

STUDY GUIDE OUTLINE FOR BOARD CERTIFICATION

Board Certified massage therapists have obtained the highest voluntary credential in the massage therapy and bodywork profession. The Board Certification Exam for Therapeutic Massage and Bodywork (BCETMB) was developed to challenge massage therapists in different areas to ensure each possesses advanced knowledge and has evolved beyond entry-level in the profession.

When working in the medical profession, massage therapists must speak and understand medical terminology, have a deeper anatomical and physiological understanding of the systems of the body as well as a thorough understanding of pathologies. Knowledge of indications, contraindications, and signs and symptoms of pathologies will ensure massage therapists will not harm clients and will not perpetuate the spread of infection.

This study guide was developed to help massage therapists who wish to separate themselves from entry-level education by mastering additional concepts. This exam contains questions that go beyond that of entry-level credentialing. Please visit www.ncbtmb.org for more information or to purchase the Online Practice Exam, an additional study tool to prepare you for the exam.

Pathology

There are numerous pathologies of all systems of the body a massage therapist will encounter. Knowing whether a pathology is contagious, and how to work within the scope of the pathology is important when working in a professional atmosphere—home office, clinic, hospital, spa—to minimize the spread of disease and/or ensure the client is comfort.

Contagious Pathologies

- Candidates will demonstrate knowledge of common contagious diseases.
- Candidates will demonstrate knowledge of how is each contracted and spread to others.
- Candidates will demonstrate knowledge of signs and symptoms of each disease.
- Candidates will demonstrate knowledge of precautions when working with people diagnosed with contagious diseases.
- Candidates will demonstrate knowledge of indications and contraindications when working with people with contagious diseases.
- Candidates will demonstrate knowledge of the differences between bacteria, viruses and fungi.
 - Influenzas
 - Pneumonia
 - Hepatitis A, B, C
 - HIV
 - Methicillin-resistant staphylococcus aureus (MRSA)
 - Tuberculosis
 - Streptococcus
 - Staphylococcus
 - Herpes
 - Herpes Zoster
 - Impetigo
 - Tinea corpus
 - Tinea pedis

- Ringworm
- Cellulitis
- Clostridium Difficile (C. Diff)
- Meningitis

Allergic Reactions/Allergies

Allergies are an immune system reaction to otherwise harmless substances the body deems harmful and reacts to the substance as if it was a threat.

- Candidates will demonstrate recognition of allergies and how to proceed if a client presents with an allergic reaction during massage therapy treatment.
- Candidates will demonstrate recognition of signs and symptoms of allergies.
 - Dermatitis/Contact Dermatitis
 - Eczema
 - Hay fever
 - Drug interactions
 - Anaphylaxis

Musculoskeletal System

Massage therapists must have an advanced knowledge of the musculoskeletal systems and pathologies from which the clients may suffer. Pain can arise in different areas caused by structural misalignment of the skeletal system or dysfunction of the muscles. A massage therapist must identify the location of each muscle and bone, looking at the body in three dimensions to assess the causative factor of pain and discomfort.

Musculoskeletal pathologies can have multiple causative factors. An advanced massage therapist can digest the information from the intake and assessment and create a treatment plan that will assist the body in readjustment and healing.

- Candidates will demonstrate advanced knowledge of musculoskeletal pathologies.
- Candidates will identify musculoskeletal pathologies that can utilize manual soft tissue techniques to assist in the recovery process.
- Candidates will identify depths of pressure that should be used when working with people who have musculoskeletal pathologies.
- Candidate will demonstrate knowledge of indications and contraindications when working with clients who have musculoskeletal pathologies.
 - Fibromyalgia
 - Lower Cross Syndrome
 - Tetanus
 - Scoliosis
 - Hyperlordosis
 - Hyperkyphosis
 - Osteomyelitis
 - Osteoporosis
 - Whiplash
 - Myositis Ossificans
 - Chronic/Acute Compartment Syndrome

- Plantar Fasciitis
- Dupuytren Contracture
- Ganglion cysts
- Bunions

Nervous System

Nervous system pathologies may lack external signs, so an advanced massage therapist must be able to recognize signs and symptoms of central and peripheral nervous system pathologies and disorders. Knowing how to recognize manic or depressive behavior and when to refer out or seek assistance from a client's primary care provider will assist a massage therapist in creating a treatment plan and determining when mental illness may prevent a client from receiving massage.

Recognizing nerve entrapment and damage will assist the massage therapist in determining massage protocol, including appropriate positioning, to work different areas while the client remains comfortable and pain free.

- Candidates will demonstrate knowledge of different mental illnesses and whether to refer the client out.
- Candidates will demonstrate knowledge of indications and contraindications when working with different nervous system pathologies and disorders.
- Candidates will demonstrate knowledge of peripheral nerve entrapment and pathologies.
- Candidates will demonstrate knowledge of how to position clients with nervous system pathologies for comfort.

Mental Disorders

- Bipolar disorder
- Depression
- Anxiety
- Stress
 - Somatization
 - Psychosis
 - Understand the effects of stress on the body
- PTSD
- Addiction
- Hives

Physical Disorders

- Traumatic brain injuries
- Epilepsy
- Parkinson's disease
- Dementia
- Alzheimer disease
- Cerebral palsy
- Bell palsy
- Thoracic outlet syndrome
- Carpal tunnel syndrome
- Neuritis
- Hives

Autoimmune Pathologies

Autoimmune pathologies may mimic symptoms of other pathologies causing the client to believe they have the pathology of another system such as the nervous or musculoskeletal systems. A massage therapist must learn the extent of the pathology and any indications or contraindication prior to working with a client suffering from autoimmune pathologies.

- Candidates will recognize different autoimmune pathologies, their signs and symptoms.
- Candidates will demonstrate knowledge of indications and contraindications of autoimmune pathologies.
- Candidates will determine when it's necessary to refer a client to his/her primary care physician if needed.
 - Rheumatoid arthritis
 - AIDS
 - Lupus
 - Guillain-Barre syndrome
 - Ankylosing Spondylitis
 - Crohn disease
 - Psoriasis
 - Multiple Sclerosis

Endocrine System

The endocrine system is composed of glands that secrete hormones to maintain homeostasis within the body. Endocrine system pathologies can disrupt sleep patterns, cause the body to react poorly to temperature changes, creating disordered eating – weight gain and loss – and cause many other problems in all body systems. Endocrine system pathologies will affect the functions of other systems due to the hormonal abnormalities that lead to improper functioning of the other systems.

- Candidates will demonstrate knowledge of endocrine system pathologies.
- Candidates will demonstrate knowledge of indications and contraindications when working with clients.
 - Diabetes Mellitus
 - Diabetes Insipidus
 - Hashimoto
 - Hyperthyroidism
 - Hypothyroidism
 - Graves disease
 - Addison disease
 - Cushing disease

Lymphatic System

Lymphatic system pathologies often lead to swelling and edema that makes movement difficult. Massage therapists must have a fundamental knowledge of how the lymphatic system works and massage techniques that will enhance the function of the lymphatic system.

- Candidates will demonstrate knowledge of the functions of the lymphatic system.
- Candidates will demonstrate knowledge of indications and contraindications for massage in relation to the lymphatic system.
- Candidates will demonstrate fundamental knowledge of manual lymphatic drainage techniques.

- Lymphangitis
- Edema

Digestive System

Digestive system pathologies can lead to discomfort, illness and systemic infections if not treated. Massage therapists must understand the digestive system and pathologies associated with digestion and elimination to ensure each is providing a safe massage while working within the client's comfort level.

- Candidates will demonstrate knowledge of the digestive system.
- Candidates will demonstrate knowledge of indications and contraindication of massage when a client presents with digestive system pathologies.
 - Cirrhosis
 - Cachexia
 - Jaundice
 - Hypercholesterolemia
 - Celiac disease
 - Gastroesophageal Reflux disease (GERD)
 - Peptic ulcers
 - Diverticulitis
 - Irritable Bowel syndrome (IBS)
 - Gallstones
 - Pancreatitis
 - Appendicitis
 - Hepatitis

Cardiovascular System

The cardiovascular system moves blood, nutrients and oxygen throughout the body. Pathologies of the cardiovascular system can cause strokes, heart attacks and tissue death. A massage therapist must have an in-depth knowledge of cardiovascular pathologies and understand when massage is indicated and contraindicated for anyone suffering from cardiovascular pathologies.

- Candidates will demonstrate knowledge of indications and contraindication of massage when working with clients who have cardiovascular pathologies.
- Candidates will demonstrate knowledge of major cardio vascular pathologies.
 - Deep vein thrombosis
 - Embolisms
 - Stroke
 - Heart Attack
 - Hemophilia
 - Anemia
 - Phlebitis
 - Aneurysms
 - Atherosclerosis
 - Angina
 - Hypertension
 - Varicose veins

Insects and Insect Bites

Many insect bites can cause pathologies in the body. Some insects can embed themselves into the skin and cause long lasting effects. A massage therapist must recognize different bites and embeddings and refer a client out for medical help.

- Candidates will recognize different bites and know whether massage is indicated, or if a contraindication is a local or general.
- Candidates will refer clients to a primary care physician if the situation is serious.
 - Tick
 - Lyme disease
 - Spider bites
 - Fleas
 - Mites

Massage Techniques – When To Be Used

Massage therapists must have knowledge of multiple techniques for working on clients with different needs. For example: understanding sports massage when working with an athlete can speed recovery time; knowing lymphatic drainage will help remove edema when working with cancer patients.

- Candidates will demonstrate knowledge of the following techniques and when it is appropriate to use them.
 - Stabilization techniques
 - Stabilize joints when stretching
 - Sports massage
 - Reciprocal inhibition
 - Muscle approximation
 - Post isometric relaxation
 - Pin and stretch
 - Trigger point
 - Neuromuscular therapy
 - Muscle energy techniques
 - Positional release
 - Understand each step of positional release
 - Tensile force
 - Torsion
 - Compression
 - Friction
 - Kneading
 - Vibration
 - Shearing
 - Bending
 - Lymphatic drainage
 - Myofascial release
 - Hydrotherapy
 - Cryotherapy
 - Contrast hydrotherapy

- Moist heat
- Active engagement techniques

Assessment

Prior to massage therapy treatment, the therapist must assess a client's overall wellbeing and ability to receive massage. The therapist should give a short interview to find out how the client is feeling and also assess the client's gait and posture balance.

Clients who present with discomfort due to muscle strain or taut areas may need additional assessment to uncover soft tissue issues. The therapist should not stop at assessing the area of discomfort but continue on to other areas of the body.

- Candidates will demonstrate knowledge of interviewing and evaluating clients prior to treatment.
- Candidates will demonstrate knowledge of treatment plans and addressing areas in need of massage.
- Candidates will demonstrate knowledge of different orthopedic tests.
- Candidates will demonstrate knowledge of postural imbalances.
 - Interviewing and evaluating intake forms
 - Uncover finding
 - Determine appropriate treatment
 - Develop treatment plans
 - Range of motion testing
 - Active
 - Passive
 - Resistive
 - Active assisted
 - Hypertonicity
 - Hypotonicity
 - Gait theory
 - Aggregate principle
 - Overload principle
 - Recruitment principle
 - Sherrington's law
 - Law of reaction
 - Law of acceleration
 - Pflueger's law
 - Straight-leg-raise
 - Posterior drawer test
 - Valgus stress test
 - Varus stress test
 - Anterior drawer test
 - Intake procedures
 - Treatment plans
 - Goals
 - Pain scales
 - Sensory Pain Scale

- McGill Pain Scale
- Wong-Baker FACES Pain Scale
- Allina Health Pain Scale
- Pelvic alignment
- Postural distortions
- Functional imbalance
- Pathological imbalance
- Structural imbalance
- Know muscle anatomy and how to position clients for purposes of treatment

Muscle assessment

- Assess referrals from different muscles and muscle groups into other areas of the body.
 - Erector spinae group
 - Trapezius
 - Rhomboids
 - Teres major and minor
 - Pectoralis major and minor
 - Abdominals
 - Psoas
 - Iliacus
 - Quadratus lumborum
 - Gluteus minimus, medius, maximus
 - Piriformis
 - Quadriceps
 - Hamstrings
 - Abductors
 - Adductors

Muscles

A massage therapist must have an advanced knowledge of the muscles of the body, which actions they perform, their agonists, antagonists and synergists. When a client is having difficulties moving or is having pain in an area of the body, the massage therapist must be able to assess all of the structures in that area to relieve discomfort or stiffness and know whether the discomfort is caused by nerve entrapment or muscle dysfunction.

- Candidates will have an advanced knowledge of each muscle's location, the action, its agonist, antagonist and synergist.
- Candidates will demonstrate an advanced knowledge of each muscle associated with the following muscle groups.
 - Head
 - Muscles of mastication
 - Muscles of swallowing
 - Muscles of facial expression
 - Cervical spine
 - Neck
 - Muscles that move the head and neck – flexion, lateral flexion, extension and rotation

- Thoracic and lumbar spine, rib cage and abdomen Muscles that move the spine – flexion, lateral flexion, extension and rotation
 - Muscles that elevate and compress the ribs
 - Muscles of inhalation and exhalation
 - Abdominal muscles
- Shoulder and Arm
 - Muscles of the rotator cuff
 - Muscles of the shoulder girdle
 - Rotation, flexion, extension, abduction, adduction of the glenohumeral joint,
 - Protraction, retraction, elevation, depression, upward rotation and downward rotation of the scapula and the clavicle
 - Muscles of elbow flexion and extension
 - Muscles of wrist flexion, extension, ulnar deviation, radial deviation, pronation and supination
- Hip
 - Lateral and medial rotators
 - Hip flexors and extensors
 - Hip abductors and adductors
- Leg
 - Knee flexors and extensors
 - Muscles of dorsiflexion and plantarflexion
 - Muscles of ankle eversion and inversion
- Receptors
 - Muscle spindles
 - Golgi tendon organs
- Principals of muscle physiology
 - Overload
 - Aggregate
 - Recruitment
 - All-or-none response

Nerve Assessment

- Assess nerve entrapment, which structures may be causing dysfunction and how to provide relief
- Understand which structures may be implicated in the condition.
 - Innervations – nerve/muscle
 - Dermatomes
 - Sciatic nerve
 - Accessory nerve (CN XI)
 - Thoracic nerve
 - Median nerve
 - Subscapular nerve
 - Radial nerve
 - Ulnar nerve
 - Obturator nerve
 - Vasovagal nerve
 - Femoral nerve

- Cervical plexus
- Brachial plexus
- Lumbar plexus
- Sacral plexus

Joins

Joint injuries can become complex and require critical thinking to assess soft tissue involvement. Joints may take long periods of time to heal and require an educated massage therapist that understands all of the intricate structures that are involved in joints throughout the body.

- Candidates will demonstrate knowledge of common joint injuries of the shoulder, elbow, wrist, hip, knee, and ankle.
- Candidates will demonstrate knowledge of joint structures including muscles and ligaments at each joint, the articulating bones, relevant bony landmarks, bursae and other structures found within each joint such as menisci.
- Candidates will demonstrate knowledge of indications and contraindication of massage when assessing and evaluating joint pathologies.
 - Joint names
 - Types of joints
 - Synarthrotic/fibrous
 - Amphiarthrotic/cartilaginous
 - Diarthrotic/synovial
 - Sprains and strains
 - Grading (1, 2, 3)The difference between strains and sprains
 - End feels
 - Capsular
 - Empty
 - Bony
 - Temporomandibular Joint Disorder
 - Bursitis
 - Adhesive capsulitis
 - Tennis elbow
 - Golfer's elbow
 - Arthritis
 - Tenosynovitis
 - Chondromalacia
 - DeQuervain's tenosynovitis
 - Bakers cyst
 - Tendonitis
 - Osteoarthritis
 - Spondylolisthesis
 - Spondylosis
 - Herniated disc
 - Gout
 - Arthroplasty
 - Hip

- Knee
- Ligament and muscle names that cross each joint

Special Populations (indications, contraindications, special needs)

Massage therapists must have a fundamental knowledge of indications, contraindication, positioning, pressure and working with special populations. Clients may not understand that massage may not be indicated due to illness, medications or other things happening in their bodies due to pregnancy complications, surgical sites, tissue integrity, etc.

- Candidates will demonstrate knowledge of indications and contraindications when working with special populations.
- Candidates will demonstrate knowledge of working with clients who are taking different medications that may alter the client in areas such as state of mind, tissue integrity, blood composition and heart function.
- Candidates will recognize the massage therapy scope of practice and know when to refer out.

Pregnancy

- Eclampsia
- Preeclampsia
- Thrombus
- Embolisms
- Hypertension
- Endocrine activity

Cancer

- Working with clients with cancer – positioning and treatments
 - Radiation
 - Chemotherapy
 - Surgical sites
- Leukemia
- Non-Hodgkin's Lymphoma
- Prostate
- Breast
- Liver
- Colorectal
- Lung

Geriatric

- Thermoregulatory needs
- Tissue changes
- Help getting on and off the table
- Depth of pressure and speed of strokes

Research

Research has strengthened trust between the medical profession and massage therapists. Research has proven massage is an excellent alternative to pain relieving medications and can be integrated into patients' treatments to speed recovery. Also proven, massage therapy helps with depression and anxiety.

As a community of massage therapists, we must continue our research to strengthen our role within the medical profession. Understanding the basics of research is important to continue forward movement.

- Candidates will demonstrate knowledge of research literacy, how to read, how to find and how to analyze research.
- Candidates will demonstrate knowledge of different stages of research.
- Candidates will demonstrate knowledge of common research terminology.
 - Methods
 - Development
 - Reasoning
 - Measurements
 - Results
 - Criteria
 - Relevant massage research
- Hypothesis
 - Desired
 - Alternative
 - Research
 - Null statistical
 - Conclusions
 - Quantitative
 - Assessment
 - Subjective
 - Scientific method
 - Statistic compilation
 - Database analysis
 - Inclusionary criteria
 - Exclusionary criteria
 - Independent variable
 - Dependent variable

Ethics and Professionalism

Massage therapists must consistently demonstrate professional behavior while remaining ethical when working with the public and other professionals in healthcare.

- Candidates will demonstrate ethical behavior when working with clients and healthcare professionals.
- Candidates will demonstrate advanced knowledge of the massage therapy scope of practice.
- Candidates will demonstrate professional behavior when in the public eye during time off.
 - Transference/Countertransference
 - Draping
 - Scope of practice
 - Client interaction outside of massage treatments

- When and where to refer clients for specific conditions
- Therapist's right to refuse treatment
- Reporting another massage therapist's misconduct
 - Report to manager
 - Report to state
 - Report to NCBTMB
- Power differential

Business and Law

Many massage therapists own their own businesses or work as independent contractors. All massage therapists should continuously update their knowledge concerning state laws, changes in the massage therapy profession and have an advanced knowledge of all governing boards and peer organization changes in rules and requirements.

- Candidates will demonstrate advanced knowledge of governing and licensing boards.
- Candidates will demonstrate knowledge of peer organizations and their purposes in the massage therapy profession.
- Candidates will demonstrate knowledge of common record keeping and charting procedures.
- Candidates will demonstrate knowledge of different types of insurance offered within the massage therapy profession.
- Candidates will demonstrate advanced knowledge of HIPAA laws, consent for massage and privacy of the client.
 - HIPPA laws
 - Consent
 - Charting and notes
 - Insurance
 - Entities that govern massage therapy
 - Massage license
 - Business license
 - National organizations within the massage therapy profession
 - Business types – sole proprietorship, corporations, partnerships, limited liability corporations
 - Working with minors
 - Employee vs. Independent Contractor
 - Scope of Practice
 - Who regulates Scope of Practice
 - Suggesting or commenting on over the counter medications or herbs
 - Difference in credentialing and the organizations behind each credential
 - State boards
 - Federal boards
 - National Certification Board for Therapeutic Massage & Bodywork
 - Local regulations/business licenses
 - Insurance
 - Liability insurance
 - Health insurance
 - Life insurance
 - Property insurance

- Insurance codes that may be used by massage therapist if collecting insurance for clients in a medical setting

Communication

Communication between clients and massage therapists will differ from communication between health care professionals but both are important and must be mastered. A massage therapist must be able to communicate with clients' families when clients can't speak for themselves.

Health care providers will desire a higher level of medical communication when working in an integrated health care facility, along with stronger documentation skills.

- Candidates will demonstrate knowledge of different styles of communication skills between client/therapist, medical professional/therapist and family/therapists.
- Candidates will demonstrate knowledge of active listening skills.
- Candidates will identify verbal and non-verbal communication skill when working with cognitively impaired clients.
 - Communicating with healthcare professionals and their patients
 - Verbal and non-verbal communication
 - Communicating with cognitively impaired clients
 - Communicating with patients who may speak another language
 - Communicating with other massage therapists while clients are present
 - Intra-workplace communication
 - Listening skills
 - Documentation
 - Who can read it
 - How to chart
 - What type of notes to use in an integrated healthcare facility

Pharmaceuticals

Clients may be taking different medications and herbs for a medical condition where deep pressure and movement may be contraindicated.

- Candidates must demonstrate knowledge of common herbs and medications that can cause harm to the body if deep pressure is applied.
- Candidates must demonstrate knowledge of medications that may be associated with pathologies if the client doesn't acknowledge taking medications during the intake and interview process.
 - Drug contraindications
 - Herb interactions