# Applied Kinesiology Home Study Course

15 CE Hours
Online Study Guide

# Presented by the:

Center for Massage Therapy Continuing Education

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It is the responsibility of the practitioner to determine the appropriateness of the techniques presented in terms within the scope of practice. This information is in no way meant to diagnose or treat medical conditions. Written medical opinions are always the best way to resolve any questions regarding applied kinesiology for massage therapists.

# **Instructions for the Applied Kinesiology home study course**

Thank you for investing in the Applied Kinesiology home study course, a 15 CE hour course designed to further your knowledge in the history, principle, and practice of applied kinesiology (AK)/muscle testing for professional bodyworkers and massage therapists.

This guide will contain all of the instructions you will need to complete this course. This is a 15 CE hour course, so that means it should take you approximately 15 hours to read the textbook and complete the multiple choice exam and course evaluation. **Please note:** this course is an introductory course in the theory and practice of AK. It is not meant to diagnose or treat medical conditions and is meant to demonstrate introductory techniques/theories that can be incorporated into your practice. We understand that some of the discussion in the textbook is in depth and we recommend starting with basic muscle testing and then proceeding into some of the more in depth information as you learn.

#### The following are steps to follow in completing this course:

- 1. Read the text and review the exam. Your textbook will be mailed to you. The exam is available for review in this guide.
- 2. Access the online examination by logging in to your account at <a href="https://massagetherapyceu.com/login.php">https://massagetherapyceu.com/login.php</a>.
- 3. Complete your examination and print your certificate. The exam is open book and there is no time limit for completion.

You must pass the exam with a 70% or better to pass this home study course. You are allowed to access and take the exam up to 3 times if needed. There is no time limit when taking the exam. Feel free to review the textbook while taking the test. This course uses the text *Applied Kinesiology*, by Robert Frost, PhD. There are no trick questions on the exam. All of the answers are clearly found in the text. It is advised to answer the exam questions in this study guide before testing online. That way, when you are testing you do not have go back and forth through the online exam.

If you have any questions please feel free to contact us at 866-784-5940, 712-490-8245 or <a href="mailto:info@massagetherapyceu.com">info@massagetherapyceu.com</a>. Most state boards require that you keep your "proof of completion" certificates for at least four years in case of audit. Thank you for taking our Applied Kinesiology home study course.

# **Applied Kinesiology Exam**

#### Chapter 1

- 1. What does kinesiology mean?
  - A. Movement
  - B. Effort
  - C. Strengthen
  - D. Manipulate
- 2. Applied Kinesiology is primarily a:
  - A. Treatment technique
  - B. Effleurage technique
  - C. Diagnostic technique
  - D. Friction technique
- 3. Goodheart found that:
  - A. Specific health problems may cause specific muscles to test weak
  - B. The muscle that tests weak due to a health problem can be used as an indicator to determine possible treatments
  - C. Treatments making the muscle test strong may positively influence the health problem
  - D. All of the above
- 4. In Applied Kinesiology (AK) what does weak-testing mean?
  - A. The muscle cannot contract sufficiently to prevent the bones to which it is attached from moving during the muscle test
  - B. The muscle can contract sufficiently to prevent the bones to which it is attached from moving during the muscle test
  - C. The muscle tests strong but cannot be weakened, e.g. touching the appropriate sedation point
  - D. Applying some stimulus and measuring the effect it has upon the results of muscle testing
- 5. All of the following are people who have made significant contributions to the study of AK EXCEPT:
  - A. George Goodheart
  - B. Leon Chaitow
  - C. David Walther
  - D. David Leaf

- 6. Which of the following types of muscle fibers are most likely to be found in "tonic" or postural muscles?
  - A. Fast fibers
  - B. Slow fibers
  - C. White fibers
  - D. An equal combination of both slow and fast fibers

- 7. Which of the following gland is often referred to as the master gland?
  - A. The hypothalamus
  - B. The thyroid gland
  - C. The pituitary gland
  - D. The thymus
- 8. A neuron is one complete nerve cell and consists of:
  - A. The cell body with no nucleus, a long extension called the synapse, many short branching extensions called dendrites, and the axon
  - B. The cell body with its nucleus, a long extension called the dendrite, many short branching extensions called axons, and the synapse
  - C. The cell body with no nucleus, a long extension called the dendrite, many short branching extensions called synapses, and the dendrite
  - D. The cell body with its nucleus, a long extension called the axon, many short branching extensions called dendrites, and the synapse
- 9. A dysfunctioning neuromuscular spindle cell is usually palpable as:
  - A. A hard lump
  - B. A referred pain pattern
  - C. A weak muscle tone
  - D. A soft spot
- 10. What are Golgi tendon organs?
  - A. Neurons located in the junction where muscles blend into tendons before attaching to bones
  - B. Joint receptors located in the junction where muscles blend into tendons before attaching to bones
  - C. Osseous tissue located in the junction where muscles blend into tendons before attaching to bones
  - D. Proprioceptors located in the junction where muscles blend into tendons before attaching to bones
- 11. In "correction of a muscle that tests weak due to dysfunctioning Golgi tendon organs", when should you suspect dysfunctioning Golgi tendon organs?
  - A. The muscle tests weak and cannot be strengthened with normal methods
  - B. The muscle starts out testing strong and then, during strong contraction, suddenly becomes completely weak
  - C. A lump which is tender to the touch is present at the junction of the muscle and its tendon
  - D. All of the above
- 12. When the level of tone in a muscle and its antagonist is equal:
  - A. The structure will be in balance
  - B. The antagonist will react by tightening and shortening
  - C. The antagonist will react by lengthening and weakening
  - D. All of the above

- 13. What are the three phases of the generalized adaptation syndrome?
  - A. Alarm reaction, injury phase, chronic phase
  - B. Alarm reaction, state of resistance, state of exhaustion
  - C. Alarm injury, state of resistance, state of edema
  - D. Stimulus reaction, acute inflammation, state of exhaustion
- 14. Biological medicine is oriented toward:
  - A. Treating the superficial cause of the illness
  - B. Self-diagnosing illness
  - C. Promoting and maintaining health
  - D. Self-treating the superficial cause of the illness

NOTE: The remainder of Chapter 2 contains history and information which we find to be outside the scope of practice of massage therapy. You may read it for the information but no exam questions will be asked over the material.

- 15. Which of the following is the central tool of Applied Kinesiology?
  - A. Biological medicine
  - B. General adaptation syndrome
  - C. Trigger point release
  - D. Muscle testing
- 16. To perform an Applied Kinesiology muscle test, how is the muscle being tested positioned?
  - A. The bones attached to each end of the muscle are positioned to place the muscle into a partial or a complete contraction
  - B. The bones attached to each end of the muscle are positioned to place the muscle into a partial or a complete extension
  - C. The bones attached to each end of the muscle are positioned to place the muscle into a partial or a complete relaxation
  - D. The bones attached to each end of the muscle are positioned to place the muscle into a partial or a complete hyperextension
- 17. What is muscle testing in the clear?
  - A. Using a muscle that tests normotonic in the clear as an indicator muscle to assess various possible problems and functions
  - B. Testing various muscles while introducing a stimulus during the test
  - C. Testing various muscles without permitting any other stimulus to be involved
  - D. Applying a challenge (stimulus such as nutrition, medicine, allergen, etc.) and checking the effects of the challenge upon the results of muscle testing
- 18. What are the four major forms of challenge?
  - A. Structural or mechanical, sustained or static, dynamic, and the respiratory challenge
  - B. Structural or mechanical, emotional, functional-neurological, and chemical-physical/energetic/electromagnetic
  - C. Emotional, the rebound challenge, the respiratory challenge, and therapy localization
  - D. Structural or mechanical, sustained or static, functional-neurological, and chemical-physical/energetic/electromagnetic

- 19. If a patient touches a bodily area where a problem exists (in therapy localization, TL):
  - A. A previously normotonic indicator muscle will test weak
  - B. A previously normotonic indicator muscle will test normal
  - C. A previously normotonic indicator muscle will test strong
  - D. A previously normotonic indicator muscle will not change
- 20. What is the main use of therapy localization?
  - A. As a therapeutic technique to treat weak muscles
  - B. As a technique for discerning the causes of known problems
  - C. As a technique for discerning normotonic indicator muscles
  - D. All of the above
- 21. For all people who cannot be directly muscle tested (such as babies, unconscious, in a coma, or physically injured):
  - A. Therapy localization may be used
  - B. A muscle challenge may be introduced
  - C. Muscle testing in the clear may be used
  - D. Surrogate testing may be used

- 22. Before one can use a muscle as an indicator for other functions (by using challenge or therapy localization):
  - A. A diagnosis of the present condition must be made
  - B. A surrogate test must be performed
  - C. Its own function "in the clear" must be established
  - D. Therapy localization must be performed
- 23. When a muscle has been identified as strong, a further differentiation must be used to determine if this muscle is:
  - A. Hypotonic or dehydrated
  - B. Normotonic or dehydrated
  - C. Hypertonic or normotonic
  - D. Hypertonic or challenged
- 24. Neurologic disorganization is popularly referred to as:
  - A. Switching
  - B. Dehydration
  - C. Hypertonicity
  - D. Normotonic
- 25. When a patient is dehydrated, \_\_\_\_\_ may not function well.
  - A. In the clear testing
  - B. Ocular lock correction
  - C. Surrogate testing
  - D. Therapy localization

- 26. What is general hypertonicity?
  - A. The state in which most or all muscles are hypertonic (test strong but cannot be weakened by the usual techniques)
  - B. The state in which most or all muscles are hypotonic (test strong but cannot be weakened by the usual techniques)
  - C. The state in which most or all muscles are hypertonic (test weak but cannot be strengthened by the usual techniques)
  - D. The state in which most or all muscles are hypotonic (test strong but can be weakened by the usual techniques)
- 27. What is a superchallenge (SC)?
  - A. Any challenge that could make one or more hypotonic muscles test weak
  - B. Any challenge that could make one or more hypertonic muscles test strong
  - C. Any challenge that could make one or more hypertonic muscles test weak
  - D. Any challenge that could make one or more hypotonic muscles test strong

- 28. Where are the small, palpable lumps that indicate the need for the origin-insertion technique located?
  - A. In the muscle belly
  - B. Where the tendon attaches to bone
  - C. At the insertion of the muscle only
  - D. At the origin of the muscle only
- 29. What are neurolymphatic reflex points?
  - A. Reflex points for lymph drainage postulated by the osteopath George Goodheart in the 1930s
  - B. Trigger points for lymph drainage postulated by the osteopath Frank Chapman in the 1930s
  - C. Golgi tendon organ points for lymph drainage postulated by the osteopath George Goodheart in the 1930s
  - D. Reflex points for lymph drainage postulated by the osteopath Frank Chapman in the 1930s
- 30. When using the neurolymphatic reflex point technique, the time for effective massage varies from:
  - A. 15 seconds to several minutes
  - B. 30-45 seconds
  - C. 1-10 minutes
  - D. 3-4 minutes
- 31. The Bennett reflexes used in Applied Kinesiology are called:
  - A. Origin-insertion technique
  - B. Neurolymphatic reflex points
  - C. Neurovascular reflexes
  - D. Trigger points

- 32. If it is determined that the neurovascular (NV) reflex point technique is indicated, how is the correction performed?
  - A. Touch the neurovascular (NV) point with the fingertips and gently tug the point in various directions until maximal pulsation is achieved, then hold the position of maximal pulsation for at least 3 seconds
  - B. Touch the neurovascular (NV) point with the fingertips and gently tug the point in various directions until maximal pulsation is achieved, then hold the position of maximal pulsation for at least 7 seconds
  - C. Touch the neurovascular (NV) point with the fingertips and gently tug the point in various directions until maximal pulsation is achieved, then hold the position of maximal pulsation for at least 10 seconds
  - D. Touch the neurovascular (NV) point with the fingertips and gently tug the point in various directions until maximal pulsation is achieved, then hold the position of maximal pulsation for at least 20 seconds
- 33. How many bilateral meridians exist?
  - A. 5
  - B. 8
  - C. 10
  - D. 12
- 34. When an organ or gland is dysfunctioning:
  - A. The corresponding meridian will be found to be in a balanced energy state
  - B. The corresponding meridian will be found to be in an imbalanced energy state
  - C. The opposite meridian will be found to be in an imbalanced energy state
  - D. The opposite meridian will be found to be in a balanced energy state
- 35. How does the examiner test to see if nutrients can strengthen a weak-testing muscle?
  - A. Have the patient take the nutrient substance for two weeks, then retest the muscle
  - B. Have the patient stand close to the nutrient substance, then retest the muscle
  - C. Have the patient place some of the nutrient substance in the mouth, chew it, taste it and retain it in the mouth, then retest the muscle
  - D. Have the patient take the nutrient substance for one month, then retest the muscle
- 36. When an organ or gland has an obvious problem, but the associated muscles all test strong (the body has compensated for the problem), it can be an indicator of a:
  - A. Hidden problem
  - B. Nutrient deficiency
  - C. Energy problem
  - D. Obvious problem
- 37. To perform the fascial release technique, the muscle is kept \_\_\_\_\_ during the whole procedure.
  - A. Extended
  - B. Flexed
  - C. Neutral
  - D. Stretched

- 38. In AK, when contraction of one muscle causes the subsequent weakening of another muscle, an undesirable reactive condition exists, referred to as:
  - A. Chill and stretch
  - B. Reactive state
  - C. Lymphatic imbalance
  - D. Inactive state
- 39. Which of the following is an indication for the reactive muscle technique?
  - A. When any strengthened muscles become weak after certain activities
  - B. When any weakened muscles become strong after chill and stretch has been performed
  - C. When any strengthened muscles become weak after therapy localizing (TL) the neurolymphatic reflex
  - D. When any strengthened muscles become weak after therapy localizing (TL) the neurovascular reflex
- 40. If the lower trapezius is the primary muscle requiring sedation, which of the following are the suspected reactive muscles?
  - A. Pectoralis minor
  - B. Levator scapula
  - C. Upper trapezius
  - D. All of the above
- 41. In the upper torso, almost everyone has:
  - A. Stronger muscles on the back than the front
  - B. Equally strong muscles on the front and the back
  - C. Stronger muscles on the front than the back
  - D. Stretched muscles in the front and tight muscles in the back
- 42. Bent-over flyes put the main work of contraction into the:
  - A. Teres major
  - B. Supraspinatus
  - C. Posterior deltoids
  - D. Pectoralis
- 43. When stretching the pectoralis muscles, how long should the position be held for?
  - A. About 10 seconds
  - B. About 20 seconds
  - C. About 40 seconds
  - D. About 60 seconds

- 44. Which of the following is the correct way to muscle test the leg adductors in the side-lying position?
  - A. The examiner presses the lower leg toward the table with no rotation of the pelvis
  - B. The examiner presses the lower leg toward the table while rotating the pelvis
  - C. The examiner pulls the lower leg away from the table with no rotation of the pelvis
  - D. The examiner pulls the lower leg away from the table while rotating the pelvis

- 45. Which of the following is the correct back neurolymphatic reflex for the gluteus maximus?
  - A. A wide stripe along the whole length of the anterior lateral surface of the thigh
  - B. In the depressions between L5 and the PSIS
  - C. On the middle of the lambda suture located between the back of the ear and the posterior fontanelle
  - D. In the depressions between L2 and L3
- 46. Which of the following organs corresponds to the hamstrings: medial and lateral?
  - A. Lung
  - B. Reproductive organs and glands
  - C. Rectum
  - D. Kidney
- 47. Which of the following meridians corresponds to the infraspinatus?
  - A. Large intestine
  - B. Kidney
  - C. Spleen
  - D. Triple heather
- 48. Latissimus dorsi is a good indicator of . .
  - A. Reproductive and sexual problems
  - B. Blood sugar imbalances and digestive problems
  - C. Emotional disturbances
  - D. Headaches and neck pain
- 49. All of the following are possible reactive muscles of the pectoralis major sternal EXCEPT:
  - A. Rhomboids
  - B. Posterior deltoid
  - C. Supraspinatus
  - D. Infraspinatus
- 50. In which of the following directions is pressure applied when muscle testing the peroneus longus and brevis?
  - A. In the direction of inversion to turn the foot back inward
  - B. In the direction of eversion to turn the foot outward
  - C. In the direction of flexion to bring the toes up
  - D. In the direction of extension to bring the toes to the table
- 51. Which of the following is the correct nutrition for the piriformis muscle?
  - A. Vitamin E
  - B. Vitamin A
  - C. Niacin and zinc
  - D. All of the above
- 52. Which of the following organs/glands corresponds to the popliteus?
  - A. Reproductive organs
  - B. Spleen
  - C. Kidney
  - D. Gall bladder

- 53. Which of the following is the correct way to muscle test the rectus femoris?
  - A. With a hand anterior and just proximal to the knee, the examiner pushes to extend the hip
  - B. With a hand posterior and just proximal to the knee, the examiner pushes to flex the hip
  - C. With a hand on the top of the knee cap, the examiner pushes the knee into the table
  - D. With a hand anterior and just distal to the knee, the examiner pushes to flex the knee
- 54. Which of the following is the correct back neurolymphatic reflex for the rhomboid major?
  - A. Between T2-3 by the laminae on the left side
  - B. Between T4-5 by the laminae on the left side
  - C. Between T6-7 by the laminae on the left side
  - D. Between T8-9 by the laminae on the left side
- 55. Which of the following is the correct patient position for testing the sacrospinalis group?
  - A. Supine
  - B. Prone
  - C. Seated
  - D. Side-lying
- 56. Which of the following is the correct neurovascular reflex for the serratus anticus?
  - A. Anterior fontanelle (bregma)
  - B. Posterior fontanelle (lambda)
  - C. Frontal bone eminences
  - D. On the medial aspect of the knee
- 57. Patients with \_\_\_\_\_ may have extremely weak-testing neck flexors.
  - A. Acute sinus conditions or problems in the lower vertebrae of the neck
  - B. Chronic sinus conditions or problems in the upper vertebrae of the neck
  - C. Chronic sinus conditions or problems in the upper vertebrae of the middle back
  - D. Acute sinus conditions or problems in the upper vertebrae of the low back
- 58. Which of the following organs/glands corresponds to the subscapularis?
  - A. Sinuses
  - B. Stomach
  - C. Heart
  - D. Lung
- 59. Which of the following is a possible reactive muscle of the tensor fascia lata?
  - A. Abductors
  - B. Peroneus brevis
  - C. Quadriceps
  - D. Hamstrings
- 60. When performing the muscle test on the teres major, in which of the following directions does the examiner press the elbow?
  - A. Abduction and flexion
  - B. Abduction and extension
  - C. Adduction and flexion
  - D. Adduction and extension

- 61. When performing the muscle test on the lower trapezius, how far is the patient's arm elevated to the side to align it with the central fibers of the lower trapezius?
  - A. About 60 degrees
  - B. About 90 degrees
  - C. About 150 degrees
  - D. About 180 degrees
- 62. Which of the following meridians corresponds to the upper trapezius?
  - A. Bladder
  - B. Kidney
  - C. Spleen
  - D. Triple heater

- 63. According to the ICAK (International College of Applied Kinesiology), which of the following is an example of ligament interlink?
  - A. Treating your left wrist plus lateral pressure on the hyoid for your left ankle pain
  - B. Treating your right wrist plus medial pressure on the hyoid for your left ankle pain
  - C. Treating your left wrist plus medial pressure on the hyoid for your left ankle pain
  - D. Treating your right wrist plus lateral pressure on the hyoid for your left ankle pain
- 64. Which of the following is an indication for the Strain Counterstrain technique?
  - A. Persistent pain in muscles and/or joints with tender trigger points
  - B. When any strengthened muscles become weak after certain activities
  - C. Corresponding organ/gland dysfunction
  - D. When looking in a specific visual direction weakens most any indicator muscle
- 65. Which of the following is the correct correction technique for specific gait tests that tested weak?
  - A. Lightly massage for about 5 seconds the corresponding acupressure points on the foot
  - B. Firmly massage for about 15 seconds the corresponding acupressure points on the foot
  - C. Firmly massage for about 10 seconds the corresponding neurovascular reflexes
  - D. Lightly massage for about 20 seconds the corresponding neurovascular reflexes
- 66. The cloacal synchronization technique of Applied Kinesiology balances:
  - A. The energies of the cloacal reflexes (related to excretion and sex) with reflexes in the organs and glands that are responsible for neurovascular health
  - B. The energies of the cloacal reflexes (related to excretion and sex) with reflexes in the lower back that are responsible for maintaining proper energy flow
  - C. The energies of the cloacal reflexes (related to excretion and sex) with reflexes in the head and neck that are responsible for maintaining upright posture
  - D. The energies of the cloacal reflexes (related to excretion and sex) with reflexes in the legs and feet that are responsible for maintaining muscular integrity

- 67. The hyoid bone is the only bone in the body that is:
  - A. Attached to another bone through a joint
  - B. Only attached on one side to another bone through a joint
  - C. Not held in place by ligaments and muscles that attach it to other structures
  - D. Not attached to another bone through a joint
- 68. The injury recall technique is a technique that is performed on:
  - A. The talus bone and/or the cervical vertebrae
  - B. The calcaneus bone and/or the cervical vertebrae
  - C. The talus bone and/or the lumbar vertebrae
  - D. The femur bone and/or the cervical vertebrae
- 69. The proprioceptive neuromuscular facilitation technique and its adaptation by Frank Mahoney in his Hyperton-X technique:
  - A. Shorten the range of motion and decrease strength in this new range of motion
  - B. Shorten the range of motion and increase strength in this new range of motion
  - C. Extend the range of motion and increase strength in this new range of motion
  - D. Extend the range of motion and decrease strength in this new range of motion

- 70. All of the following are common substances that often have a negative effect upon the body EXCEPT:
  - A. Chemicals
  - B. Water
  - C. Metals
  - D. Microbes
- 71. When a slant table is not available for testing for lymphatic congestion, which of the following can be used?
  - A. A normal flat table with the patient laying supine with no other support
  - B. Pillows placed under the ankles of the supine patient
  - C. Pillows placed under the neck of the supine patient
  - D. Pillows placed under the hips of the supine patient

- 72. A simple technique for reducing stress is to:
  - A. Place a hand (the examiner's or the patient's) upon the patient's neck
  - B. Place a hand (the examiner's or the patient's) upon the patient's lower back
  - C. Place a hand (the examiner's or the patient's) upon the patient's shoulders
  - D. Place a hand (the examiner's or the patient's) upon the patient's forehead
- 73. When suffering from a psychological reversal, the:
  - A. The organs/glands and the meridians are in conflict
  - B. The conscious mind and the subconscious mind are in equilibrium
  - C. The conscious mind and the subconscious mind are in conflict
  - D. All of the above

- 74. Roger Callahan proposed/discovered that:
  - A. Phobias are energetic disturbances of specific energy points, with the spleen meridian usually being the culprit
  - B. Phobias are energetic disturbances of specific meridians, with the triple heater meridian usually being the culprit
  - C. Phobias are energetic disturbances of specific energy points, with the heart meridian usually being the culprit
  - D. Phobias are energetic disturbances of specific meridians, with the stomach meridian usually being the culprit

- 75. Which of the following screenings techniques may help the examiner to determine where to start or what needs to be done?
  - A. Structural screening
  - B. Hidden weakness screening
  - C. Chemistry screening
  - D. All of the above

This completes the Applied Kinesiology exam.