



COAST GUARD
STRENGTH AND CONDITIONING
ASSESSMENT TEST

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DEADHANG PULL-UP

Purpose:

To assess grip strength, core strength, and upper extremity vertical pulling strength.

Equipment Required:

- Pull-up bar
- Stop watch
- Hand chalk (optional)
- Assistant, bench, or foot stool

Procedure:

1. Use the stop watch to mark 5-second intervals.
2. Long sleeves will be removed in order to observe the lockout of the elbows with each repetition.
3. Diameter of the ideal bar may range between 1 and 1-3/4 inches. *Note: Larger diameters increase the difficulty of the grip.*
4. Bar height should be high enough to allow for the tallest participants' legs to hang straight without touching the ground when the arms are fully extended. *Note: Recommend using an adjustable pull-up bar if available or employing pull-up bars of varying height.*
5. A bench or stool may be used to initially grasp the bar. Assistance to the bar with a step-up, jumping or being lifted up is authorized. Assistance up to the bar will not be used as momentum into the first pull-up.
6. Grasp the bar with the palms facing forward (away from the body). Spacing of the hands may be no greater than one fist's width outside the shoulder (medium grip width). Crossing of the legs is authorized in order to gain stabilization.
7. Start the stopwatch.
8. Give the command "ready." Move to a free hang position with the arms fully extended beneath the bar, using an overhand grip, legs fully extended with the feet not touching the ground touching the ground and the body motionless. *Note: Participant will begin from a 5-second dead hang before beginning first pull up.*
9. After the next five seconds, the time keeper will give the command, "go". On the command "go", pull the body upward until the chin is above the bar and then immediately lower the body until the arms are fully extended and locked out. Participant will/must hang motionless until the next "Go" command. Repeat the exercise.
10. Pull-ups will be completed at the rate of one pull-up every 5 seconds. The intent IS NOT for the participant to hang for 5 seconds in between each pull up, merely to complete a pull-up every 5 seconds.
11. The intent is to execute a vertical dead-hang pull-up. The body must maintain a generally straight plane from head to toe; a certain amount of inherent body movement will occur as the pull-up is executed; however, the intent is to avoid a pendulum-like motion that enhances the ability to execute the pull-up. Piking, kicking, kipping, whipping of the body or legs, or any movement used to assist in the vertical progression of the pull-up is NOT authorized. If observed the repetition will not count for score.
12. The test will be terminated if the participant drops from the bar, or cannot complete a repetition on pace with a 5-second interval cadence. If the participant maintains the cadence, but fails to meet other performance standards (i.e. fully extended arms, locking out elbows), the grader will repeat the number of the last correct repetition (participant will be told to make the proper correction). If the participant is able to complete a proper pull up, but cannot complete it within 5 seconds, the participant will receive credit for that pull-up, but the test will end there.
13. The goal is for the participant to complete as many repetitions as possible. Score will be the number of correct repetitions performed.

Video Example: <http://www.uscg.mil/hq/cg1/cg111/cgap/AssessmentItems/PullUpCG.wmv>

A Pull-Up **WILL** be counted if:

- Body is maintained in a general straight plane with minimal swinging.
- Chin is above the bar.
- Arms are fully extended during hang.
- Spacing of the hands is no greater than one fist's width outside the shoulder
- Each pull-up is completed within 5 seconds.

A Pull-Up **WILL NOT** be counted if:

- Swinging, Kipping, Pitching, Piking or the like is utilized during this event.
- Chin does not reach the top of the bar on every repetition.
- Participant does not fully extend arms and lock-out elbows at the down position.
- Feet touch the ground or any other object.

STANDING LONG JUMP

Purpose:

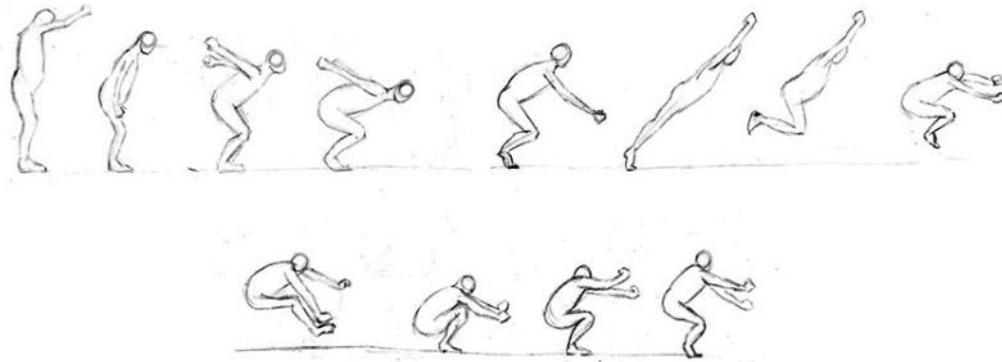
To assess lower extremity functional strength, neuromuscular efficiency, and dynamic power.

Equipment Required:

- Standard tape measure or testing mat (*to measure horizontal distance jumped*).
- Flat nonslip testing surface.

Procedure:

1. After proper warm-up, the athlete stands behind a line marked on the ground with feet slightly apart. A two-foot takeoff and landing is used, with counter movement; i.e., swinging of the arms and bending of the knees to provide forward drive.
2. Have the client perform a maximal jump.
3. Participant must “stick” then hold the landing position for **at least 3 seconds** before conclusion.
4. If participant fails to hold the landing position without taking a step, falls, or touches body parts other than the feet, the jump will not be counted.
5. A second attempt is authorized.
6. Measure the distance from the starting line to the **back of the heel** closest to the starting line. Record the results in **inches**.



A Standard long jump **WILL** be counted when participant:

- Jumps with both feet at the same time from behind line.
- Holds the landing position for at least 3 seconds before taking another step.

A Standard long jump **WILL NOT** be counted if:

- Does not stay stable after landing for 3 seconds (stick the landing)
- Fails to hold the landing position without taking a step, falls, or touches body parts other than the feet.

Video Example:

<http://www.uscg.mil/hq/cg1/cg111/cgap/AssessmentItems/LongJumpStandingL1.wmv>

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INVERTED ROW

Purpose:

To assess grip strength, upper extremity horizontal pulling, and core strength.

Equipment Required:

- Suspension training device (i.e.: TRX) with a single anchor point.
- Overhead anchor point/ Pull up bar.
 - Stop watch.

Procedures:

1. Long sleeves will be removed in order to observe the lockout of the elbows with each repetition.
2. Use the stop watch to mark 5-second intervals.

Suspended Plank Position:

- Hold the handles of a suspension training device with palms of hands facing towards feet. Arms will be fully extended with elbows locked out, and directly under the pull-up bar.
 - The body shall be rigid in a straight line from participant's head to his/her heels. Feet together, dorsi-flexed so that only the heels are on the ground.
 - The feet can be stabilized by another individual's foot placed at their heels.
 - Shoulders shall be no more than 12 inches off the deck.
3. Begin the test after hanging for 5 seconds in the suspended plank position.
 4. Pull the body up by drawing elbows back (in line with shoulders), at the same time slowly rotating palms inward so that they face each other.
 5. The top end of the exercise will be when the distal wrist crease is even with the sternum.
 6. Inverted Rows will be completed at the rate of one every 5 seconds.
 7. Note: The intent IS NOT for the participant to hang for 5 seconds in between each row. Merely to complete an inverted row every 5 second.
 8. Good form means that the body is kept straight throughout the movement. The chin should remain tucked during the motion.
 9. Lower the body until the arms are fully extended with elbows locked out, then hold until the next "Go" command is issued. Repeat the exercise.
 10. Discontinue the test if the participant fails to:
 - a. Bring both wrists even with their pectoral.
 - b. Maintain a suspended plank. (example: buttock touches the floor)
 - c. Complete a full repetition within 5 seconds.

Video Example: <http://www.uscg.mil/hq/cg1/cg111/cgap/AssessmentItems/InvertedRowTestCG.wmv>

An Inverted Row **WILL** be counted when:

- The body is kept straight, plank like, throughout the movement.
- Each repetition is completed every 5 seconds.
- Wrist creases are brought even with the pectorals muscles

An Inverted Row **WILL NOT** be counted if:

- The body isn't kept straight throughout the movement.
- A repetition takes longer or less than 5 seconds to complete.
- Wrist creases are **NOT** brought even with the pectorals muscles.

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T-DRILL

Purpose:

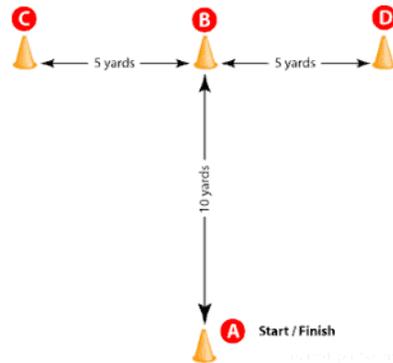
To assess speed, agility and quickness (*the athlete's speed with directional change*).

Equipment Required:

- Flat, dry surface, i.e.: gym floor, concrete or pavement
- Four cones
- Stop watch
- One timer and one time recorder
- One spotter

Procedure:

1. Arrange the four cones as in the figure below:



2. Ensure the athlete has warmed up prior to the test.
3. The test begins with the athlete standing at cone 'A'.
4. On the command "Go," the athlete sprints **FORWARD** to cone 'B' and touches the base of the cone with the **RIGHT** hand.
5. The athlete then side shuffles to the **LEFT** 5 yards and touches the base of cone 'C' with the left hand. (**NOTE:** When side shuffling, the athlete should always face front in the "Athletic Position" (*see glossary*). The athlete **MAY NOT** cross their feet when side shuffling.)
6. The athlete then side shuffles to the **RIGHT** 10 yards and touches the base of cone 'D' with the **RIGHT** hand.
7. The athlete then side shuffles to the **LEFT** 5 yards and touches the base of cone 'B' with the **LEFT** hand, then back peddles past cone 'A', at which the timer is stopped.
8. For safety:
 - a. Offset Cone "A" to left or right, so as not to be a tripping hazard.
 - b. A spotter should be positioned several feet behind cone "A" to catch an athlete who stumbles while back peddling.
9. Reasons for disqualification of a trial: The athlete fails to touch the base of any cone, crosses one foot in front of the other instead of shuffling the feet, or fails to face forward for the entire test.

A Completed T-Drill **WILL** be counted when the participant:

- Touches the bases of cones B, C, and D in that order.

A Completed T-Drill **WILL NOT** be counted if the participant:

- Does not touch the base of cones B, C, and D
- Crosses feet during side shuffle
- Runs forward other than from cone A to B

Video Example: <http://www.uscg.mil/hq/cg1/cg111/cgap/AssessmentItems/TDrillTestL1CG.wmv>

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SIDE BRIDGE

Purpose:

To assess athlete's "core strength" and all three layers of the abdominal wall while keeping the torso in a neutral posture.

Equipment Required:

- Stop watch
- Assistant
- Foam pad (optional), for elbow

Procedure:

1. Lie on your side (instructor will choose the side) with the forearm of the bottom arm on the floor and the elbow bent at a 90 degree angle so the fingers point away from you
2. Participants rest the upper arm along the top side of body.
3. Place the foot of the top leg just **in front of the other** to increase the base of support. Soles of the feet cannot be touching the floor. The back foot shall be the same side as the supporting arm.
4. Maintain a straight line from neck to feet in all three planes (frontal, sagittal, and transverse)
5. Time will be stopped when the participant's straight line bridge is broken.

Video Example: http://www.uscg.mil/hq/cg1/cg111/cgap/pro_video/PlankSide.wmv

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300 YARD SHUTTLE

Purpose:

The 300-yard shuttle is a measure of anaerobic endurance or the ability to exert large bursts of energy over a short period of time. The benefits of this training will:

- Improve resistance to fatigue
- Enhance faster recovery time
- Increase tolerance of lactic acid in working muscles and blood
- Increase disposal of lactic acid

Equipment Required:

- Flat, dry surface, i.e.: gym floor, concrete or pavement
- Stopwatch
- Measuring tape
- Pencil / paper

Procedure:

(The test is based on **25 yard** running intervals)

1. Place two cones, 25 yards (75 feet) apart to indicate the sprint distance. A test administrator shall be stationed at each cone/line.
2. Participant stands behind the designated starting line awaiting the test administrator's command to "GO".
3. The participant will run to the opposite 25-yard line and place one foot on the line, then return to touch the starting line with one foot.
4. Repeat this, continuously, six times covering a total of 300 yards.
5. Each testing administrator will ensure participant touches the line with one foot, at each end. If the line is not crossed the participant will be immediately called back to touch the line. *(If the participant does not touch the line, the test will not count.)*
6. Record the time.

Video Example: <http://www.uscg.mil/hq/cg1/cg111/cgap/AssessmentItems/Shuttle300Yd1CG.wmv>

A 300 Yard Shuffle **WILL** be counted when:

- The participant completes six 25-yard intervals touching one foot on each line.

A 25 Yard interval **WILL NOT** be counted if:

- The participant does not touch required lines

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GLOSSARY:

Agility: Refers to the ability to start (or accelerate), stop (or decelerate and stabilize), and change direction quickly, while maintaining “Athletic Position”.

Athletic Position: The proper form for sport-related movement.

Hold perfect posture:

1. Shoulder blades back and down.
2. Abdomen tight.
3. Knees slightly bend
4. Hips sitting back and down,
5. Feet shoulder width apart.
6. Weight should be forward, on the middle of your feet.

Core Strength: the strength of the underlying muscles of the torso, which help determine posture.

Dorsi-flex: bending at the ankle to move the front of the foot upward.

Dynamic Power: The ability of the neuromuscular system to produce the greatest force in the shortest time.

Kipping: A swinging, body “snapping” contortion utilized during pull-ups to eke out more repetitions.

Lateral Shuffle: Sprinting sideways without crossing feet one in front of the other.

Neuromuscular Efficiency: The ability of the neuromuscular system to enable all muscles to efficiently work together in all planes of motion.

Piking: Extending hips outward, away from center.

Pillar Strength: the foundation of movement. Consists of core, hip and shoulder stability. Those three areas give us a center axis from which to move. If you think of the body as a wheel, the pillar is the hub, and the limbs, the spokes.

Plane of Motion:

Frontal: refers to side to side.

Sagittal: refers to forward or backward.

Transverse: refers to rotational.

Quickness: (or reaction time) Refers to the ability to react to a stimulus and appropriately change the motion of the body with maximal rate of force production in all planes of motion and from all body positions, during functional activities.

Speed: Refers to the ability to move the body in one intended direction as fast as possible.

Side shuffle: A sideways walk or run where the feet meet parallel but will not cross in front or behind each other.

Warm Up: Dynamic stretching through full ranges of motion, to increase the heart rate, respiration rate, and tissue temperature, as well as psychologically prepare the individual for higher training intensities.

