



**PHOTOBIO-MODULATION
TREATMENT PROTOCOLS**

FOR

**NEUROMUSCULAR PAIN
SYNDROMES**

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NEUROMUSCULAR PAIN SYNDROMES

- Neuromuscular Pain Syndromes represent a spectrum of nerve, muscle, tendon and joint related conditions that affect the body's muscles strength and limits the joints natural range of motion.
- Neuromuscular disorders cause the weakening of muscles in the body because of interrupted communication between the nervous system and the muscles the nerves control.

NEUROMUSCULAR PAIN SYNDROMES

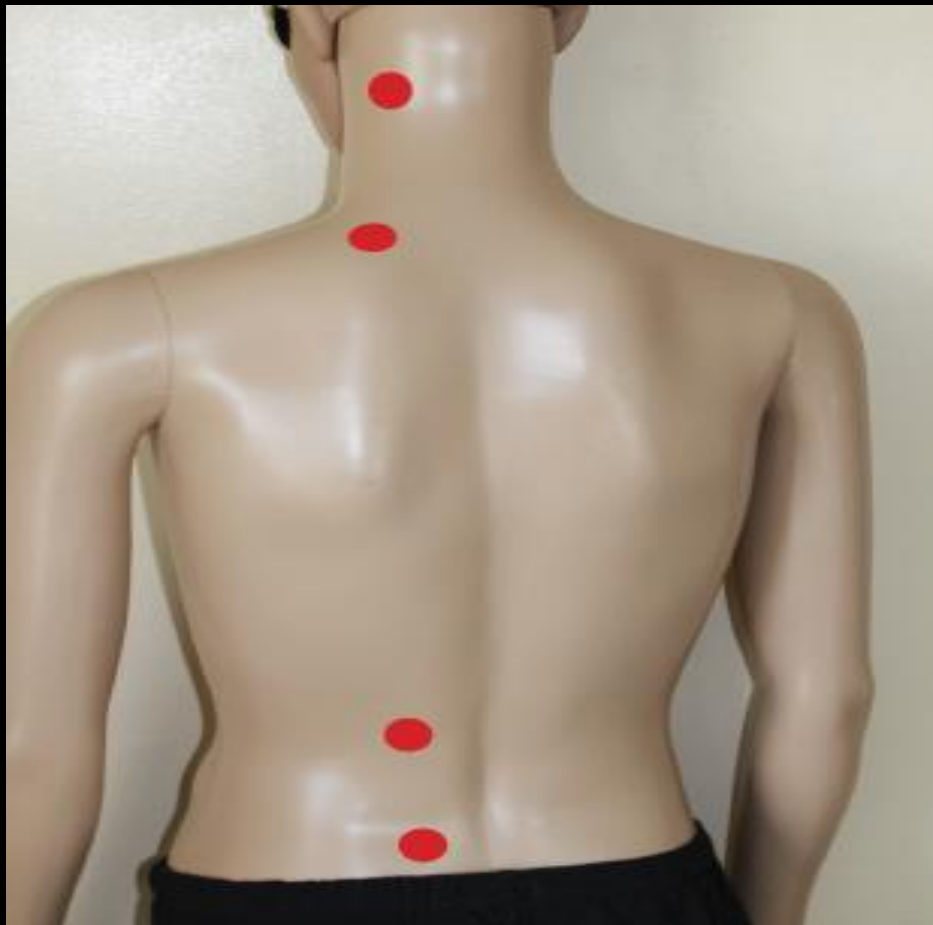
- Thus, putting a greater physical load onto the nerves, muscles, muscle tendons, joints and vertebral discs causing an increase in chronic pain, inflammation and a degeneration of the joints (arthritis).
- PBM therapy is designed to reset the interruption between the nerves and muscles to restore normal muscle function and proper range of motion to decrease or eliminate pain, inflammation and arthritis.

AVANT LASER PROTOCOLS

STEP #1 RESET THE NEUROLOGY

- **Laser the NERVE SUPPLY to the Effected Area with *Infrared***

Lasering the nerve or nerve root to the area of involvement to bring the nerve to a higher state and promote quicker healing times by 25-50% faster than normal.



AVANT LASER PROTOCOLS

STEP #2 LASER EFFECTED AREA

- **Laser the Effected Area of Pain with *Infrared* and *RED* laser**

Whenever a patient presents with pain and inflammation there will be associated muscle weakness. Cautiously, find the associated muscle(s) weakness with the associated pain. While lasering you will see:

- a. Decreased pain and Inflammation**-increased ATP allows the cells to detoxify at a higher rate and decrease mechanical pressure on the nerve(s)
- b. Improved muscle strength**-increased ATP means greater interdigitation of the muscle contractile proteins.
- c. The muscles relax** due to increased ATP
- d. Increased Range of Motion** closes the Pain Gate
- e. Increase blood flow and immune function**

AVANT LASER PROTOCOLS

STEP #3 LASER THE EFFECTED AREA OF PAIN WITH MOVEMENT

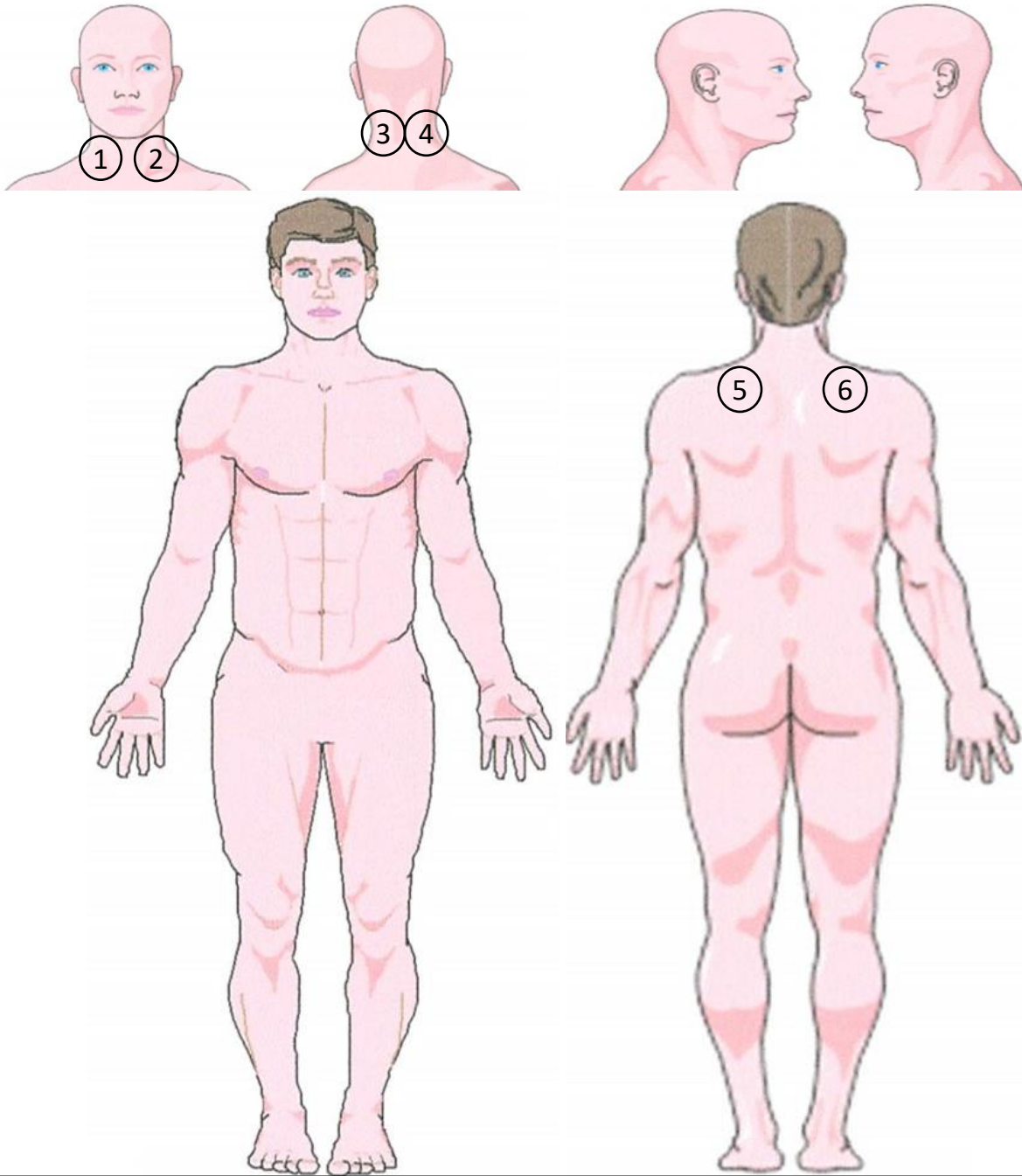
Continue to Laser the Effected Area with *RED* while you do Muscle and Joint Movement:

- a. Start with **light movements** through normal range of motion
- b. Move the AOI against **light resistance**
- c. Perform **manual therapy** while continuing to laser
- d. Work your way up to **Strain/Counter strain** movements

NECK PAIN

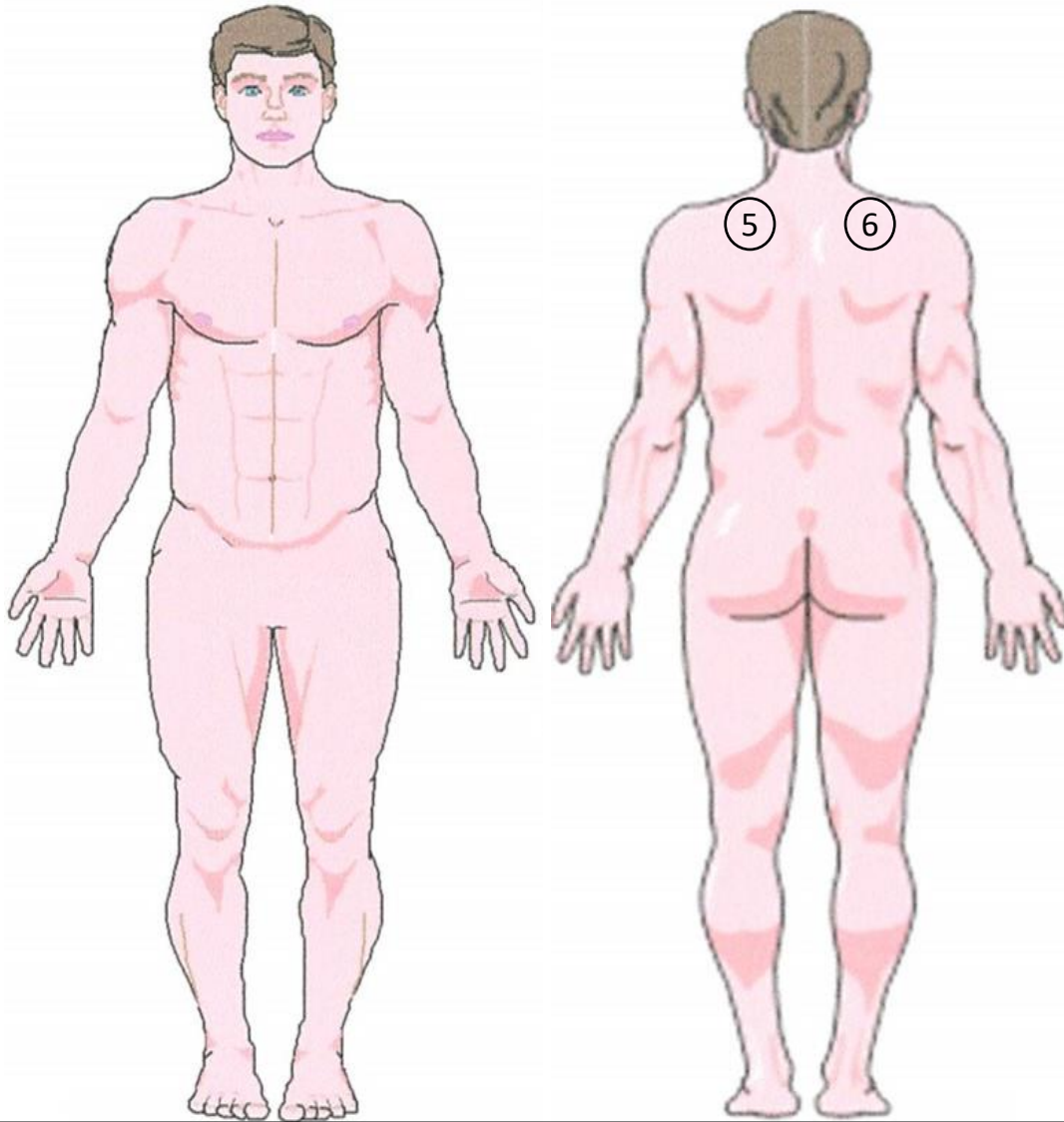
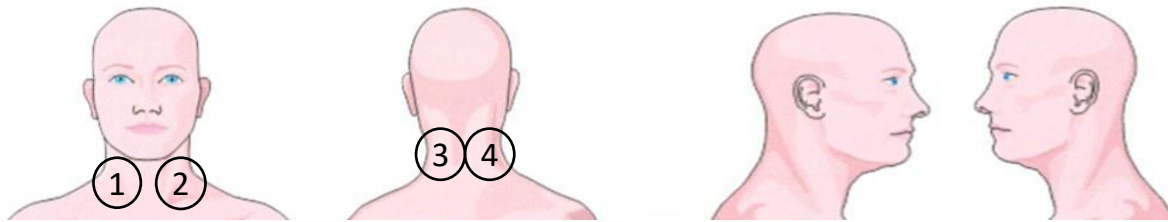
- Injury
- Whiplash
- Sprain/strain
- Arthritis
- Pinched nerve
- Degenerative disc disease
- Cervical spondylosis
- Spinal stenosis
- Torticollis

Neck Pain-Chronic Pain *IR*



1. 30 seconds-upper anterior cervical spine
2. 30 seconds-upper anterior cervical spine
3. 30 seconds-upper cervical spine
4. 30 seconds-upper cervical spine
5. 30 seconds-upper shoulder
6. 30 seconds-upper shoulder

Neck Pain-Muscle Balance *RED*



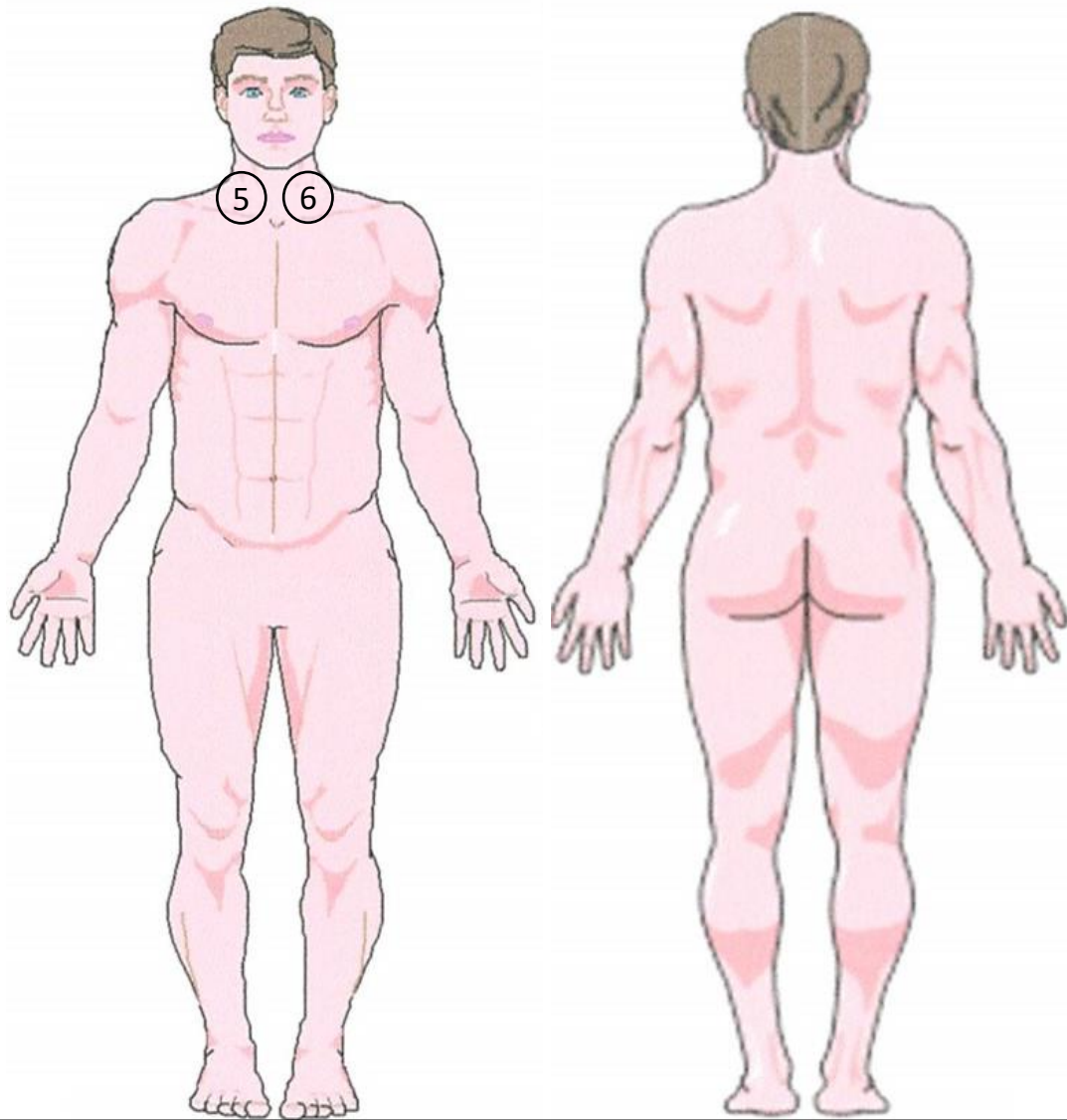
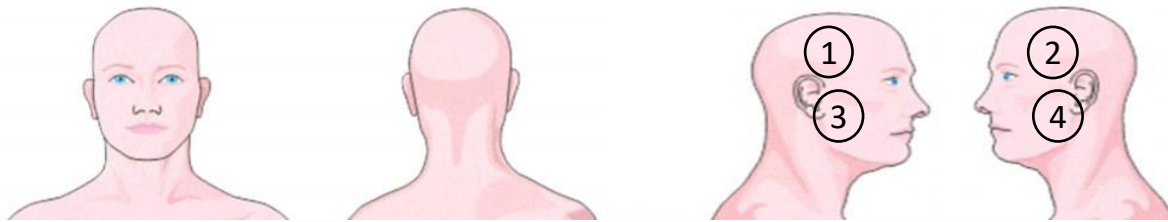
1. 30 seconds-upper anterior cervical spine
2. 30 seconds-upper anterior cervical spine
3. 30 seconds-upper cervical spine
4. 30 seconds-upper cervical spine
5. 30 seconds-upper shoulder
6. 30 seconds-upper shoulder



HEADACHES

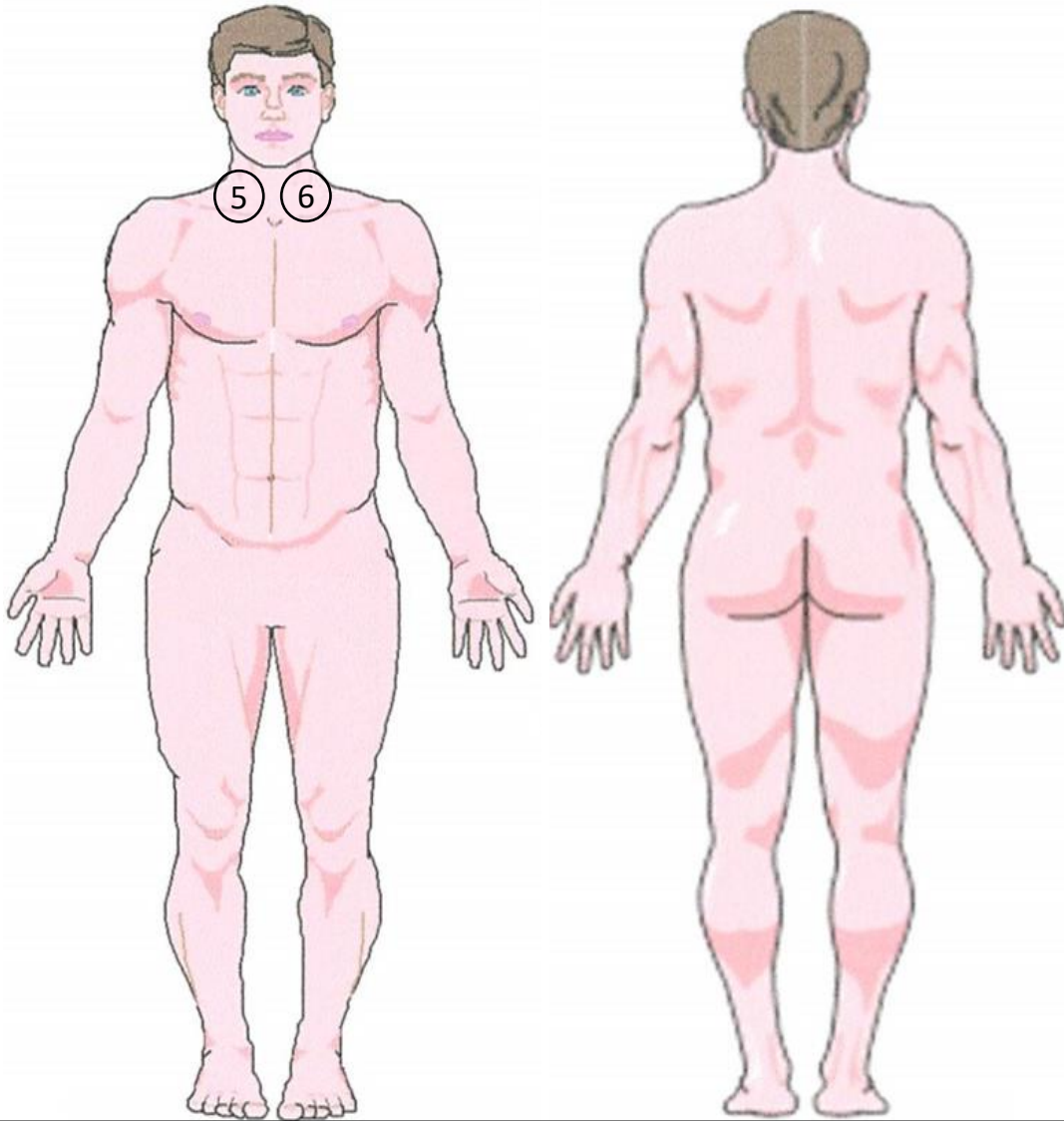
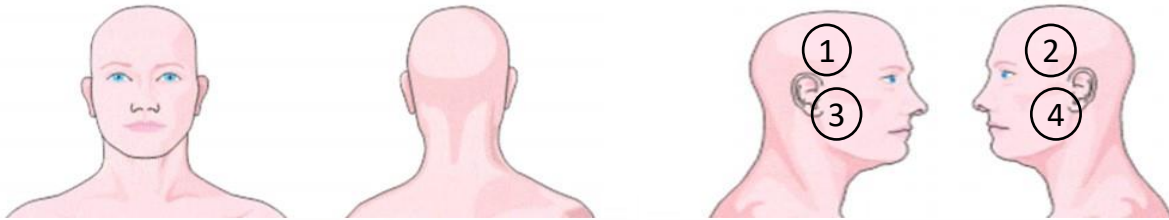
- Tension
- Migraine
- Sinus
- Cluster

Headaches-Chronic Pain *IR*



1. 30 seconds-temporalis muscle
2. 30 seconds-temporalis muscle
3. 30 seconds-TMJ
4. 30 seconds-TMJ
5. 30 seconds-SCM
6. 30 seconds-SCM

Headaches-Muscle Balance *RED*

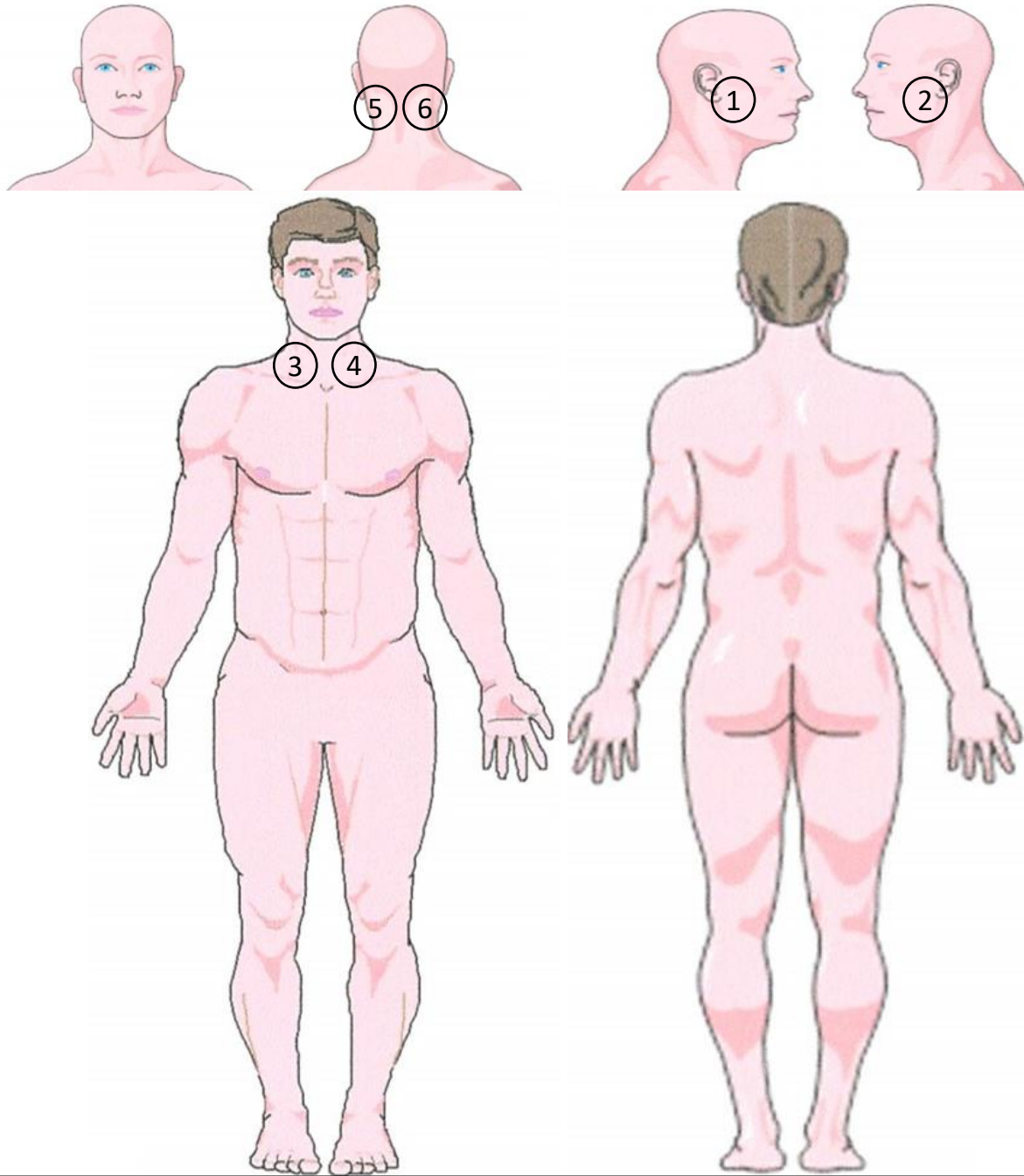


1. 30 seconds-temporalis muscle
2. 30 seconds-temporalis muscle
3. 30 seconds-TMJ
4. 30 seconds-TMJ
5. 30 seconds-SCM
6. 30 seconds-SCM

TEMPORAL MANDIBULAR DISORDERS

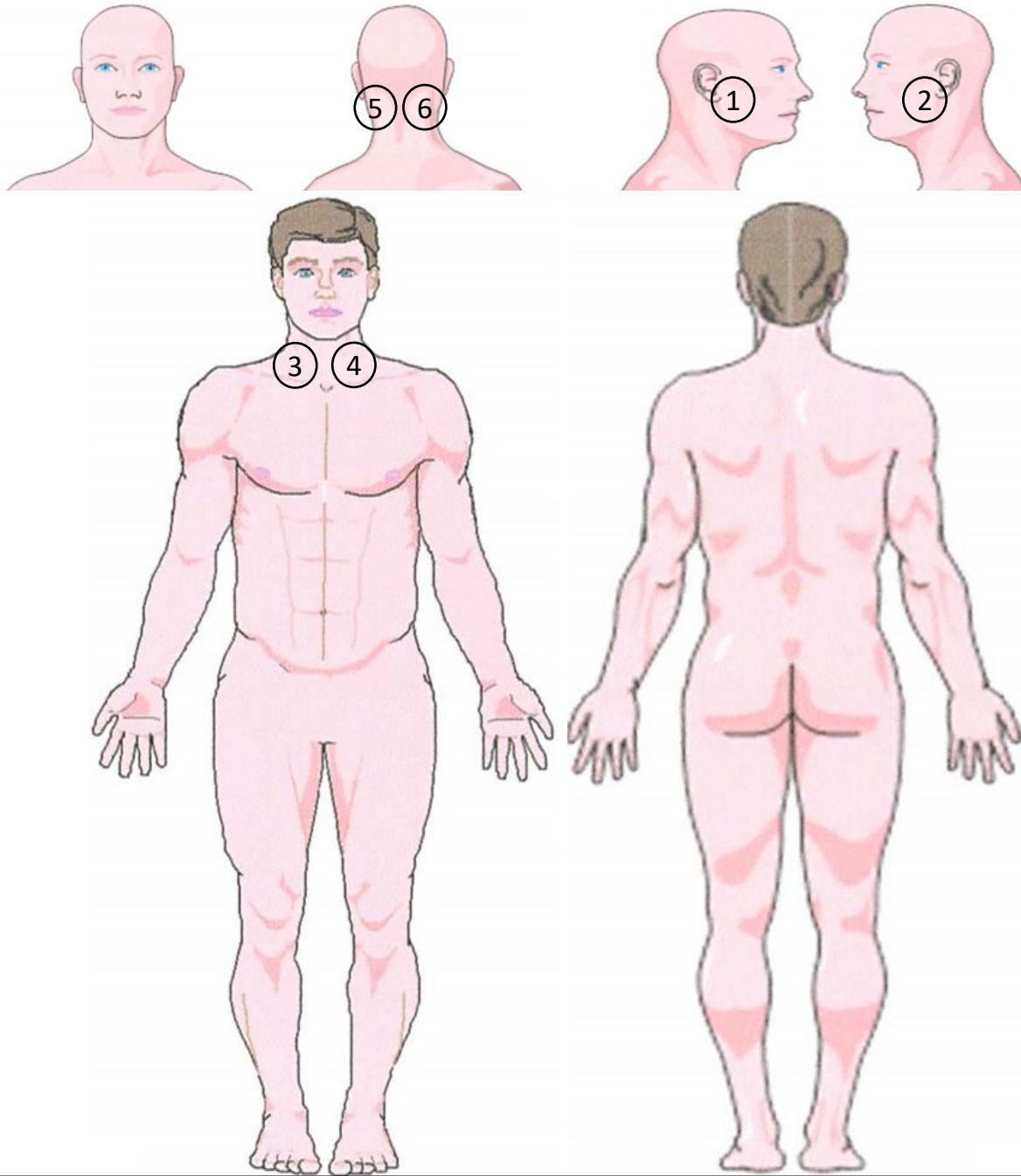
- Injury
- Whiplash
- Sprain/strain
- Arthritis
- Degenerative disc disease
- Popping and clicking in the jaw
- Ringing in the ears
- Trigeminal neuralgia

TMD-Chronic Pain *IR*



1. 30 seconds-TMJ
2. 30 seconds-TMJ
3. 30 seconds-SCM
4. 30 seconds-SCM
5. 30 seconds-sub-occipital muscles
6. 30 seconds-sub-occipital muscles

TMD-Muscle Balance *RED*

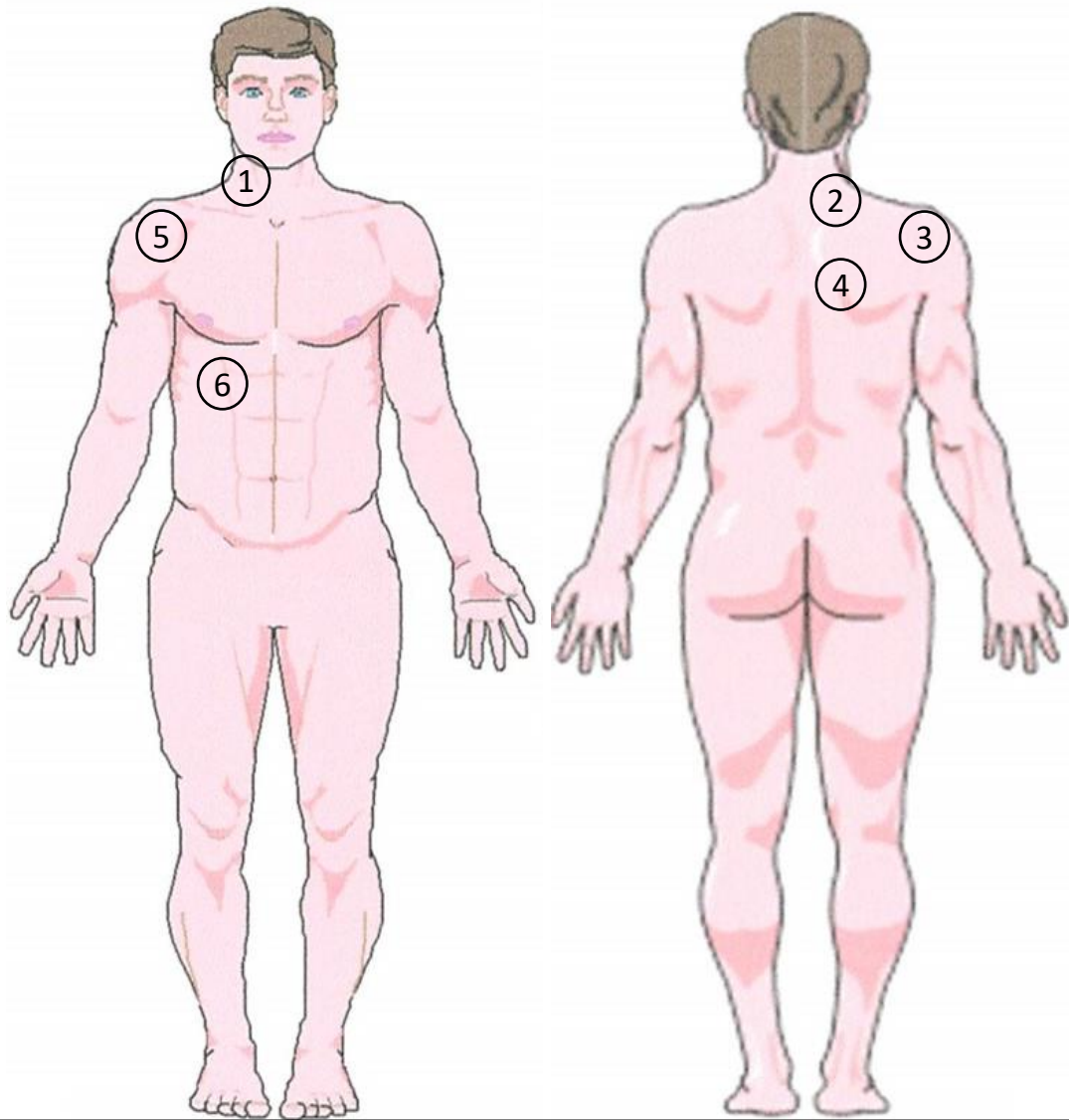
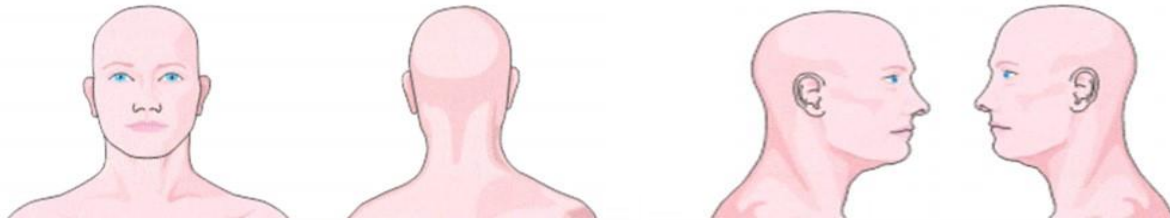


1. 30 seconds-TMJ
2. 30 seconds-TMJ
3. 30 seconds-SCM
4. 30 seconds-SCM
5. 30 seconds-sub-occipital muscles
6. 30 seconds-sub-occipital muscles

SHOULDER PAIN

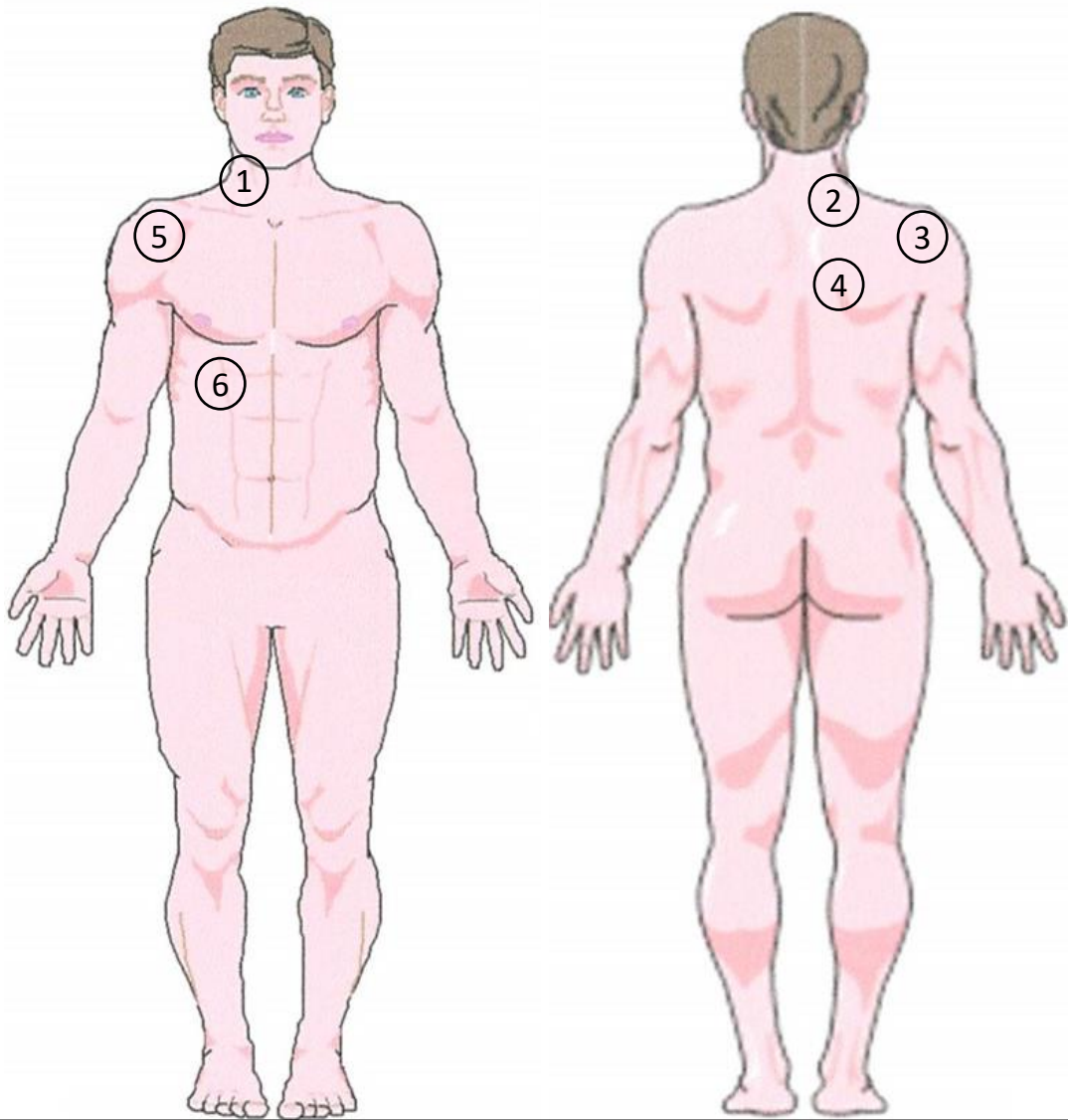
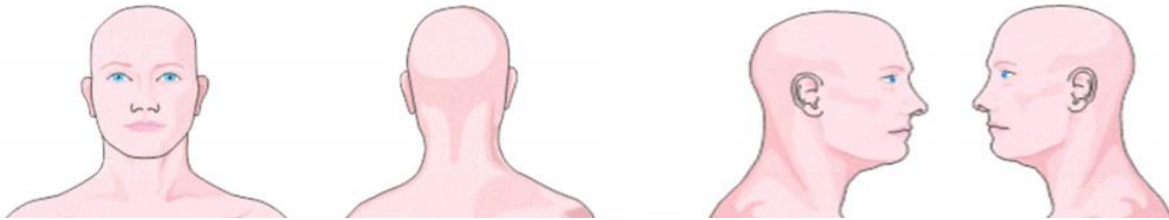
- Injury
- Rotator cuff
- Sprain/strain
- Arthritis
- Bursitis
- Frozen shoulder
- Clavicle fracture
- Dislocation or separation
- Labrum tear
- Bone spur
- Tendonitis
- Pinched nerve

Shoulder Pain-Chronic Pain *IR*



1. 30 seconds-lower anterior cervical spine
2. 30 seconds-lower cervical spine
3. 30 seconds-lateral shoulder
4. 30 seconds-lower shoulder
5. 30 seconds-anterior shoulder
6. 30 seconds-diaphragm/liver

Shoulder Pain-Muscle Balance *RED*



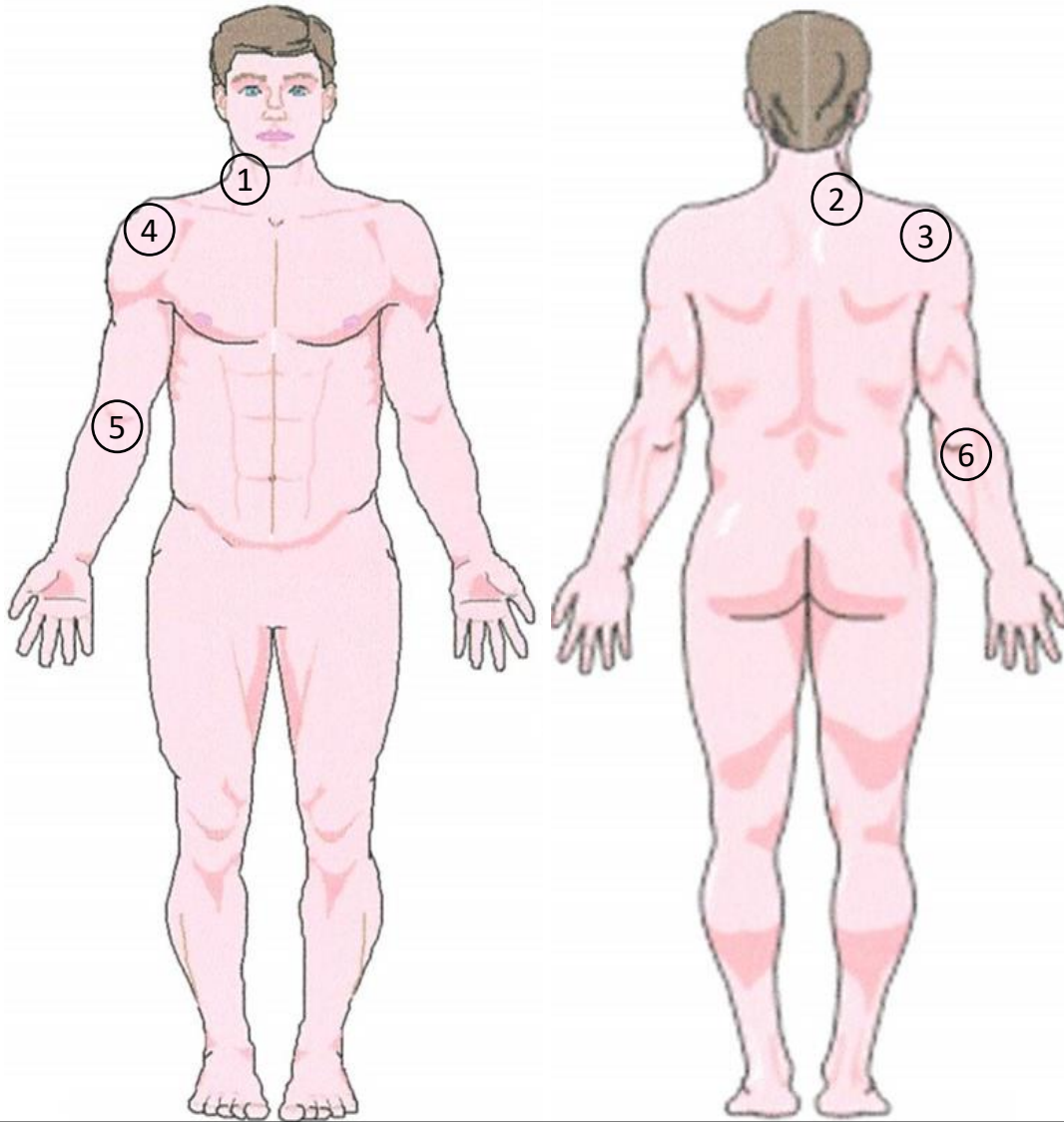
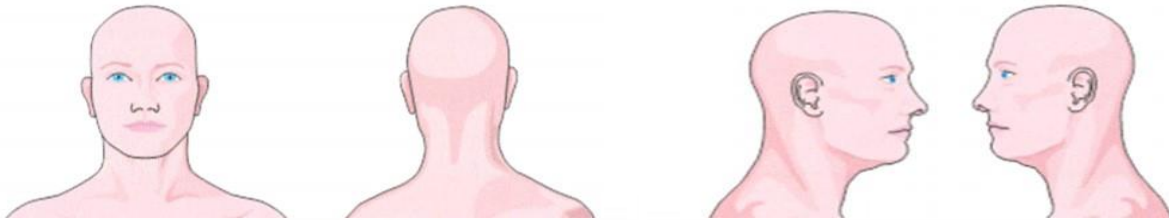
1. 30 seconds-lower anterior cervical spine
2. 30 seconds-lower cervical spine
3. 30 seconds-lateral shoulder
4. 30 seconds-lower shoulder
5. 30 seconds-anterior shoulder
6. 30 seconds-diaphragm/liver



ELBOW PAIN

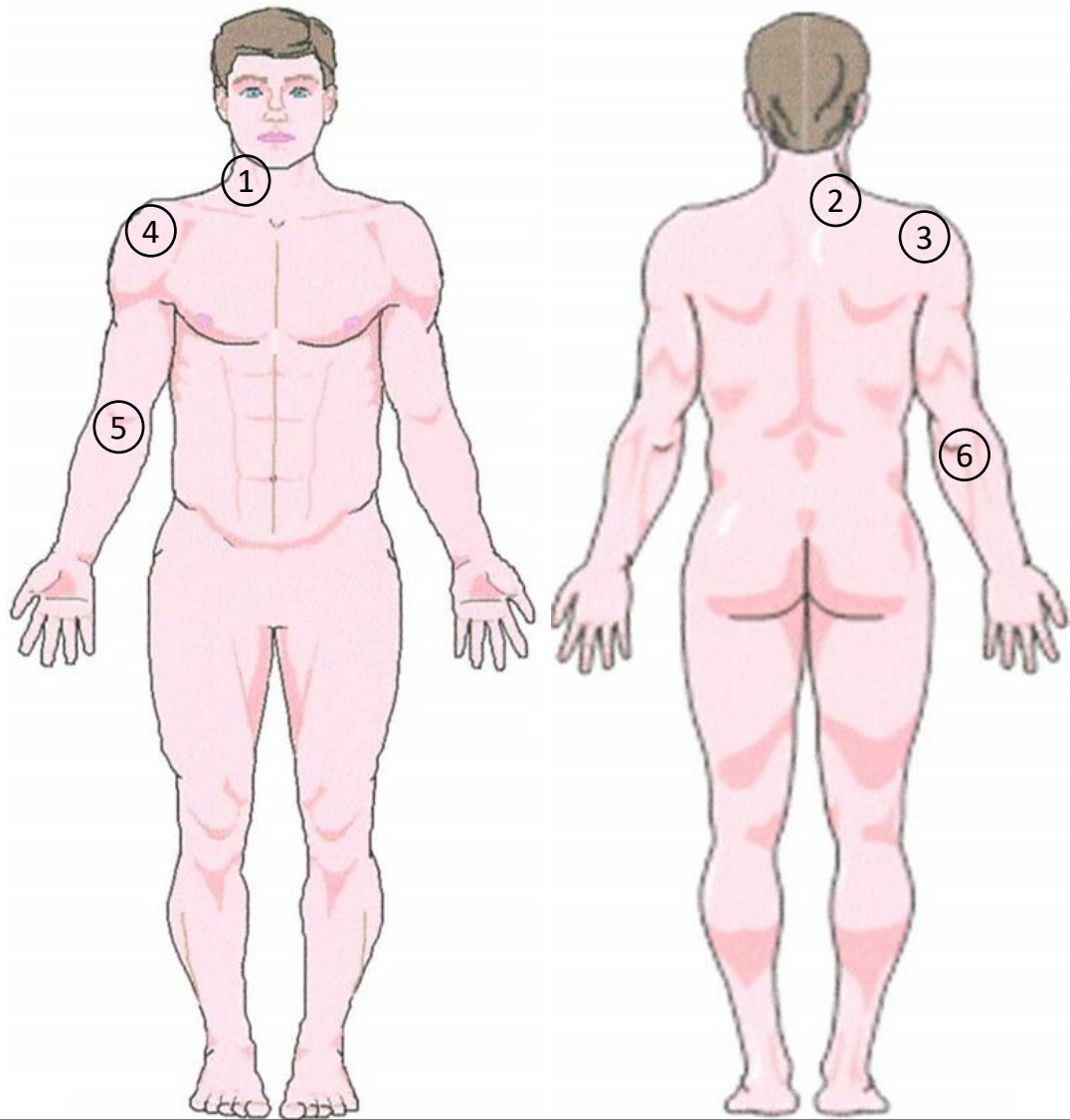
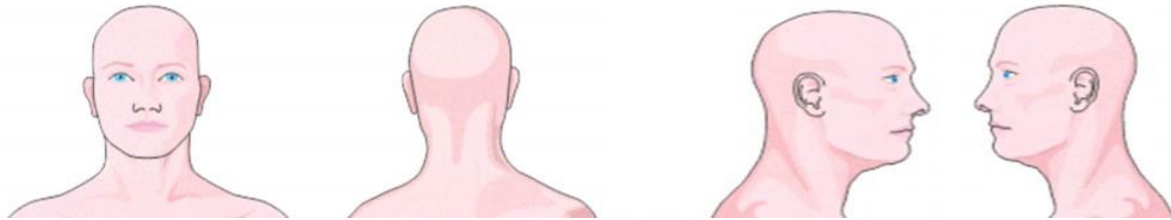
- Injury
- Sprain/strain
- Arthritis
- Tennis elbow
- Golfer's elbow
- Pinched nerve
- Tendonitis

Elbow Pain-Chronic Pain *IR*



1. 20 seconds-lower anterior cervical spine
2. 20 seconds-lower cervical spine
3. 20 seconds-lateral shoulder
4. 20 seconds-anterior shoulder
5. 90 seconds-elbow
6. 90 seconds-elbow

Elbow Pain-Muscle Balance *RED*



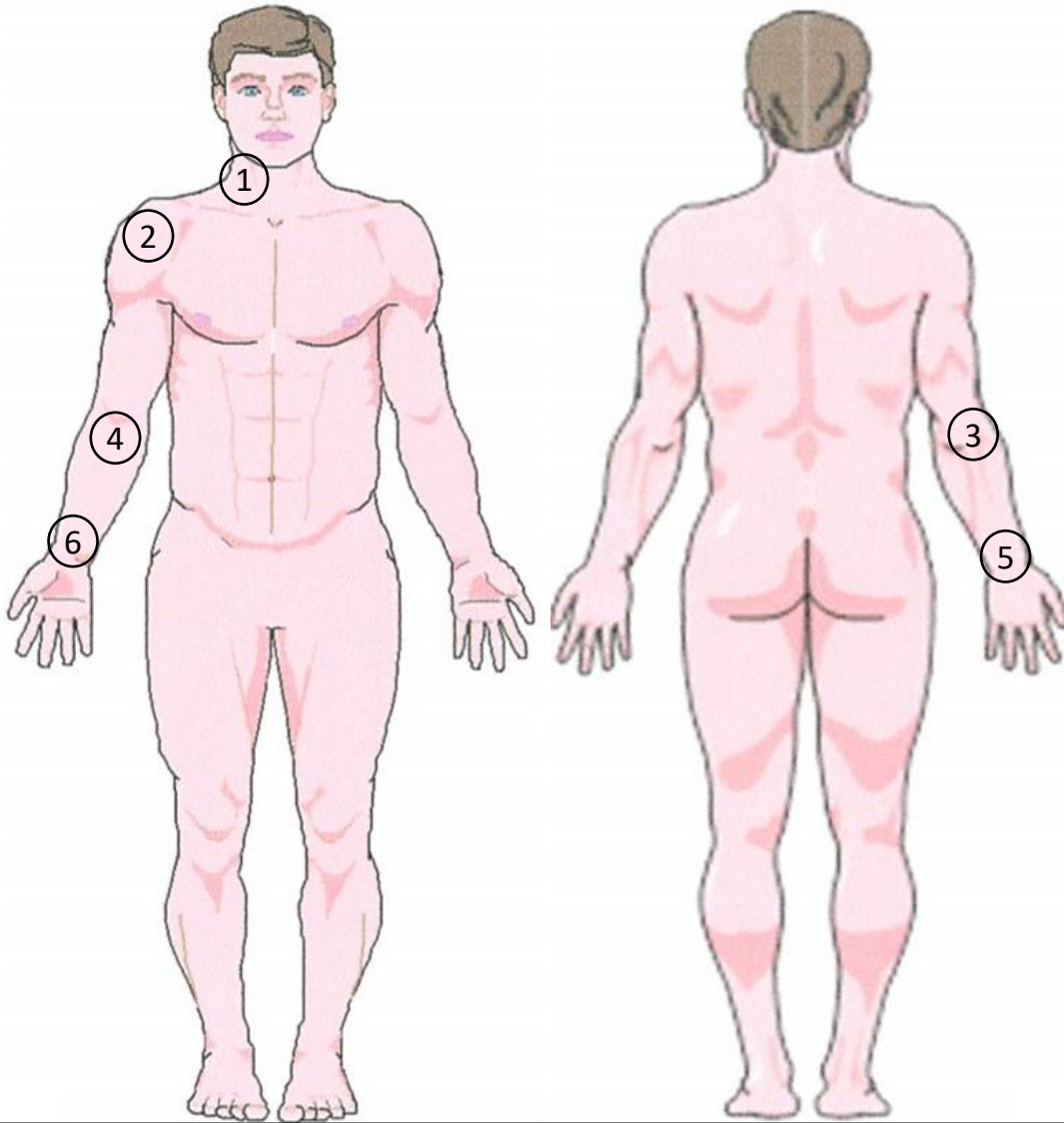
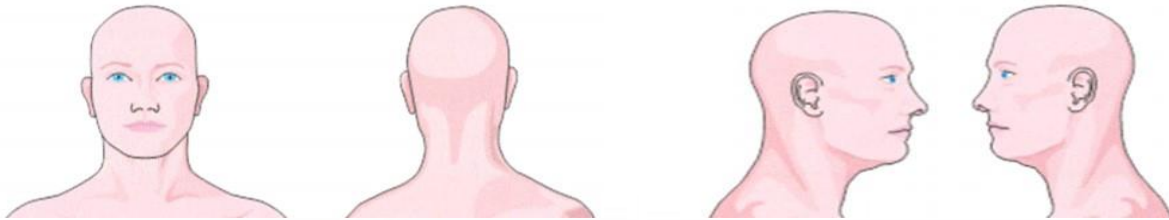
1. 20 seconds-lower anterior cervical spine
2. 20 seconds-lower cervical spine
3. 20 seconds-lateral shoulder
4. 20 seconds-anterior shoulder
5. 90 seconds-elbow
6. 90 seconds-elbow



WRIST PAIN

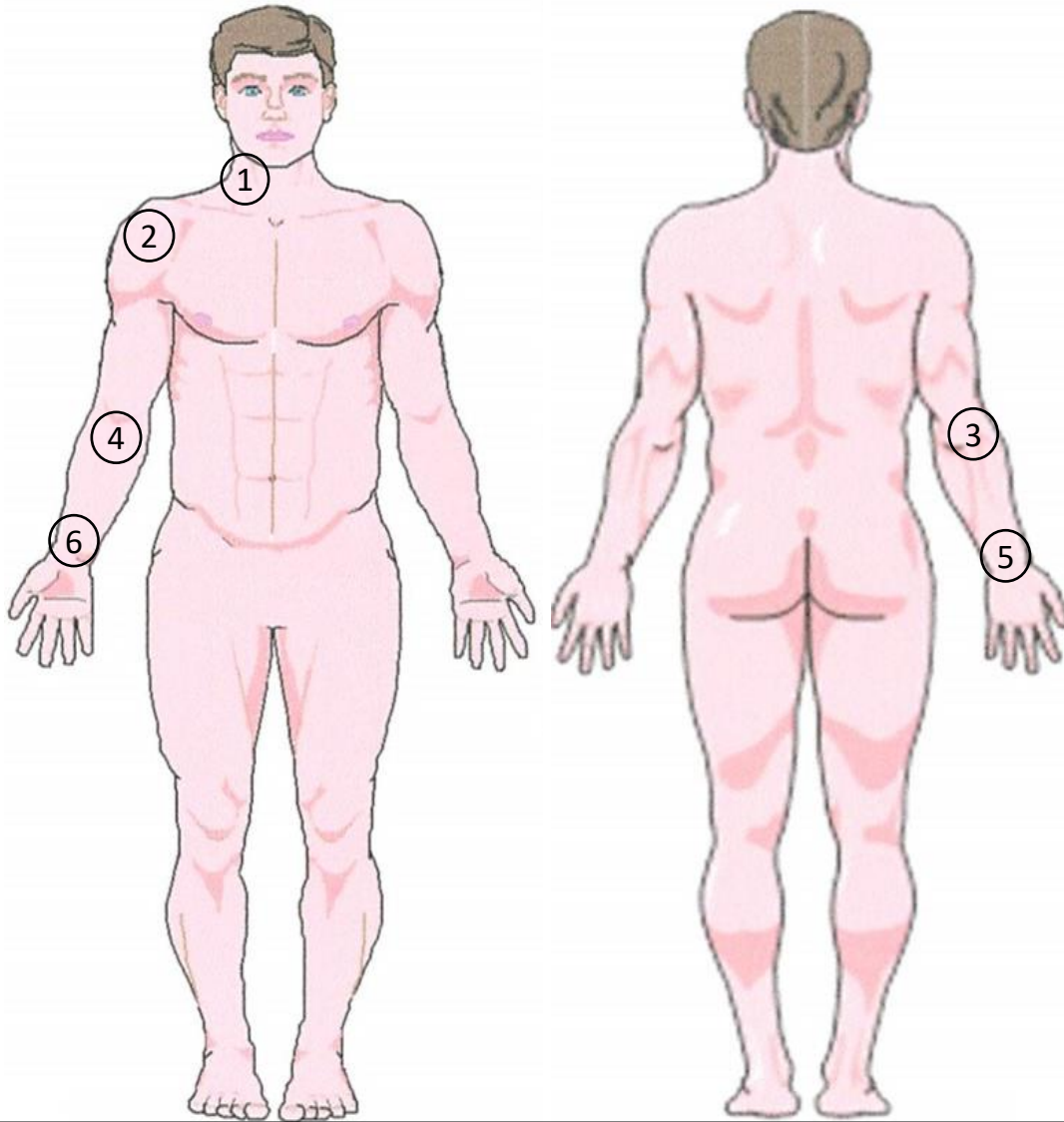
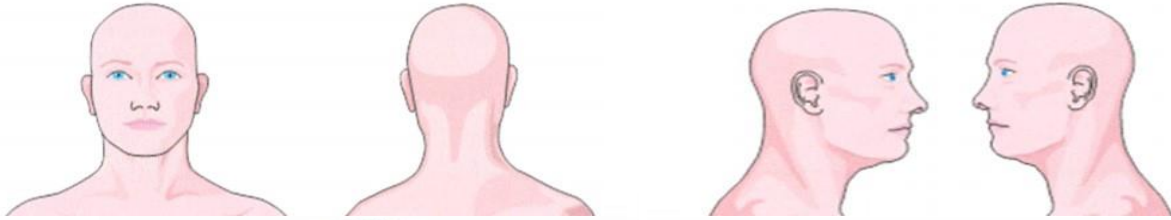
- Injury
- Sprain/strain
- Arthritis
- Carpal tunnel
- Rheumatoid arthritis
- Ganglion cysts
- Dupuytren's contracture

Wrist Pain-Chronic Pain *IR*



1. 20 seconds-lower anterior cervical spine
2. 20 seconds-anterior shoulder (coracobrachialis)
3. 20 seconds-posterior elbow
4. 60 seconds-upper forearm (pronator teres)
5. 60 seconds-wrist
6. 60 seconds-wrist

Wrist Pain-Muscle Balance *RED*

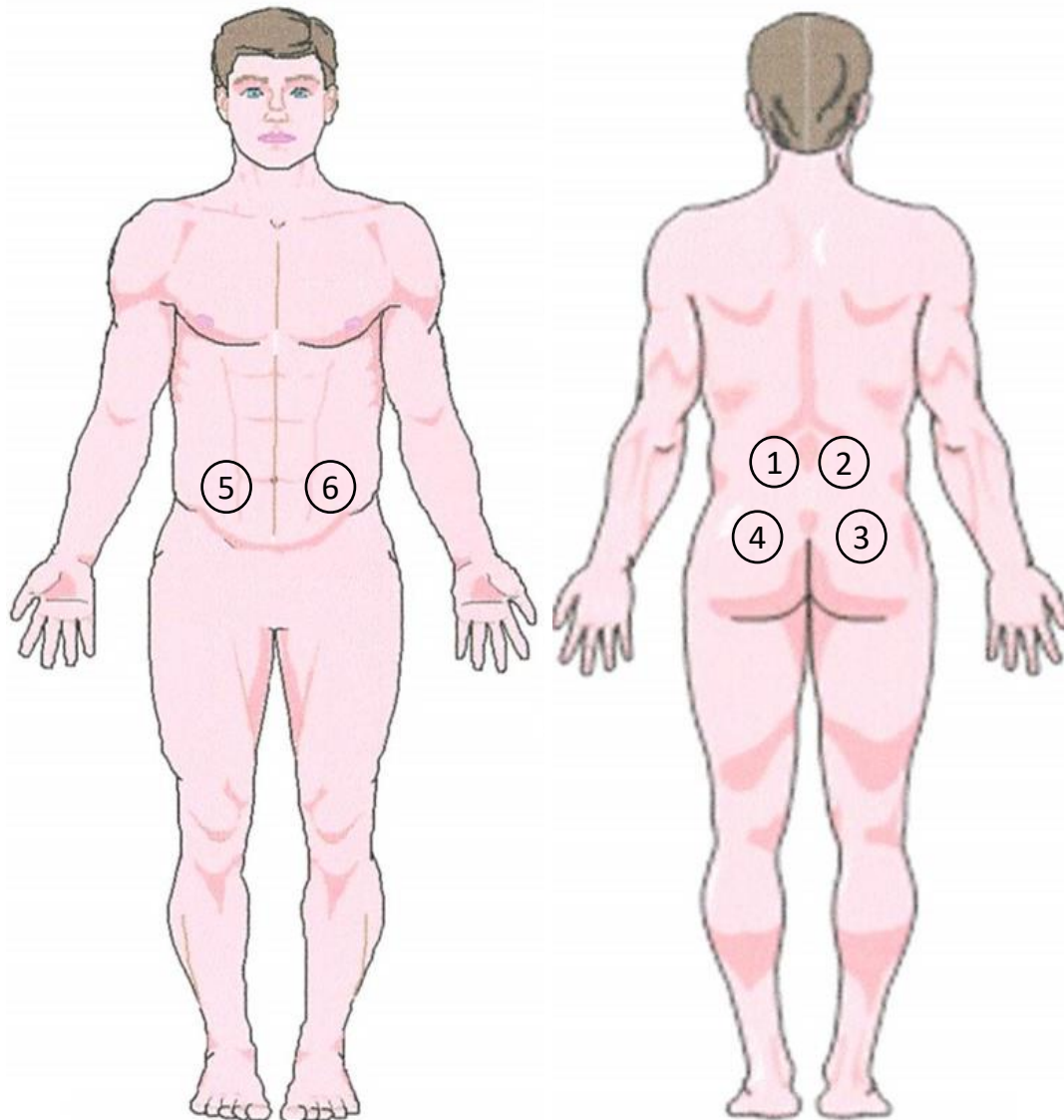
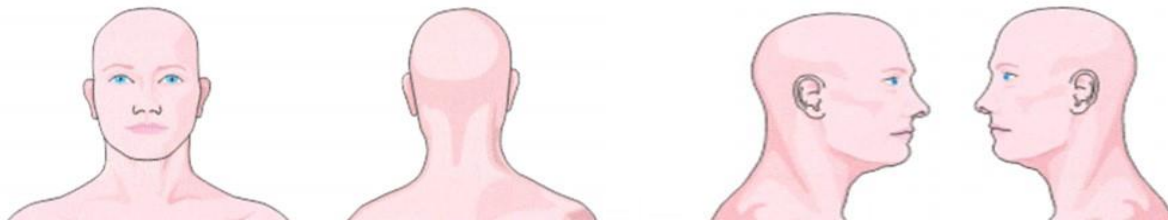


1. 20 seconds-lower anterior cervical spine
2. 20 seconds-anterior shoulder (coracobrachialis)
3. 20 seconds-posterior elbow
4. 60 seconds-upper forearm (pronator teres)
5. 60 seconds-wrist
6. 60 seconds-wrist

LOW BACK PAIN

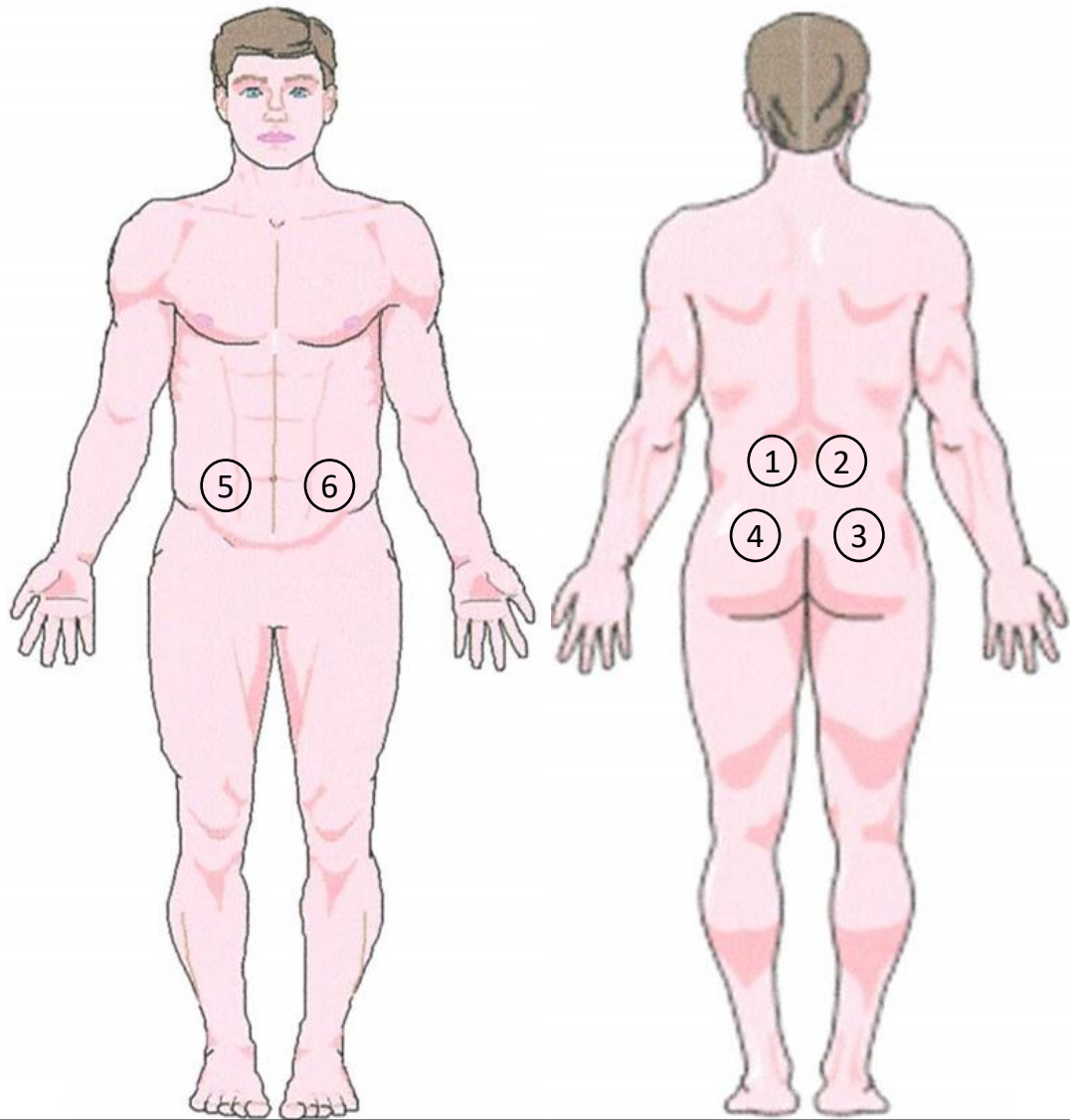
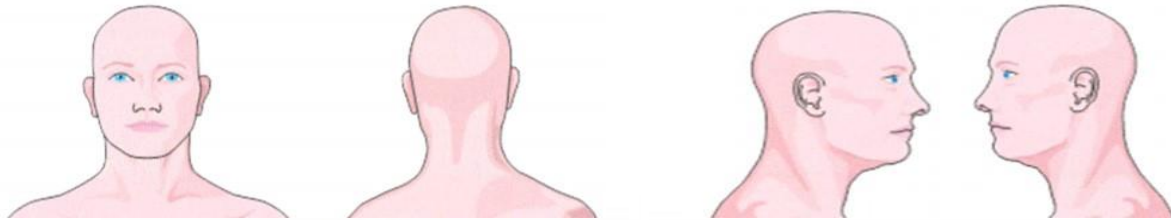
- Injury-whiplash
- Sprain/strain
- Arthritis
- Pinched nerve
- Degenerative disc disease
- Lumbar spondylosis
- Spinal stenosis
- Sciatica
- Scoliosis

Low Back Pain-Chronic Pain *IR*



1. 30 seconds-upper lumbar spine
2. 30 seconds-upper lumbar spine
3. 60 seconds-low back
4. 60 seconds-low back
5. 30 seconds-psoas muscle
6. 30 seconds-psoas muscle

Low Back Pain-Muscle Balance *RED*



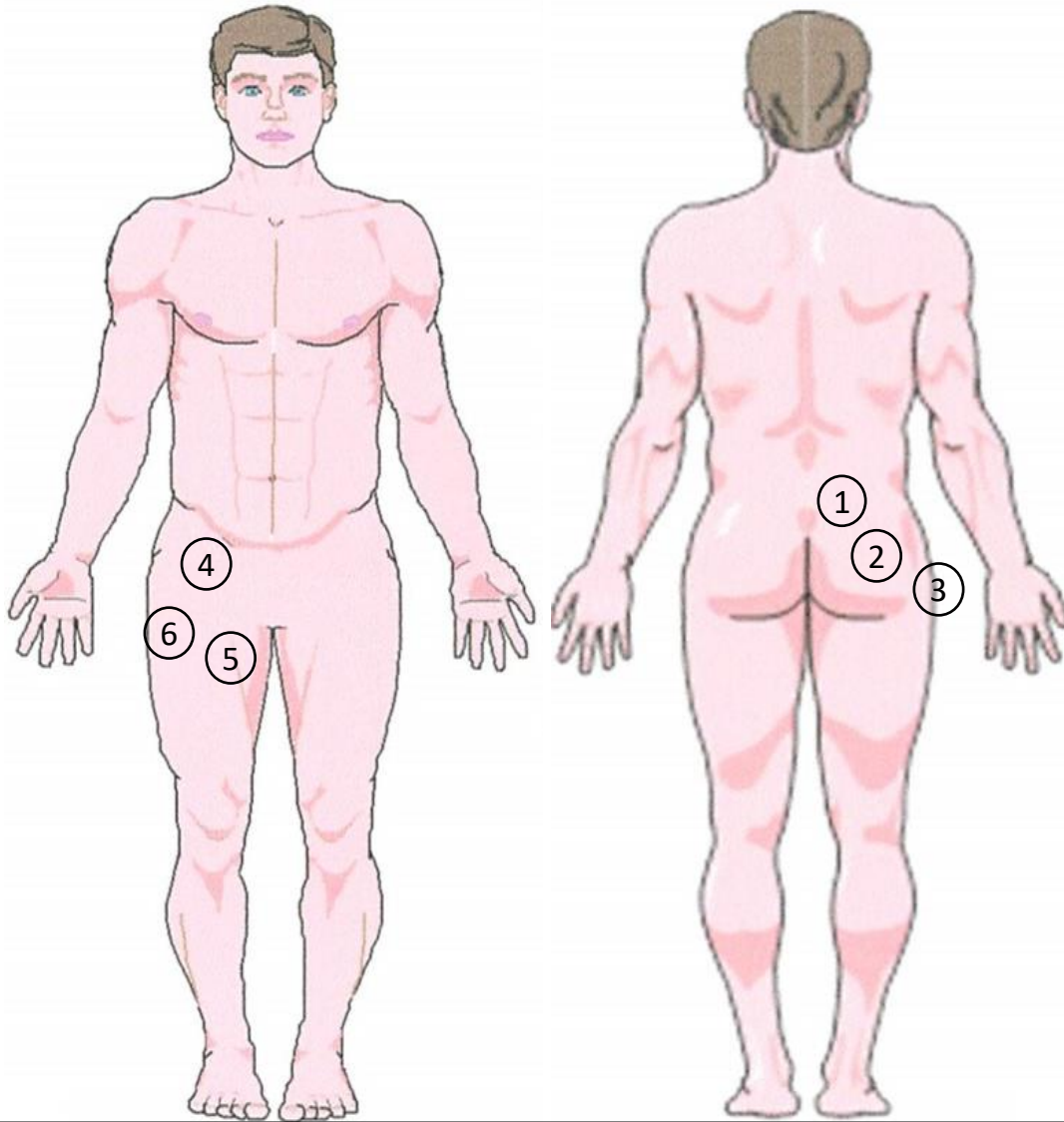
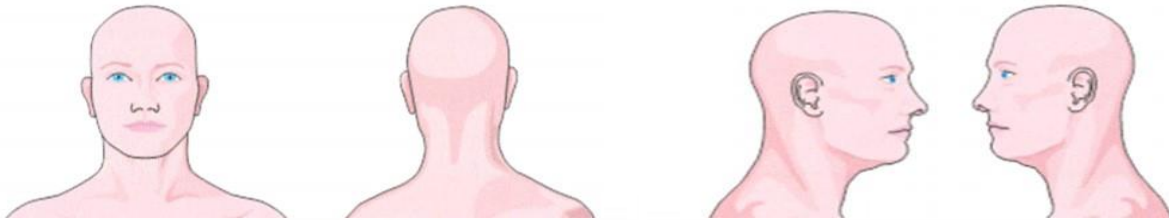
1. 30 seconds-upper lumbar spine
2. 30 seconds-upper lumbar spine
3. 60 seconds-low back
4. 60 seconds-low back
5. 30 seconds-psoas muscle
6. 30 seconds-psoas muscle



HIP PAIN

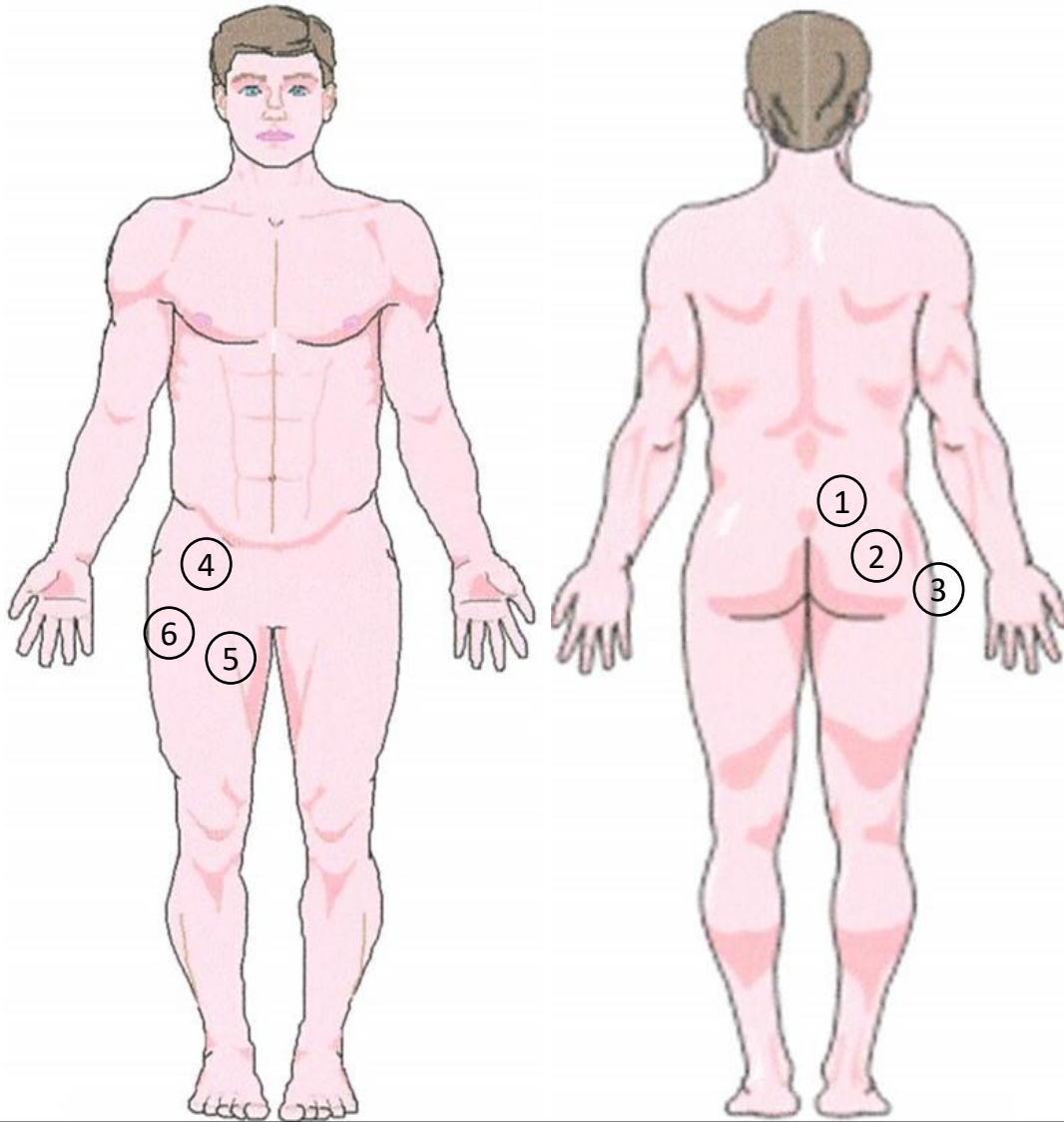
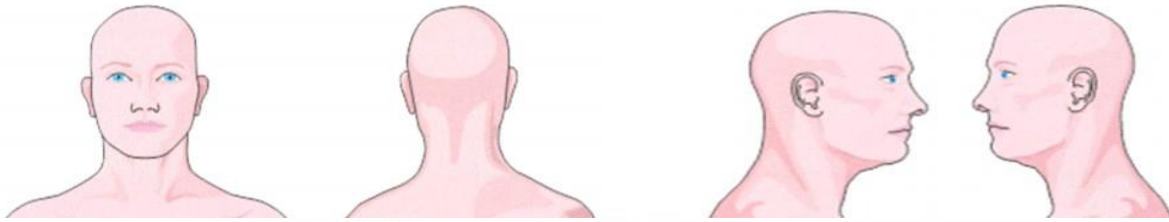
- Injury
- Sprain/strain
- Arthritis
- Bursitis
- Pinched nerve
- Labrum tear
- Degenerative joint disease
- Lumbar spondylosis
- Spinal stenosis
- Sciatica

Hip Pain-Chronic Pain *IR*



1. 30 seconds-upper lumbar spine
2. 30 seconds-middle gluteus muscle
3. 60 seconds-lateral hip
4. 60 seconds-middle groin
5. 30 seconds-adductor muscle
6. 30 seconds-upper abductor

Hip Pain-Muscle Balance *RED*



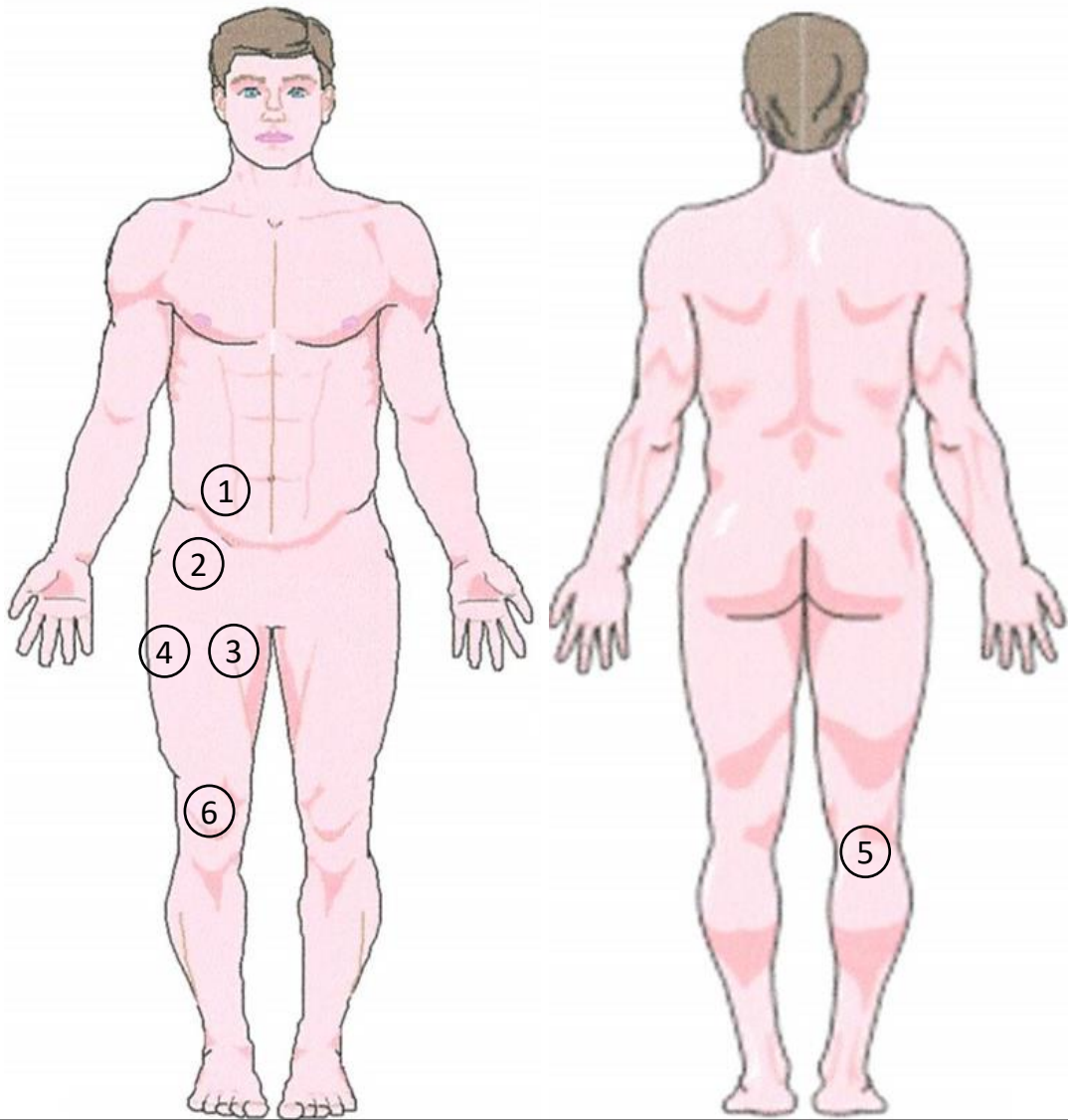
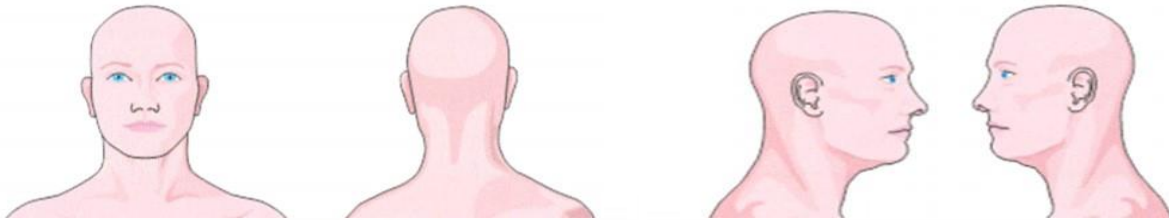
1. 30 seconds-upper lumbar spine
2. 30 seconds-middle gluteus muscle
3. 60 seconds-lateral hip
4. 60 seconds-middle groin
5. 30 seconds-adductor muscle
6. 30 seconds-upper abductor



KNEE PAIN

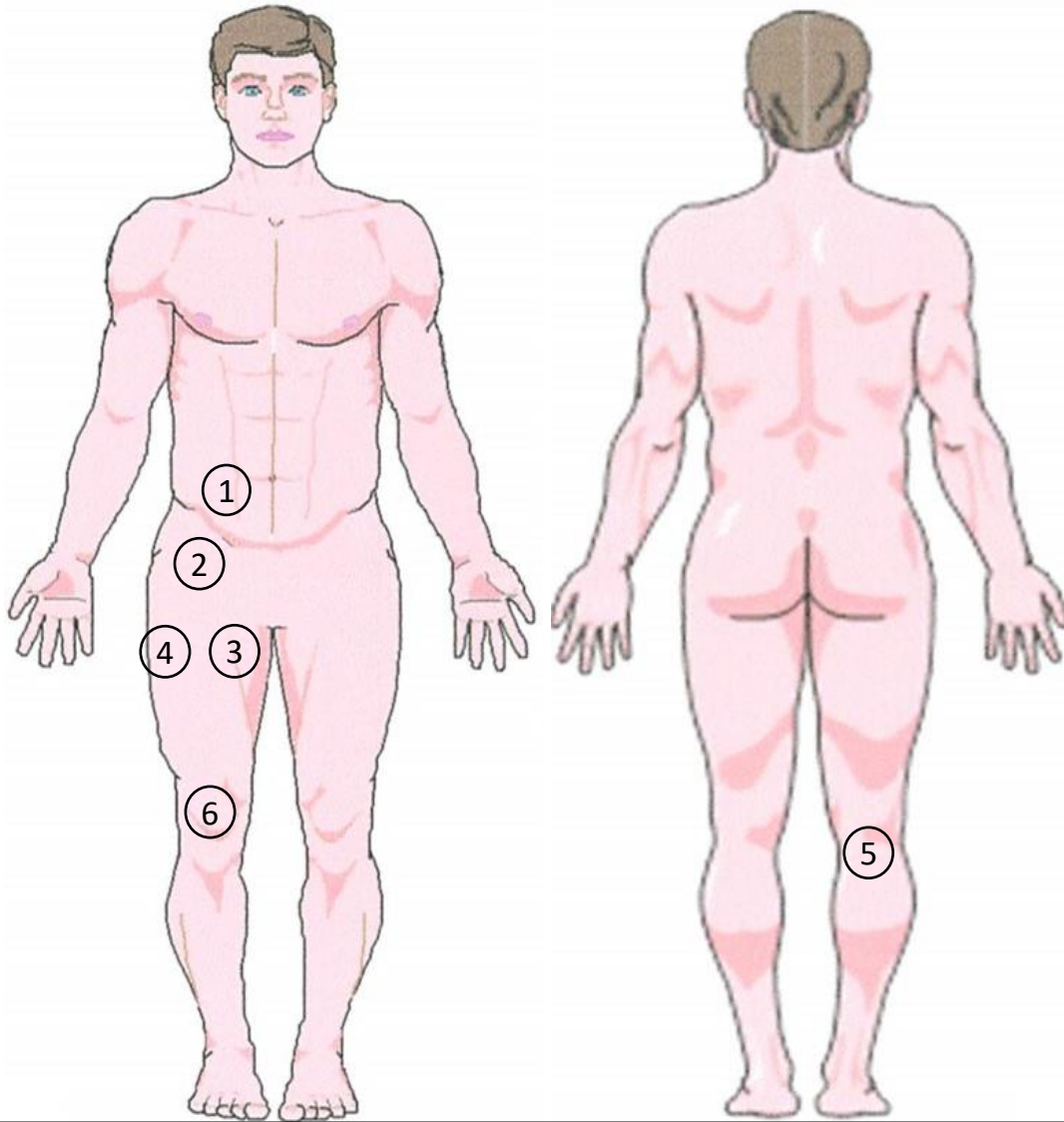
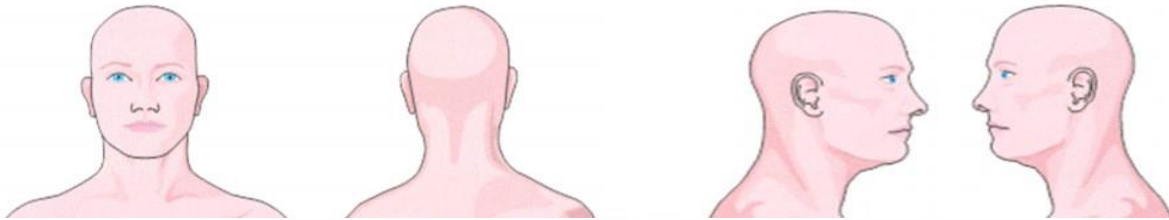
- Injury
- ACL/meniscus
- Sprain/strain
- Arthritis
- Gout/RA
- Bursitis
- Patellar tendonitis
- Degenerative joint disease
- Loose bodies
- Iliotibial band syndrome

Knee Pain-Chronic Pain *IR*



1. 20 seconds-anterior upper lumbar spine
2. 20 seconds-groin
3. 30 seconds-upper adductor
4. 60 seconds-ilio-tibial band
5. 60 seconds-knee
6. 60 seconds-knee

Knee Pain-Muscle Balance *RED*

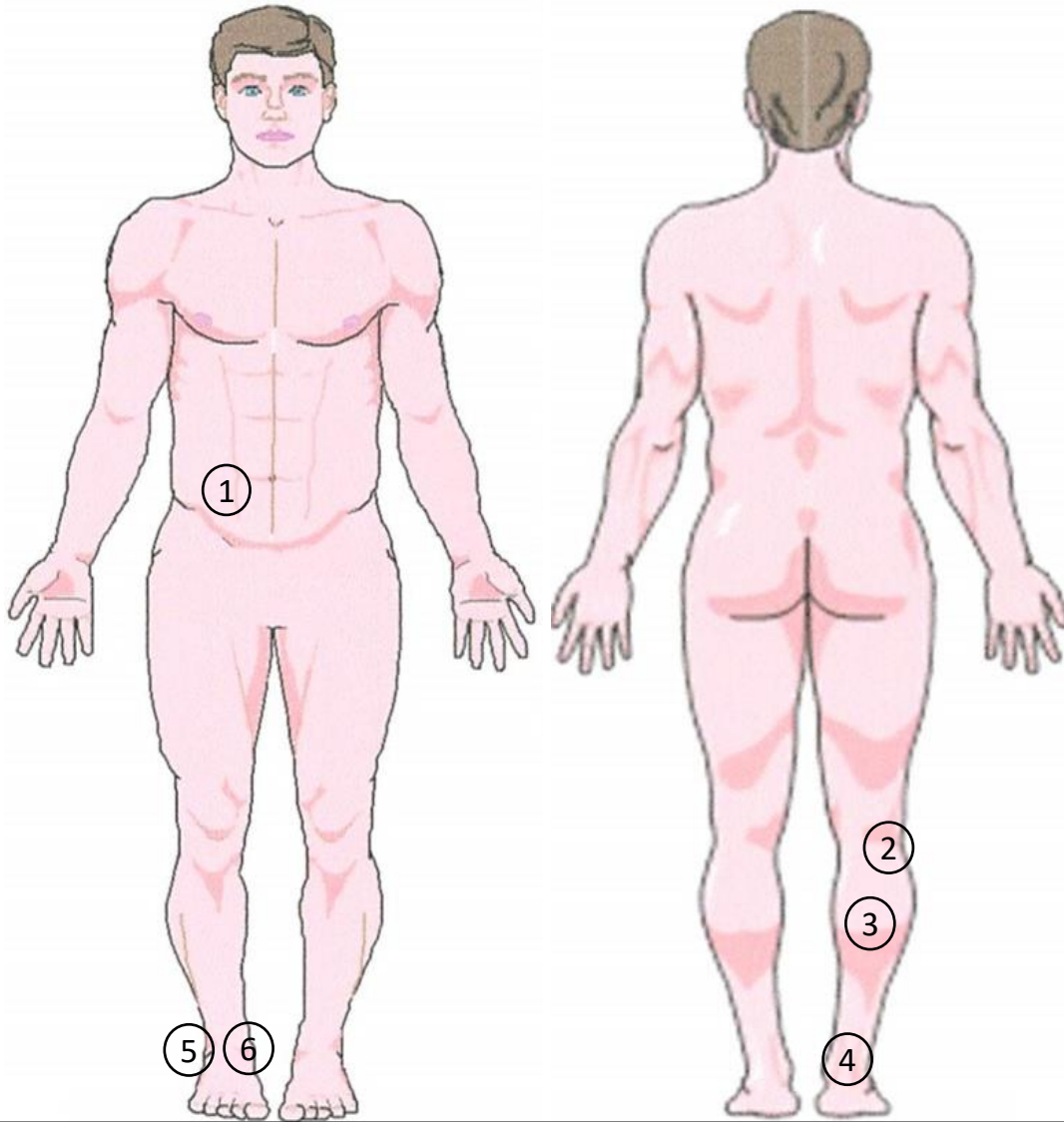
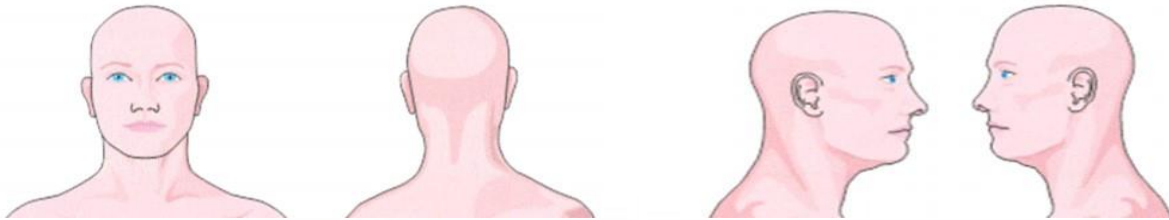


1. 20 seconds-anterior upper lumbar spine
2. 20 seconds-groin
3. 30 seconds-upper adductor
4. 60 seconds-ilio-tibial band
5. 60 seconds-knee
6. 60 seconds-knee

FOOT/ANKLE PAIN

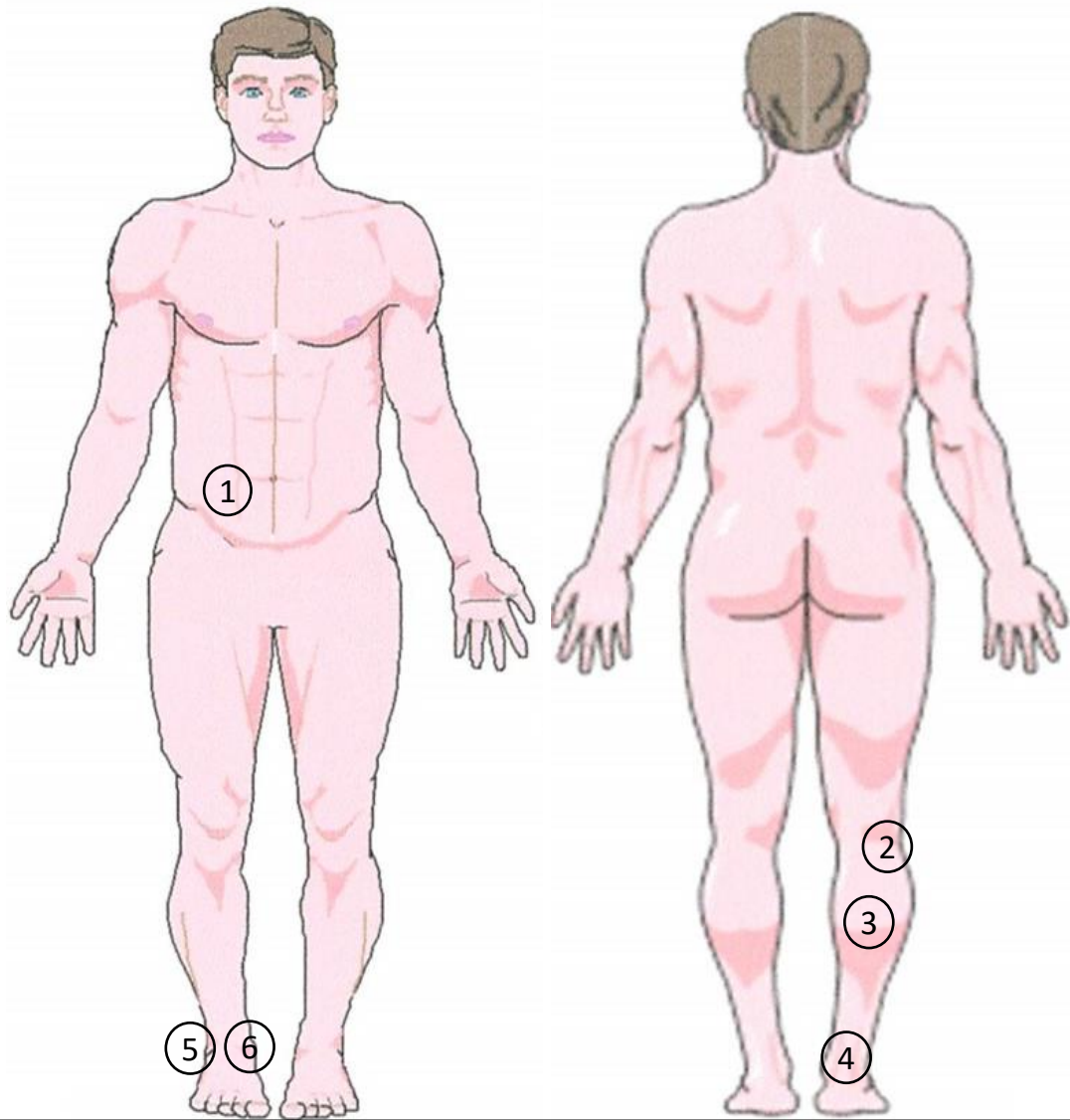
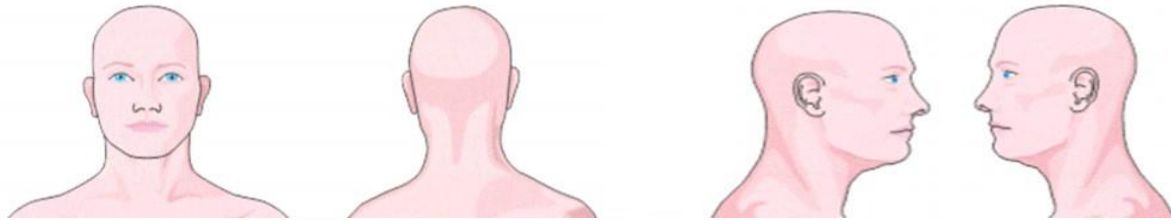
- Injury
- Sprain/strain
- Arthritis
- Achilles tendonitis
- Bone spur
- Bursitis
- Hammer toe
- Bunions
- Peripheral neuropathy
- Plantar fasciitis
- Stress fracture
- Tendonitis
- Tarsal tunnel

Foot/Ankle Pain-Chronic Pain *IR*



1. 20 seconds-anterior upper lumbar spine
2. 20 seconds-back of the knee (posterior fibular head)
3. 20 seconds-calf
4. 30 seconds-lower Achilles
5. 60 seconds-lateral and anterior foot/ankle
6. 60 seconds-medial and anterior foot/ankle

Foot/Ankle Pain-Muscle Balance *RED*



1. 20 seconds-anterior upper lumbar spine
2. 20 seconds-back of the knee (posterior fibular head)
3. 20 seconds-calf
4. 30 seconds-lower Achilles
5. 60 seconds-lateral and anterior foot/ankle
6. 60 seconds-medial and anterior foot/ankle