Hey there!
This study guide is designed to help you get familiar with key concepts from *Massage and Manual Therapy for Orthopedic Conditions, Second Edition.*

Please complete the questions that match the **Level of study you are currently in**. Try to answer them **before each module**, as this will prepare you for your module tests.

MODULE ONE : Fundamentals Chapter 1 And Chapter 2, Lumbosacral, And Cervical

Fundamentals – Chapter 1, Level I

1. What is the new paradigm in biology and medicine?
2. What are the characteristics of soft tissue injury?
3. How are collagen fibers arranged in healthy soft tissue?
4. How is collagen arrangement affected by injury?
5. What are the treatment implications of disrupted collagen?
6. What is the function of ground substance in connective tissue?
7. What is the dysfunction of ground substance?
8. What is thixotropy?
9. Why is thixotropy relevant to massage therapy?
10. Why is movement important in the early stages of repair?
11. What is tensegrity?
12. What is piezoelectricity?
13. Why are tensegrity and piezoelectricity important in massage therapy?
14. What are the causes of pain from soft tissue injury?
15. What are the causes of pain from soft tissue dysfunction?
16. What is a sclerotome?
17. What type of pain is associated with a sclerotome?
18. What is Janda's concept of soft tissue dysfunction?
19. Why is Janda's concept relevant to massage therapy?
20. What is Lauren Berry's concept of soft tissue dysfunction?
21. Why is Lauren Berry's concept relevant to massage therapy?

Fundamentals – Chapter 1, Level II

1. What is the pain-gate theory of Melzak and Wall?
2. Why is the pain-gate theory relevant to massage therapy?
3. What are the structural goals of treatment?
4. What are the neurological goals of treatment?
5. What is joint play?
6. What is joint dysfunction?
7. What are the causes of joint dysfunction?
8. What are treatment options for joint dysfunction?
9. What is the function of the muscle spindle?
10. What is the function of the Golgi Tendon Organ (GTO)?

11. What are the functions of alpha motor neurons?
12. What are the functions of gamma motor neurons?
13. What are the eight causes of muscle dysfunction?
14. How does cartilage maintain circulation?
15. How does cartilage maintain health?
16. What is the arthrokinetic reflex?
17. What are the signs of impaired muscle function?

Fundamentals – Chapter 2, Level I

1. What are the five characteristics of soft tissue that a therapist can palpate?
2. What are the three treatment modalities described in this text?
3. What are the treatment goals for the inflammation stage?
4. What are the treatment goals for the repair stage?
5. What is the open position of joints?
6. Why is the open joint position important for massage therapists?
7. What is the position of function for the wrist and hand?
8. Why is the position of function important for massage therapists?
9. What are the three intentions of wave mobilization strokes?
10. What are three characteristics of wave mobilization strokes that are like ocean waves?
11. Why is pain-free movement recommended in early rehab?
12. What are six clinical uses of MET?
13. What is RI MET?
14. What is CRAC MET?
15. What is PIR MET?
16. How do these MET types help increase ROM?

Fundamentals – Chapter 2, Level II

1. What are the four aspects of assessment and treatment?
2. What does SOAP stand for?
3. What are four red flags that contraindicate massage?
4. What are six categories of information to gather during a history?
5. What categories of information come from active motion assessment?
6. How does active motion assessment help determine the healing stage?
7. What are five reasons a muscle may test weak during isometric testing?
8. What are three clinical effects of joint mobilization?
9. What is the hypothesis for how MET relaxes a hypertonic muscle?
10. What are the eight categories of end feel?
11. What are four symptoms that indicate a need for referral?

Lumbosacral Spine - Chapter 3, Level I

1. What are the seven layers of back muscles (1 point) and their groups from superficial to deep?
    a. What is the first (most superficial) layer of back muscles?
    b. What muscles are included in the second layer?
    c. What muscles are in the third layer?
    d. What muscles are in the fourth layer?
    e. What muscles are in the fifth layer?
    f. What muscles are in the sixth layer?
    g. What is the deepest layer of back muscles?
2. Why is it important for a massage therapist to understand the order of these layers?
3. What is the origin of the erector spinae muscle group?
4. What is the insertion of the erector spinae?
5. What is the origin of the psoas muscle?
6. What is the insertion of the psoas?
7. What is the origin of the quadratus lumborum (QL)?
8. What is the insertion of the quadratus lumborum?
9. How do the locations of origin and insertion influence the function of these muscles?

Lumbosacral Spine - Chapter 3, Level II

1. What is the origin or insertion of the piriformis?
2. What is the insertion of the piriformis?
3. What is the origin of the gluteal muscles?
4. What is the insertion of the gluteal muscles?
5. What is the origin of the multifidus?
6. What is the insertion of the multifidus?
7. What muscles cause an increased lumbar curve?
8. What muscles cause a decreased lumbar curve?
9. How do you perform a length assessment test for the iliopsoas?
10. How do you perform PIR MET for the iliopsoas?
11. What are the superficial attachments on the crest of the ilium?
12. What are the deeper attachments on the crest of the ilium?
13. What are three factors that affect the diameter of the intervertebral foramen (IVF)?
14. What are the superficial attachments to the sacral base?
15. What are the deeper attachments to the sacral base?
16. What is the direction of a stroke to release the multifidi?
17. What is the direction of a stroke to release the rotatores?
18. How can abnormal muscle function predispose a person to an episode of low back pain (LBP)?
19. What are the two types of pain referral?
20. What is the SLR test?
21. What are the implications of a positive SLR test?

Cervical Spine – Chapter 5, Level I

1. What are the four suboccipital muscles?
2. What are the signs and symptoms of cervical disc degeneration?
3. What are the signs and symptoms of cervical disc herniation?
4. Where are the facet joints located on a skeleton?
5. How do you locate the facet joints on a person?
6. How is CR MET performed for acute neck pain?
7. What are the signs and symptoms of a whiplash injury?
8. What are the signs and symptoms of anterior scalene syndrome?
9. What is the stroke direction for the scalene muscles?
10. Which muscles are short and tight in upper crossed syndrome?
11. Which muscles are weak and inhibited in upper crossed syndrome?
12. What is the stroke direction for the medial group of erector spinae in the neck?
13. What are four factors that predispose a person to neck pain?
14. What is the foraminal compression test?
15. What is the clinical significance of the foraminal compression test?
16. What are the postural signs of upper crossed syndrome?

Cervical Spine – Chapter 5, Level II

1. What are the suprahyoid muscles?
2. What are the infrahyoid muscles?
3. What are the prevertebral muscles?
4. What are the TMJ-related muscles?
5. What is the origin and insertion of the scalenes?
6. What is the origin and insertion of the SCM?
7. What is the origin and insertion of the suboccipital muscles?
8. What is the origin and insertion of the longus capitis?
9. What is the origin and insertion of the longus colli?
10. What is the origin and insertion of the temporalis?
11. What is the origin and insertion of the masseter?
12. What are the normal ranges of motion for the cervical spine?
13. What does a positive elevated-arm stress test indicate?
14. How is PIR MET performed for the cervical region?
15. How is CR MET performed for the TMJ?
16. What are the two types of muscle-tension headaches?
17. How does forward head posture (FHP) affect the facet joints?
18. Where is a common site of entrapment of cervical nerves?
19. What massage techniques help release entrapped cervical nerves?
20. What MET techniques help release entrapped cervical nerves?

MODULE TWO : Thoracic and Shoulder

Thoracic Spine – Chapter 4, Level I

1. Describe the signs and symptoms of thoracic muscle strain.
2. Describe the signs and symptoms of thoracic arthrosis.
3. Describe the signs and symptoms of facet joint fixation.
4. Describe the upper cross syndrome.
5. List the 7 muscles that tend to be weak and inhibited in upper cross syndrome.
6. List the 9 muscles that tend to be short and tight in upper cross syndrome.
7. List three common areas of postural dysfunction in the thoracic spine.
8. Name 3 of the 8 factors that predispose to dysfunction and pain in the thoracic region.
9. Describe how the strokes for the erector spinae promotes mobility in the thoracic spine.
10. Describe the strokes for the erector spinae to promote mobility and hydration in the thoracic spine.
11. Describe a kyphotic spine.
12. Describe the typical muscle imbalance in the Pectoralis Minor.
13. Describe the typical muscle imbalance in the Lower Trapezius, and Upper Trapezius.
14. Name the thoracic erector spinae muscles.
15. Describe the two basic stroke directions to treat erector spinae.
16. Describe the direction of positional dysfunction of the levator scapula.
17. Describe the stroke direction for the levator scapula.
18. Describe the stroke direction to release the diaphragm.
19. Define scoliosis.
20. Describe Lauren Berry's theory of a possible cause for scoliosis.
21. List the three most common mechanical disorders that cause mid-back pain.
22. Why is the area of C7–T1 often thick and fibrotic to palpation?

Thoracic Spine – Chapter 4, Level II

1. Describe the signs and symptoms of osteoporosis.
2. Describe the signs and symptoms of scoliosis.
3. Describe the postural imbalances of a kyphotic spine.
4. List common areas of postural dysfunction in the thoracic spine.
5. What does palpation of the serratus posterior superior and inferior feel like?
6. How do you palpate the rhomboids?
7. What are normal palpation findings in the thoracic spine?
8. What does a degenerated thoracic spine feel like?
9. What is the stroke direction for the multifidus?
10. What is the stroke direction for the iliocostalis cervicis?
11. What is Adam's test?
12. How do you differentiate between structural and functional scoliosis?
13. How would you identify a functional scoliosis?
14. What is the MET to release the rhomboids?
15. How is MET used to improve respiratory function?
16. Why is the area of C7–T1 often thick and fibrotic on palpation?

Shoulder – Chapter 6, Level I

1. List the four muscles of the rotator cuff.
2. What is the origin and insertion of the supraspinatus?

3. What is the action of the supraspinatus?
4. What is the origin and insertion of the infraspinatus?
5. What is the action of the infraspinatus?
6. What is the origin and insertion of the teres minor?
7. What is the action of the teres minor?
8. What is the origin and insertion of the subscapularis?
9. What is the action of the subscapularis?
10. List six muscles that are commonly short and tight in the shoulder.
11. List six muscles that are commonly weak and inhibited in the shoulder.
12. Describe the MET for the pectoralis minor.
13. Describe the CR-MET for the supraspinatus.
14. Describe the common positional dysfunction of the anterior deltoid.
15. Describe the stroke direction used to correct anterior deltoid dysfunction.
16. Describe the signs and symptoms of supraspinatus tendinitis.
17. Describe the signs and symptoms of infraspinatus tendinitis.
18. Describe the signs and symptoms of subscapularis tendinitis.
19. Describe the stroke direction for the teres minor.
20. Describe the stroke direction for the infraspinatus.
21. Describe the MET for the internal rotators of the shoulder.
22. Describe the MET for the external rotators of the shoulder.
23. List the scapular stabilizing muscles.
24. List 4 of the 5 common causes of the costoclavicular syndrome, part of the thoracic outlet syndrome.
25. When treating muscular dysfunction in the shoulder, do you treat the tight muscles or the weak muscles first?

Shoulder – Chapter 6, Level II

1. Describe how to differentiate rotator cuff symptoms from a nerve root irritation in the neck.
2. Describe the signs and symptoms of bicipital tendinitis.
3. Describe the signs and symptoms of subacromial bursitis.
4. Describe the signs and symptoms of impingement syndrome.
5. Describe the signs and symptoms of adhesive capsulitis.
6. Describe the empty-can test.
7. Describe Speed's test.
8. Describe the significance of a positive empty-can test.
9. Describe the significance of a positive Speed's test.
10. List the muscles that attach to the coracoid process.
11. List the ligaments that attach to the coracoid process.
12. Describe the scapular stabilization test.
13. List the muscle attachments to the anterior humerus.
14. List the muscles that attach to the bicipital groove.
15. Describe what is indicated when the shoulder hikes upward in active abduction.
16. Describe the MET for frozen shoulder.

17. Describe the anatomical boundaries of the coracoacromial arch.
18. Describe the contents within the coracoacromial arch.
19. Describe the consequences of weak rotator cuff muscles.

MODULE THIRD : Hip and Knee

Hip – Chapter 8, Level I

1. Describe the origin, insertion, and action and stroke direction of the psoas major.
2. Describe the origin, insertion, and action and stroke direction of the psoas minor.
3. Describe the origin, insertion, and action of the gluteus medius.
4. Describe the origin, insertion, and action of the adductor longus.
5. Describe the origin, insertion, and action of the hamstrings.
6. Describe the origin, insertion, and action of the TFL.
7. Describe the origin, insertion, and action of the rectus femoris.
8. List the signs and the symptoms of gluteus medius tendonitis.
9. List the signs and the symptoms of adductor tendonitis.
10. List the signs and the symptoms of handstrings tendonitis.
11. List the signs and the symptoms of iliopsoas tendonitis.
12. List the signs and the symptoms of quadriceps tendonitis.
13. Describe the positional dysfunction of the psoas and the stroke direction to correct it.
14. Describe the positional dysfunction of the TFL and the stroke direction to correct it.
15. Describe the positional dysfunction of the adductors and the stroke direction to correct it.
16. Describe an MET for acute hip pain.
17. Describe an MET to increase medial rotation of the hip.
18. What is the first motion to be lost in capsulitis of the hip?
19. What is the first motion to be lost in arthritis or degeneration of the hip?
20. Describe how to perform the prone MET to increase medial rotation of the hip.
21. Describe the MET for the gluteus maximus.
22. Describe the MET for the gluteus medius.
23. Describe the MET for the gluteus minimus.
24. Describe the MET for the TFL.
25. Which hip muscles are typically tight and short in lower crossed syndrome?
26. Which hip muscles are typically weak in lower crossed syndrome?
27. Describe the symptoms of capsulitis of the hip.
28. Describe the symptoms of arthritis of the hip.
29. Describe anteverted hips and how ROM is affected.
30. Describe retroverted hips and how ROM is affected.
31. Describe a difference between anteverted and retroverted hips.
32. Describe the signs and symptoms of trochanteric bursitis.
33. Describe the signs and symptoms of entrapment of the femoral nerve.

Hip – Chapter 8, Level II

1. Describe the origin and insertion of the pectineus.
2. Describe the origin and insertion of the sartorius.
3. Describe the origin and insertion of the gracilis.
4. Describe the stroke direction to release the sciatic nerve in the gluteal region.
5. List three common sites of entrapment of the sciatic nerve in the hip region.
6. Describe the symptoms of iliopsoas tendinitis.
7. Describe the symptoms of iliopectineal bursitis.
8. Describe the symptoms of entrapment of the femoral nerve.
9. What are the typical ranges of motion of the hip?
10. Describe the anatomy, function, dysfunction, and injury of the labrum.

11. List the muscle attachments on the pubic ramus and ischial ramus.
12. Describe the site of entrapment and stroke direction to release the obturator nerve.
13. Describe the site of entrapment and stroke direction to release the femoral nerve.
14. Describe the site of entrapment and stroke direction to release the lateral femoral cutaneous nerve.
15. List three factors that contribute to hip pain.
16. Describe how to perform Trendelenburg's test.
17. Describe what a positive Trendelenburg's test indicates.

Knee – Chapter 9, Level I

1. Describe how to perform the MET for acute knee pain.
2. Describe genu valgus / valgum.
3. List three factors that cause genu valgus.
4. Describe why the medial meniscus is more commonly injured than the lateral meniscus.
5. List the signs [1] and the symptoms [3] that a client may display with an MCL sprain, and indicate whether it is a sign or symptom.
6. List the signs [1] and the symptoms [3] that a client may display with an LCL sprain, and indicate whether it is a sign or symptom.
7. Describe the signs and symptoms of a sprain of the coronary ligament.
8. Describe the signs and symptoms of fibrosis of the joint capsule.
9. Describe the signs and symptoms of arthritis of the knee.
10. Describe the stroke direction to release the soft tissue of the medial knee.
11. Describe the stroke direction to release the soft tissue of the lateral knee.
12. Explain why that stroke direction is used.
13. List four factors that predispose someone to knee pain.
14. Describe the structure and function of the coronary ligaments.
15. Describe the stroke direction to release the coronary ligaments.
16. List the 8 muscles that cross the knee joint which tend to be tight and short in dysfunction.
17. List which knee muscles tend to be weak and inhibited.
18. Describe the medial patellar retinaculum and its attachments.
19. Describe the lateral patellar retinaculum and its attachments.
20. Describe two possible outcomes of injury to the knee ligaments.
21. Explain the implications of those outcomes for the massage therapist.

Knee – Chapter 9, Level II

1. Describe the MET for the popliteus.
2. Describe the MET for the quadriceps.
3. Describe the MET for the lower attachments of the hamstrings.
4. Describe the signs and symptoms of popliteal tendinitis.
5. Describe the signs and symptoms of chondromalacia patella.
6. Describe the signs and symptoms of injuries to the menisci.
7. List the structures that are released on the medial aspect of the knee.

8. List the structures that are released on the lateral aspect of the knee.
9. List the structures that attach to the posterior aspect of the femur.
10. List the structures that attach to the tibia and fibula at the knee.
11. Describe the knee muscle most commonly atrophied after injury.
12. Explain why that muscle becomes atrophied.

MODULE FOUR: Leg, Ankle, and Foot, Elbow, Wrist and Hand

Leg, Ankle, and Foot – Chapter 10, Level I

1. Describe the MET for acute ankle pain.
2. List the ligaments that make up the lateral collateral ligament of the ankle.
3. List the compartments of the leg.
4. List the muscles found in each compartment of the leg.
5. Describe the tibialis posterior MET.
6. Describe the extensor hallucis MET.
7. Describe which muscles tend to be short and tight in the leg.
8. Describe which muscles tend to be weak and inhibited in the leg.
9. Describe which muscles tend to be short and tight in the foot.
10. Describe which muscles tend to be weak and inhibited in the foot.
11. List the 8 common dysfunctions and injuries in the leg, ankle, and foot.
12. Describe the signs and symptoms of gastrocnemius strain.
13. Describe the signs and symptoms of heel spurs.
14. Describe the signs and symptoms of hammer toes.
15. List the names of the intrinsic muscles in each layer of the foot.
16. Describe two causes of pronation in the foot.
17. Describe the functions of the ligaments of the ankle.
18. After an ankle ligament sprain, what are the two possible outcomes?

Leg, Ankle, and Foot – Chapter 10, Level II

1. List the main nerves to the leg, ankle, and foot.
2. Describe the common entrapment sites of each main nerve.
3. Describe the direction of the stroke used to treat each nerve entrapment.
4. Describe the attachment sites for the anterior talofibular ligament.
5. Describe the direction of the strokes to treat the anterior talofibular ligament.
6. List the muscles that are typically tight and short in hammer toes.
7. List the muscles that are weak in hammer toes.
8. List the muscles that are typically tight and short in claw toes.
9. List the muscles that are weak in claw toes.
10. Describe the assessment findings in pronation.
11. Describe which muscles are typically tight and short in pronation.
12. Describe which muscles are typically weak in pronation.
13. List the tendons that pass behind the medial malleolus.
14. List the tendons that pass behind the lateral malleolus.
15. List the tendons on the dorsum of the foot.
16. Describe the stroke direction used to treat those tendons.
17. Describe the signs and symptoms of less common dysfunctions and injuries of the leg, ankle, and foot.
18. How much extension does the first MTP joint need to have for normal gait?
19. Explain why that much extension is necessary for gait.
20. Describe the dysfunction of the sesamoids of the great toe.
21. Describe the stroke direction to treat the sesamoids of the great toe.
22. Describe the movement direction used for mobilization of the ankle.
23. Describe the movement direction used for mobilization of the foot.
24. Describe the stroke direction to treat the collateral ligaments of the toes.

Elbow, Forearm, Wrist, and Hand – Chapter 7, Level I

1. Describe the “position of function” of the wrist.
2. Describe the “position of function” of the hand.
3. List the muscles in the thenar group.
4. List the muscles in the hypothenar group.
5. Describe the origin and insertion of the flexor carpi ulnaris.
6. Describe the origin and insertion of the extensor carpi radialis brevis (ECRB).
7. Describe the origin and insertion of the pronator teres.
8. Describe the origin and insertion of the extensor carpi ulnaris.
9. Name the 7 common dysfunctions and injuries of the elbow, wrist, and hand.
10. Describe the MET for acute elbow pain.
11. Describe the MET for acute wrist pain.
12. Describe the MET for acute hand pain.
13. Describe the treatment protocol for injured ligaments of the wrist.
14. Describe the stroke direction to release the thenar eminence.
15. Describe the stroke direction to release the hypothenar eminence.
16. List the five fascial compartments of the forearm.
17. List the muscles in each compartment of the forearm.
18. Describe the stroke direction to release the collateral ligaments of the fingers.
19. Describe the implication if your client has painless weakness while attempting to perform MET.

Elbow, Forearm, Wrist, and Hand – Chapter 7, Level II

1. Describe the direction of mobilization in self-care for the fingers.
2. Describe the origin and insertion of the thenar muscles.
3. Describe the origin and insertion of the hypothenar muscles.
4. Describe the signs and symptoms of less common injuries of the elbow, wrist, and hand.
5. Describe the signs and symptoms of less common dysfunctions of the elbow, wrist, and hand.
6. Describe the common entrapment sites of the median nerve at the elbow.
7. Describe the common entrapment sites of the radial nerve at the elbow.
8. Describe the common entrapment sites of the ulnar nerve at the elbow.
9. Name the two muscles involved in De Quervain’s tenovaginitis.
10. Describe the treatment protocol for De Quervain’s tenovaginitis.
11. Describe the attachment sites for the transverse carpal ligament.
12. Describe the treatment protocol for acute carpal tunnel syndrome.
13. Describe the treatment protocol for chronic carpal tunnel syndrome.
14. Describe the common entrapment sites of the median nerve at the wrist.
15. Describe the common entrapment sites of the ulnar nerve at the wrist.
16. Describe the MET for the elbow muscles.
17. Describe the MET for the wrist muscles.
18. Describe the MET for the hand muscles.
19. Describe the mobilization techniques for the elbow.
20. Describe the mobilization techniques for the wrist.
21. Describe the mobilization techniques for the hand.

22. Describe the treatment protocol for degenerative arthritis of the hand.

Study Guide: Level III

Level III emphasizes integrating anatomical knowledge.
Students should be able to identify the origin and insertion points of all major muscles and ligaments in the region and understand how these structures contribute to movement and stabilization. Additionally, this level requires familiarity with the appropriate stroke directions used to treat each of these tissues.

*Study soft tissue attachments, layers of tissue, position of dysfunction and stroke direction. Refer to the muscle charts in each chapter.

Study Guide: Level IV

This level focuses on clinical reasoning and tissue-specific pathology.
Students will study common and uncommon dysfunctions and injuries including joints, ligaments, muscles, and neural tissues. They should be able to identify the signs and symptoms that correspond with each type of tissue injury and understand how to differentiate between them. Emphasis is placed on understanding which therapeutic approaches are beneficial for each type of dysfunction. This includes knowing what techniques support healing in joints, what methods are helpful for ligaments and muscles, and how to work with nerve-related conditions. This level prepares practitioners to assess, identify, and treat various conditions with specificity and confidence.

*Study signs, symptoms, causes, dysfunction and treatment sections for general anatomy and common and uncommon dysfunction and injury sections.