACTS

Not many people have the sternalis and subclavius muscle



Biceps Brachii (BI-seps BRAY-kee-eye) - Two heads and of the arm (Corkscrew muscle)
Brachialis (BRAY-kee-AL-iss) - Arm (Strongest elbow flexor / superficial lateral forearm)
Pectoralis Major (PEK-tor-al-iss) - Chest
Pectoralis Minor (PEK-tor-al-iss) - Chest

TrP Location –
 Pectoralis minor; have the client in the supine position, anterior part of the axillary, then place your fingers on the anterior ribs and finally have the client perform horizontal adduction to go more medially under the Pectoralis major

TrP Location –
 Pectoralis Major; ask the client where their areola is as a landmark (Never put pressure on it). You can use a towel over the pects or use the client's fingers to find the TrP's on woman.

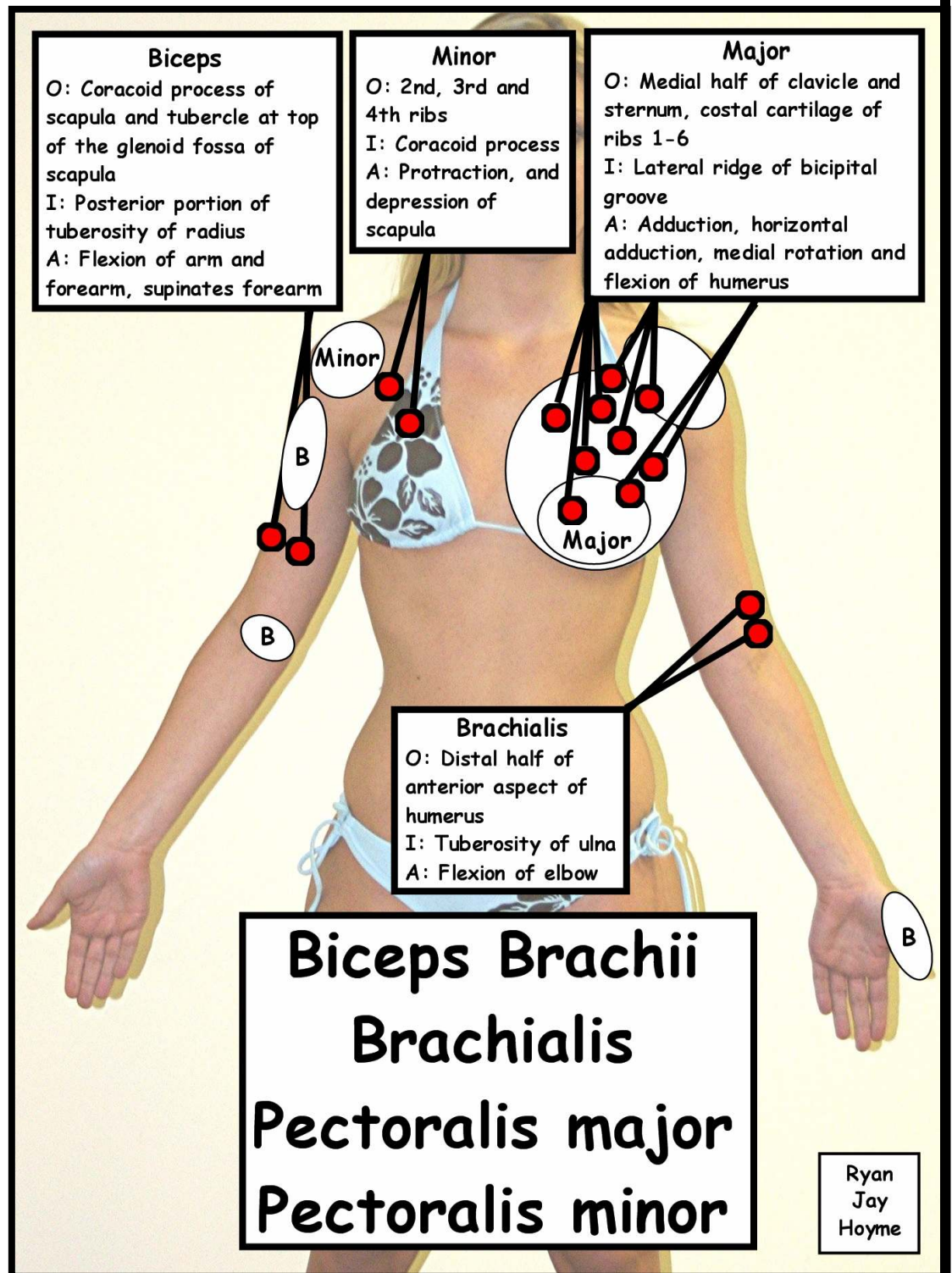
TrP Location –
 Brachialis; have the client flex their bicep and it is under the lower portion of the bicep on the lateral side

FUN FACTS

Thoracic Outlet Syndrome - Scaleni or Pectoralis (Tightness equals rounded shoulders and or constriction of chest wall Minor)

Mastectomy - Removal of the breast tissue. Pectoralis minor and Pectoralis major could be affected.

Breathing problems - Tight Innercostals, Pectoralis Major, and or Scalenes.



Abductor Digiti Minimi Manus (ab-DUCK-tur DIH-jih-tee MIN-ih-mee MAN-us) - Lead away, digits, smallest and hand

Abductor Pollicis Brevis (ab-DUCK-tur POLL-is-iss BREV-us) - Lead away, thumb and short

Abductor Pollicis Longus (ab-DUCK-tur POLL-is-iss LONG-us) - Lead away, thumb and long

Adductor Pollicis (ad-DUCK-tur POLL-is-iss) - Lead towards and thumb

Brachioradialis (BRAY-kee-oh-RAY-dee-AL-iss) - Arm and radius

TrP Location – Brachioradialis; 2 inches inferior to the lateral epicondyle of the humerus

TrP Locations - Adductor Pollicis & Opponens Pollicis; Just inferior to the index finger on the palm side

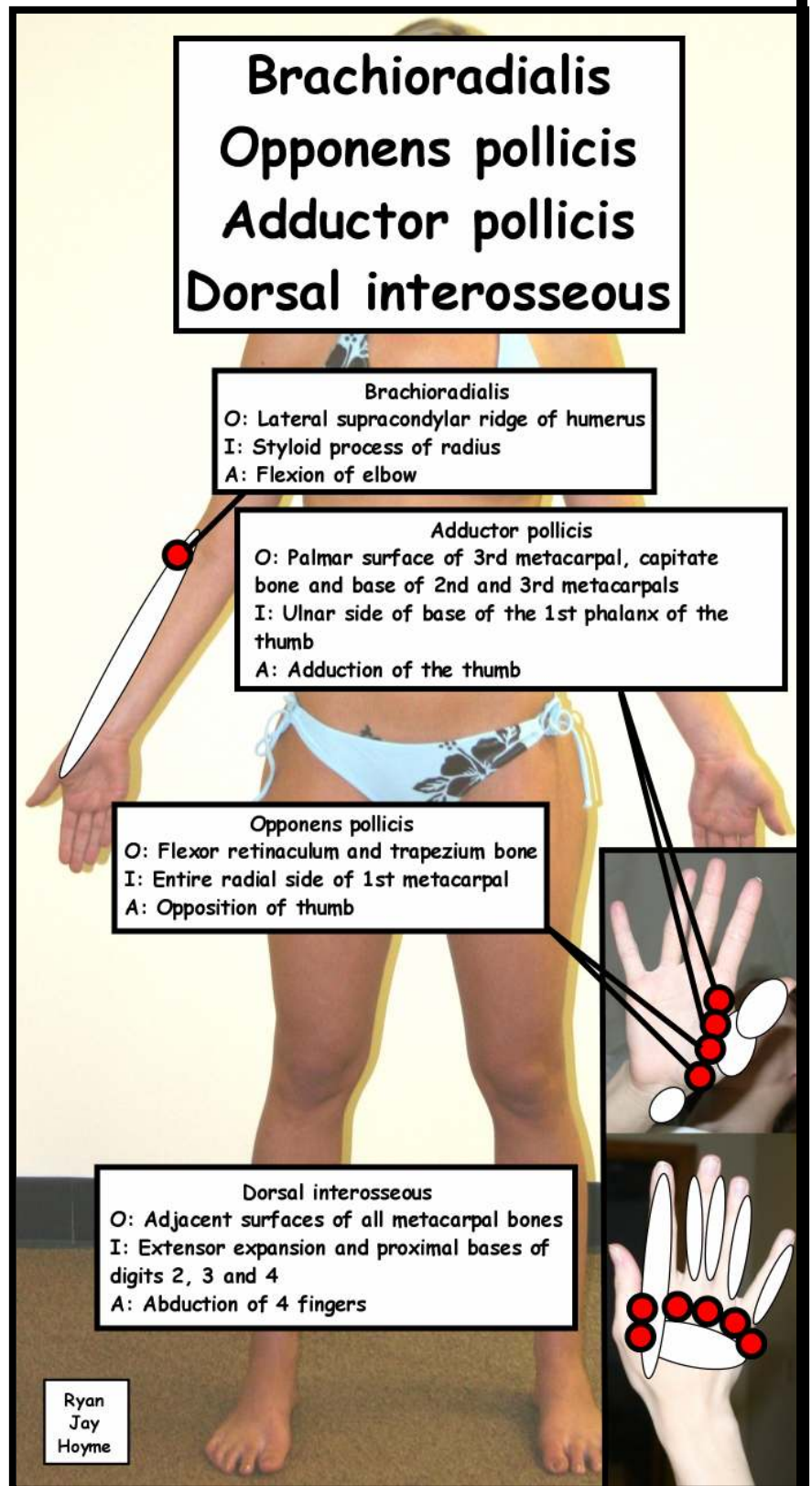
TrP Locations – Dorsal Interosseous; on the dorsal part of the hand

FUN FACTS

Hypothenar eminence - Opponens digiti minimi, Flexor digiti minimi brevis, and Abductor digiti minimi

Thenar eminence - Opponens pollicis, Abductor pollicis brevis, and Flexor pollicis brevis

De Quervain's Syndrome (Washerwoman's Sprain) - Stenosing tenosynovitis of the short extensor (extensor pollicis brevis) and long abductor tendon (abductor pollicis longus) of the thumb.



Palmaris Longus (pal-MAR-iss LONG-us) - Palm and long

Pronator Quadratus (PRO-nay-tor kwad-RATE-us) - Causes pronation and square shaped

Pronator Teres (PRO-nay-tor TER-eez) - Causes pronation and round/smooth

Supinator (SOOP-in-ATE-or) - Causes supination

TrP Location – Palmaris Longus; one inch inferior to the medial epicondyle of the humerus and go medial about 1 ½ inches (Make sure you are not on the Flexor carpi ulnaris)

TrP Location – Pronator Quadratus; find the carpals on the radial side and go superior 1 inch (Try not to push pressure one the radius bone and not on the radial pulse; so just go at an angle)

TrP Location – Pronator Teres; find the medial epicondyle of the humerus and go inferior 1/2 inch and one inch medial

TrP Location – Supinator; find lateral epicondyle of humerus, then go inferior one inch and medial one inch (Hook under Brachioradialis)

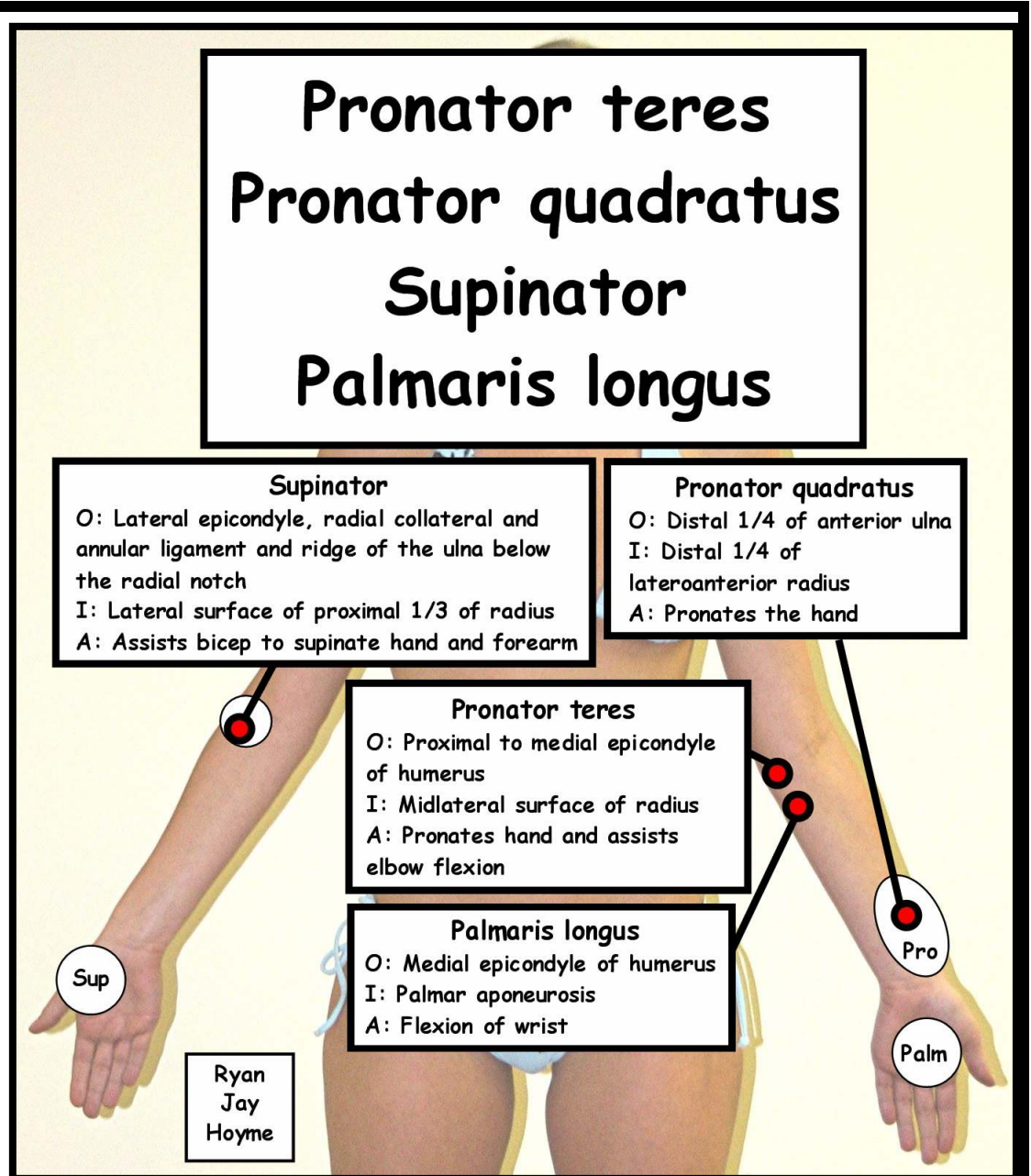
FUN FACTS

Tennis Elbow (Epicondylitis) - Supinator, Wrist Extensors, Triceps brachii

Radial Tunnel Syndrome -This syndrome is often misdiagnosed as chronic lateral epicondylitis, because patients complain of lateral elbow pain at the forearm. Stretch the supinator muscle.

Pronator Teres Syndrome - A Cause of Carpal Tunnel Syndrome and it is a Nerve entrapment at the pronator teres muscle area. The median nerve can get entrapped between the humeral and ulnar heads of the pronator teres muscle. The patient will complain of pain and tingling in the palmar and dorsal aspect of the hand, palm, and fingers.

Dupuytren's contracture - This relatively common disorder is characterized by hyperplasia of the palmar fascia and related structures, with nodule formation and contracture of the palmar fascia.



Flexor Carpi Radialis (FLEXS-or KAR-pee- RAY-dee-AL-iss) - Bend, wrist and radius

Flexor Carpi Ulnaris (FLEXS-or KAR-pee- ul-NAR-iss) - Bend, wrist and ulna

Flexor Digiti Minimi Manus (FLEXS-or DIH-jih-tee MIN-ih-mee MAN-us) - Bend, digits, smallest and hand

Flexor Digitorum Profundus (FLEKS-or DIH-jih-TOR-um pro-FUND-us) - Bend, digits and deep

Flexor Digitorum Superficialis (FLEKS-or DIH-jih-TOR-um SOO-per-fish-ee-AL-us) - Bend, digits and top of surface

Flexor Pollicis Brevis (FLEXS-or POLL-is-iss BREV-us) - Bends, thumb and short

Flexor Pollicis Longus (FLEKS-or POLL-is-iss LONG-us) - Bend, thumb and long

TrP Location – Flexor Carpi Radialis; find the lateral epicondyle of the humerus and go down 2 inches and one inch medial (Make sure you are not on the median nerve)

TrP Location – Flexor Carpi Ulnaris; find the medial epicondyle of the humerus and go inferior 1 inch and one inch medial (Most medial forearm muscle).

TrP Location – Flexor Digitorum; the TrP's are on each side of the median nerve.

TrP Location – Flexor Pollicis Longus; find the carpals on the radial side and go superior 2 inches (Try not to push pressure one the radius bone and not on the radial pulse; so just go at an angle)

FUN FACTS

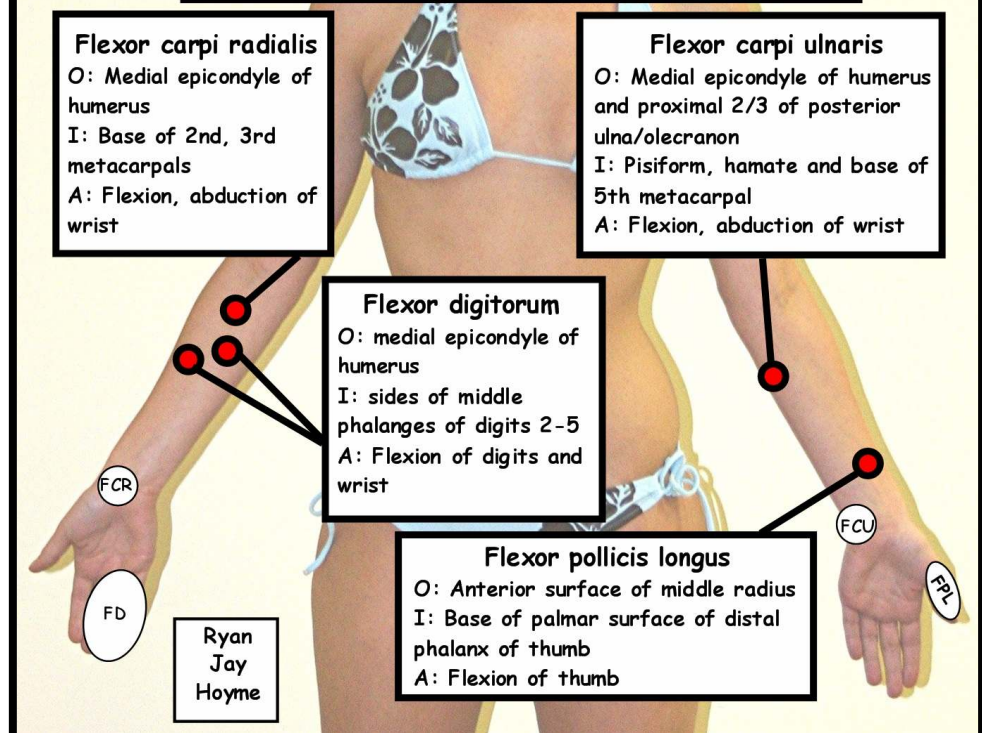
Carpal Tunnel Syndrome - There are 9 tendons and the median nerve pass through the tunnel from the forearm to the hand. Increased pressure in the tunnel form inflammation in one or many of the tendons irritate the median nerve. Flexor Retinaculum, Flexor Digitorum Superficialis, Flexor Digitorum Profundus, and or the Palmaris Longus.

Golfer's Elbow (Medial epicondylitis) - Inflammation of the medial epicondyle. Palmaris Longus, Flexor Digitorum Superficialis, Flexor Carpi Radialis, Flexor Carpi Ulnaris, or Pronator Teres.

Guyon's canal syndrome - a common nerve compression affecting the ulnar nerve as it passes through a tunnel in the wrist called Guyon's canal. This problem is similar to carpal tunnel syndrome, but involves a completely different nerve. Sometimes both conditions can be causing a problem in the same hand.

Flexor Carpi Ulnaris tunnel syndrome - This muscle tunnel syndrome represents entrapment of the ulnar nerve between the humeral and ulnar heads of the flexor carpi ulnaris muscle.

Flexor carpi radialis Flexor carpi ulnaris Flexor digitorum Flexor pollicis longus



External Abdominal

Oblique (ab-DAHM-in-al oh-BLEEK) - Abdomen and slant

Internal Abdominal Oblique (ab-DAHM-in-al oh-BLEEK)

- Abdomen and slant (The fibers go vertical)

Rectus Abdominis (REK-tus ab-DAHM-in-iss) - Straight and abdomen (Horizontal layer of connective tissue every few inches / six pack muscle)

Transversus Abdominis (Trans-VER-sus ab-DAHM-in-iss) - Lying crosswise and abdomen (Deepest abdominal muscle / Wraps around the internal organs)

TrP Location – Never push straight down on the abdomen (Especially above the navel)

TrP Location – Rectus abdominis; have the client perform a sit-up to find the rectus abdominis

FUN FACTS

Costals - Internal and External
Diaphragm - Prime mover in inspiration

Internal Intercostals (inter-KOS-talz) - Between ribs

External Intercostals (inter-KOS-talz) - Between ribs

Duodenal ulcer - Rectus abdominis

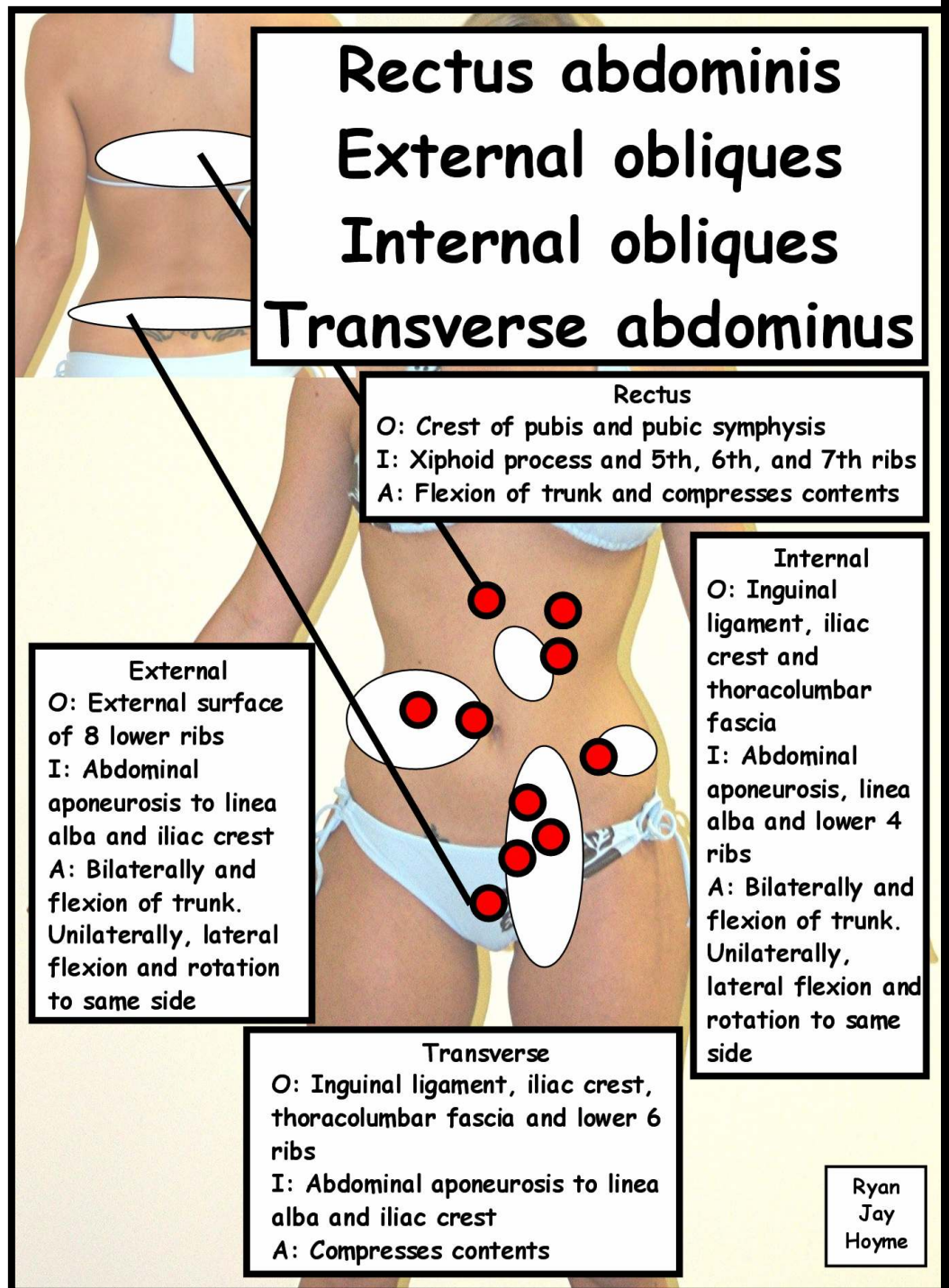
Back Pain (Lower) -

Quadratus lumborum, Thoracolumbar paraspinals, Gluteus (maximus / medius), Rectus abdominis, Iliopsoas

Hockey player's syndrome - Involves a tear of the external oblique aponeurosis, associated with inguinal nerve entrapment.

Inguinal hernias - result from a weakness or tear of the posterior wall of the inguinal canal (transversus abdominis).

Frequent Urination - Tight abdominus rectus muscle and floor of the pelvis.



Iliacus (ILL-ee-AK-us) - Hip

Psoas Major (SO-as) - Loins (Strongest hip flexor / strongest posture muscle)

Psoas Minor (SO-as) - Loins (Missing in most cadavers)

TrP Location – Psoas; find the rectus abdominus and perform the technique straight down on the external obliques (Never above the navel region and not on the rectus abdominis. Once you have gone as far as you can, then hook your fingers towards their spine)

TrP Location – Iliacus; find their hip bone and hook your fingers under it

FUN FACTS

Iliopsoas - Group of psoas major, psoas minor, and iliacus

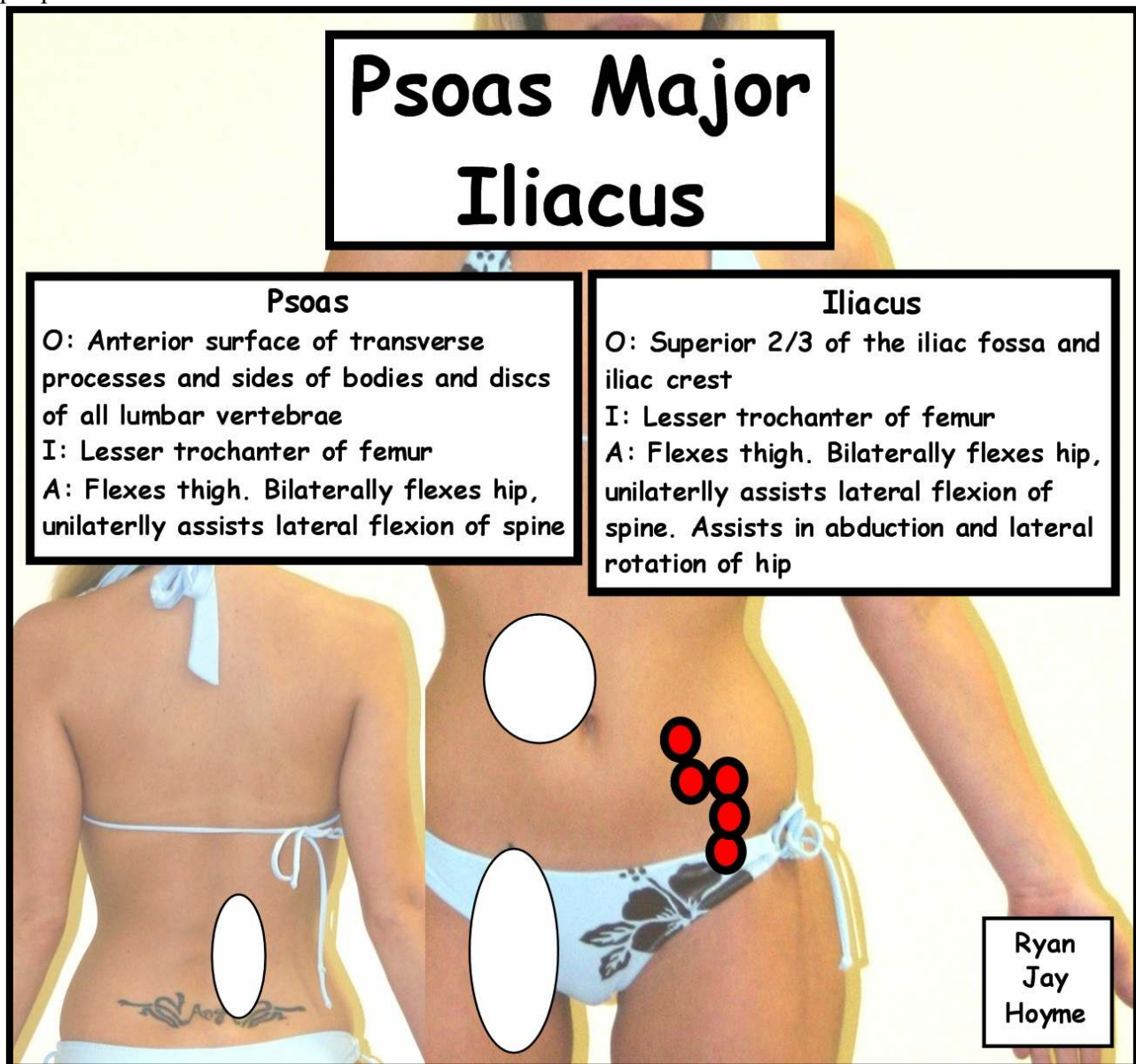
Appendicitis - Rectus abdominus or Psoas

Back Pain (Lower) - Quadratus lumborum, Thoracolumbar paraspinals, Gluteus (maximus / medius), Rectus abdominis, Iliopsoas

Groin Pain - Adductors or Iliopsoas

Psoas Syndrome - Chronic psoas shortening and weakness may occur due to sleeping in the fetal position, exercise programs emphasizing repetitive hip flexion, and sedentary life styles.

Some people don't have the Psoas minor



Rectus Femoris (REK-tus FEM-or-iss) - Straight and relates to the thigh (Only quad muscle that crosses two joints and has two actions)

Vastus Intermedius (VAS-tus inter-MEE-dee-us) - Large

Vastus Lateralis (VAS-tus LAT-ter-al-us) - Large

Vastus Medialis (VAS-tus MEE-dee-al-us) - Large

TrP Location – Rectus femoris; have the client tense up their anterior part of their leg and for the superior TrP, find their ASIS and go inferior about 2 inches and medial 2 inches. For their lower TrP, find patella (Knee cap) and go 2-3 inches superior

TrP Location – Vastus intermedius; have the client tense up their anterior part of their leg and for the TrP, find their ASIS and go inferior about 3 inches and hook under the rectus femoris.

TrP Location – Vastus lateralis; Use the rectus femoris and the IT band as landmarks (The Vastus lateralis is in between both of them)

TrP Location – Vastus medialis; have the client tense up their anterior part of their leg and find patella (Knee cap) and go 2 inches superior and one inch medial. The other TrP is 3-4 inches superior of the patella and one inch medial.

FUN FACTS

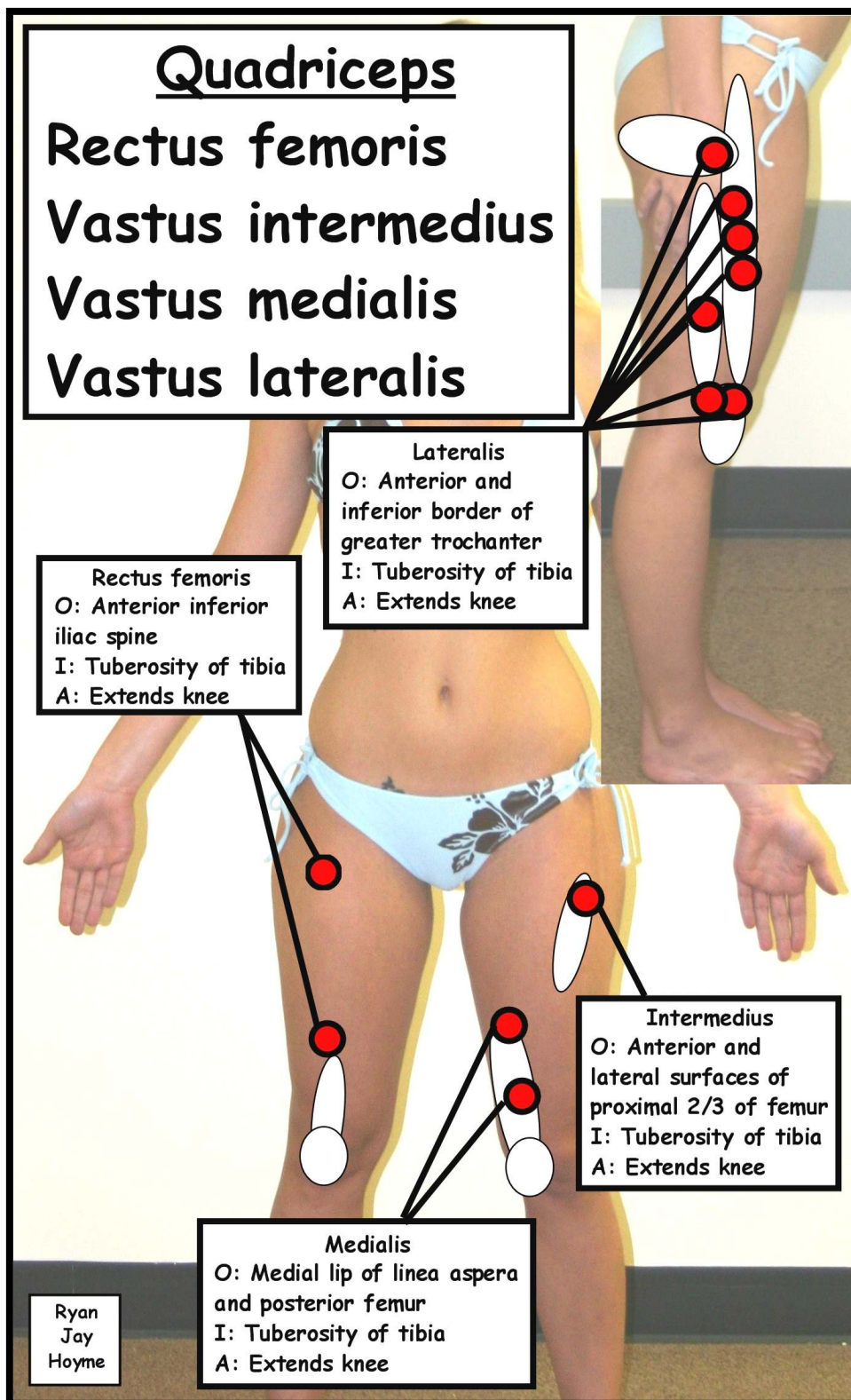
Arthritis of Knee - Rectus femoris, Vastus medialis, Vastus lateralis

Bursitis of the hip (Trochanteric) - Gastrocnemius, Vastus lateralis, Tensor fasciae latae or Quadratus lumborum

Arthritis of Hip - Tensor fasciae latae, Vastus lateralis

Rapid Extension (problems with) - Vastus Medialis, Rectus Femoris, Vastus Lateralis.

Displaced Patella (Dancers) - Quadriceps asymmetrically tight. Classical ballet ranks above contact sports for injury.



Adductor Brevis (ad-DUCK-tur BREV-us) - Lead towards and short
Adductor Longus (ad-DUCK-tur LONG-us) - Lead towards and long
Gracilis (gra-SIL-iss) - Slender (The gracilis and the femoral shaft form the letter 'V')

Pectineus (PEK-tih-NEE-us) - Pubic bone (Medial to the femoral artery and considered an extension of the iliopsoas muscle)

Sartorius (sar-TOR-ee-us) - Tailor (Longest muscle)

TrP Location – Pectineus; one inch below the femoral triangle

TrP Location – Adductor Brevis & Longus; 2 and 3 inches below the femoral triangle

TrP Location – Sartorius; find the ASIS and map out a curved line all the way down to the medial part of the knee and you will find many TrP's

TrP Location – Gracilis; use the medial side of the knee and keep going superior and then you will find many TrP's

FUN FACTS

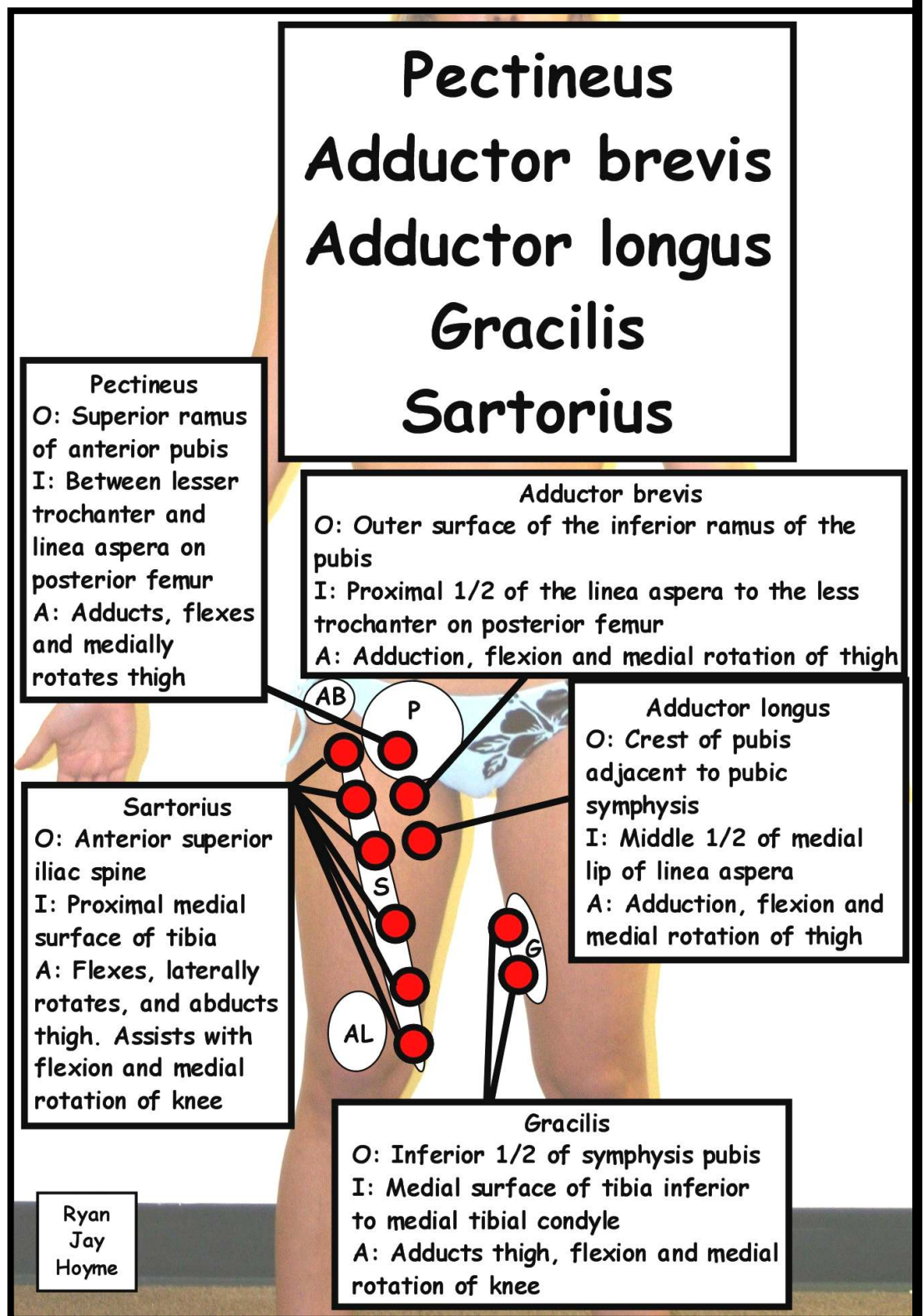
Meralgia Paresthetica - Tensor fasciae latae or Sartorius

Appendicitis - Rectus abdominus or Psoas

Sexual Dysfunction - Piriformis, Adductors

Groin Pain - Adductors or Iliopsoas

Adductor longus - While the adductor longus, adductor magnus, adductor brevis, and pectineal muscles are all adductors of the hip, of these the adductor longus is most often injured in sports.



Extensor Digitorum

Longus (ex-STEN-sur DIH-jih-TOR-um LONG-us) - Stretches, digits and long

Extensor Hallucis

Longus (ex-STEN-sur HAL-uh-iss LONG-us) - Stretches, big toe and long

Tibialis Anterior (TIB-ee-AL-iss) - Related to shin bone (Weakness causes flat foot / Tightness causes high arch / prone to shin splints)

TrP Location – Tibialis Anterior; find the patella and go inferior 2-3 inches and the TrP's are just lateral to the tibia bone (Not on it)

TrP Location – Extensor digitorum longus; it is in between the tibialis anterior and the peroneus muscles (About same area as

Tibialis anterior TrP's, but laterally ½-1 inch)

TrP Location – Extensor hallucis longus; it is in between the tibialis anterior and the peroneus muscles (Lower ½ of the shin)

FUN FACTS

Pes Cavus - Higher than normal arch in the foot and could be a tight Tibialis Anterior muscle.

Pes Planus - Is flat feet, not enough of an arch, weakness in the soleus-gastroc group or tibialis anterior.

Shin Splints - Overly tight (hypertonic) Tibialis anterior muscle & could also be Extensor hallucis longus, Extensor digitorum longus, or Tibialis posterior. Injuries that result in small tears in the fibers of these muscles probably cause the pain known as shin splints.

Inverted foot or clubfoot - tibialis anterior muscle could be one of the causes.

Hammertoes - Are caused by tight extensor digitorum longus.

Bunions - Can be caused by tightened extensor hallucis longus.

Dorsiflexor weakness - Foot slaps down when walking, weakness in the dorsi-flexor muscles.

