NASM-PES - Quiz Questions with Answers

Assessment

Assessment

1.

If you have a client who is taking nitrates, what might the outcome be for their heart rate and blood pressure?

Increase heart rate / Decrease blood pressure

Increase heart rate / Increase blood pressure

Decrease heart rate / Decrease blood pressure

Decrease heart rate / Increase blood pressure

Correct answer: Increase heart rate / Decrease blood pressure

Nitrates are often prescribed for the treatment of chest pain and angina, and work by dilating blood vessels, which reduces the amount of work the heart has to do to pump blood. This can lead to a decrease in blood pressure and an increase in heart rate.

As a personal trainer, it is important to know if your clients are taking nitrates, as their blood pressure may be lower than expected during exercise, and adjustments to their program may need to be made.

2.

You are assessing a new client whose focus is baseball. Which of the following would be an appropriate power-focused assessment?

Rotation MB Throw

Overhead Squat Test

LEFT Test

Davies Test

Correct answer: Rotation MB Throw

If your client is a baseball player and wants to improve their power, an appropriate power-focused assessment would be the Rotation Medicine Ball (MB) Throw.

The Rotation MB Throw measures the total body power and rotational power of the athlete, which is essential for throwing and hitting in baseball. It involves standing perpendicular to a wall and explosively rotating the torso while throwing a medicine ball as far as possible. The distance thrown is recorded and used to determine the athlete's power output.

Another power-focused assessment that may be appropriate for baseball players is the Double Leg Vertical Jump. These assessments help to measure the athlete's upper and lower body power, respectively, which are important for generating force and speed in baseball movements.

3.

During the overhead squat assessment to determine dynamic postural control, how low should the athlete be instructed to descend?

Approximately the height of a chair

Approximately ninety degrees

Approximately to a quarter squat

To the floor

Correct answer: Approximately the height of a chair

Approximately the height of a chair is correct because this is a known depth for most individuals and is enough depth to establish if any movement impairments will occur during this pattern. This movement will be completed five times to allow the Sports Performance Professional to observe the different areas of the body with both a lateral and posterior view. The overhead squat assessment is used to evaluate dynamic flexibility, core strength, balance and overall neuromuscular control.

Approximately ninety degrees is incorrect because an athlete may not have the kinesthetic awareness to understand this depth.

Approximately to a quarter squat is incorrect because this is ambiguous and not enough depth to observe functional ability.

To the floor is incorrect because this is a depth that many individuals may not be able to reach and is excessive to observe functional ability.

4.

During a double-leg lowering test, which of the following degree ranges is considered "good+" and "good?"

15 to 30 degrees

30 to 45 degrees

45 to 60 degrees

60 to 75 degrees

Correct answer: 15 to 30 degrees

During a double-leg lowering test, a range of 15 to 30 degrees from the floor is considered "good+" and "good" regarding core strength and lumbo-pelvic stability. This range represents the angle between the floor and the client's legs when they can no longer maintain the natural curve of their lumbar spine, indicated by a change in pressure on the blood pressure cuff.

A smaller angle (closer to 15 degrees) suggests better core strength and control. In comparison, a larger angle (closer to 30 degrees) represents a good but slightly lower core strength and stability level.

Fitness professionals can use this information to design targeted exercise programs to improve core strength, stability, and lumbar spine positioning, ultimately contributing to better overall movement quality, posture, and a reduced risk of injury.

5.

A Sports Performance Coach wants to measure the speed of his basketball athletes. Which sports performance test would be the **most** appropriate for this population?

3/4-court sprint

30-yard sprint

40-yard sprint

Lower-extremity functional test

Correct answer: 3/4-court sprint

3/4-court sprint is correct because the setting and length of this speed and acceleration assessment is specific to the sport of basketball. The distance of this test is from the baseline to the opposite free throw line. Other speed tests such as the 30 or 40 yard dash would serve to measure speed and acceleration as well, but they are not as specific a sports performance test.

30-yard sprint and 40-yard sprint are incorrect because these do not occur on a surface specific to basketball nor represent a distance commonly covered during the sport.

Lower-extremity functional test is incorrect because this is an assessment of lateral speed and agility.

6.

Which of the following strength assessments would be ideal when testing a baseball player?

Squat (5-Rep Max) and Pull-Ups

300-Yard Shuttle Test and Timed: Home to First Base

Clean and Press and Timed: Home to First Base

Sit-Ups and Wall Sits

Correct answer: Squat (5-Rep Max) and Pull-Ups

When testing a baseball player's strength, an ideal combination of assessments would be Squat (5-Rep Max) and Pull-Ups.

The Squat (5-Rep Max) is a great measure of lower body strength and power, which are important for explosive movements like sprinting, jumping, and throwing. In baseball, lower body strength is essential for generating power in the legs and hips, which translates into greater bat speed, throwing velocity, and running speed.

Pull-Ups are a great measure of upper body strength, particularly in the back and arms. In baseball, upper body strength is crucial for throwing, hitting, and fielding, as well as for maintaining good posture and preventing injury.

The 300-Yard Shuttle Test is a fitness assessment that involves running back and forth between two points (usually 25 yards apart) multiple times, evaluating an individual's speed, agility, and anaerobic capacity. Timed: Home to First Base is a measurement used in baseball or softball to assess an athlete's speed by measuring the time taken to run from home plate to first base.

Clean and Press is a compound weightlifting exercise where a barbell is lifted from the floor to the shoulders, followed by pressing it overhead, testing upper body strength, power, and coordination. Timed: Home to First Base is a measurement used in baseball or softball to assess an athlete's speed by measuring the time taken to run from home plate to first base.

Sit-Ups is an abdominal strength and endurance test where an individual lies on their back, bends their knees, and performs repeated forward flexion of the torso, measuring core strength and muscular endurance. Wall Sits is a lower body isometric exercise where an individual sits against a wall with their knees bent at a 90-degree

angle and holds the position, evaluating lower body strength, endurance, and static stability.

7.

What is the name of the strength assessment that is recommended for basketball players?

185 lbs. Bench Press

185 lbs. Squat

185 lbs. Deadlift

185 lbs. Clean

Correct answer: 185 lbs. Bench Press

The 185 lbs. Bench Press is a strength assessment specifically designed for basketball players. It involves the athlete bench pressing 185 pounds for as many repetitions as possible. The test measures upper body strength and endurance, which are important factors for basketball players in performing tasks such as shooting, rebounding, and defending.

8.

During the Double-Leg Lowering Test, when is the assessment deemed to be over?

When the pressure in the cuff decreases

When the client performs 10 repetitions

When the client holds the position until failure

When the client is not able to lift his/her arms any longer

Correct answer: When the pressure in the cuff decreases

The Double-Leg Lowering Test is a performance assessment that can effectively assess neuromuscular control and strength of the core.

The client is asked to lie down, and a flat blood pressure cuff is placed under the lumbar spine. The cuff is raised to 40 mm Hg, and the client's legs are maintained in full extension at 90 degrees.

The client is then asked to perform a drawing-in maneuver, then slowly lower his/her legs toward the ground.

The test is over when the cuff decreases in pressure from the back arching or the pressure increasing, as the client allows the abdominal wall to protrude and compensate with the rectus abdominis and obliques.

9.

For a basic resting heart rate assessment, which pulse location is located on the wrist?

Radial artery

Carotid artery

Dorsalis pedis artery

Brachial artery

Correct answer: Radial artery

For a basic resting heart rate assessment, the radial artery is located on the thumb side of the wrist.

Place the tips of your index and middle fingers over the radial artery, applying gentle pressure. Do not use your thumb, as it has its own pulse, which can interfere with the accuracy of the measurement.

Count the number of beats for a full minute, or for 30 seconds, and multiply by 2, to obtain the resting heart rate. It is best to perform the assessment when the individual is relaxed, preferably after sitting or lying down for at least 5 minutes.

The carotid artery is a pair of large blood vessels, composed of the internal and external carotid arteries, that supply oxygen-rich blood to the head and neck, branching off from the aorta in the chest and ascending through the neck.

The dorsalis pedis artery is a blood vessel that supplies oxygen-rich blood to the dorsal surface of the foot, originating from the anterior tibial artery as it crosses the ankle joint.

The brachial artery is a major blood vessel that supplies oxygen-rich blood to the upper arm, originating from the axillary artery and extending down the arm before branching into the radial and ulnar arteries at the elbow.

10.

Which of the following is **not** a common postural distortion compensation for the single-leg squat assessment?

Head migrates forward

Knee moves inward

Hip hike

Torso rotates outward

Correct answer: Head migrates forward

The single-leg squat assessment is a functional movement evaluation that helps identify muscle imbalances, postural distortions, and potential movement compensations in an individual. This assessment involves having the client perform a single-leg squat while the assessor observes their form and identifies any deviations from proper alignment.

To perform the single-leg squat assessment, follow these steps:

1. *Have the client stand with their feet hip-width apart, arms relaxed by their sides, or placed on their hips.*
2. *Ask the client to lift one foot off the ground, maintaining balance on the supporting leg.*
3. *Instruct the client to slowly squat down on the supporting leg, bending the knee and lowering their hips towards the ground. The non-supporting leg should remain straight and off the ground.*
4. *Observe the client's form during the squat, paying particular attention to their hip, knee, and ankle alignment, as well as their torso positioning.*
5. *Repeat the assessment on the other leg.*

During the single-leg squat assessment, the following common postural distortion compensations may be observed:

- *Knee moves inward*
- *Hip hike*
- *Hip drop*
- *Torso rotates inward*
- *Torso rotates outward*

Head migration is related to upper body movement assessment.

11.

Which of the following sports performance tests would be the **most** appropriate to measure an athlete's acceleration ability?

10-yard sprint

30-yard sprint

5-10-5 test

Lower-extremity functional test

Correct answer: 10-yard sprint

10-yard sprint is correct because this distance is not long enough for an athlete to reach their top speed. This test is performed by a timer beginning the stop watch on the athlete's first movement and stopping once the athlete hits the 10-yard mark. The assessment also measures reaction capabilities.

30-yard sprint is incorrect because an athlete will reach top speed at this distance.

5-10-5 test and lower-extremity functional test are incorrect because they measure lateral speed and agility.

12.

What is the MAIN difference between the 300-yard shuttle drill and the 30-yard dash?

The 300-yard shuttle measures total anaerobic endurance; the 30-yard dash measures reaction capabilities and maximum speed

The 300-yard shuttle measures lateral power; the 30-yard dash measures muscular endurance

The 300-yard shuttle is used to determine movement dysfunction; the 30-yard dash is used to measure lower body strength

The 300-yard shuttle is used when measuring max heart rate; the 30-yard dash is used as a warm-up exercise before 1RM testing

---

Correct answer: The 300-yard shuttle measures total anaerobic endurance; the 30-yard dash measures reaction capabilities and maximum speed

These two tests are assessments in different categories. The 300-yard shuttle is a metabolic assessment; while the 30-yard dash is a Speed, Agility, and Quickness (SAQ) assessment.

Also, the 300-yard dash measures total anaerobic endurance, while the 30-yard dash measures reaction capabilities and maximum speed.

13.

During an overhead medicine ball throw, what is the absolute maximum amount of weight that can be used during this assessment?

No more than 5% of the athlete's body weight

A standard 5-pound medicine ball

No more than 10% of the athlete's body weight

A standard 10-pound medicine ball

Correct answer: No more than 5% of the athlete's body weight

During an overhead medicine ball throw, the absolute maximum amount of weight that can be used during the assessment is no more than 5% of the athlete's body weight.

The overhead medicine ball throw is a dynamic movement assessment that measures total body power and explosiveness. During the assessment, the client stands with their feet shoulder-width apart and throws a medicine ball overhead as far as they can. The weight of the medicine ball used during the assessment should not exceed 5% of the athlete's body weight to ensure proper form and technique.

Using a medicine ball that is too heavy for the athlete can increase the risk of injury and decrease the accuracy of the assessment results. Therefore, it is important to select an appropriate weight for the medicine ball based on the athlete's body weight and fitness level.

14.

Agility is an essential skill to have for a soccer player. If you wanted to test the agility of a client who plays soccer, you would use all of the following assessments **except**:

20-Meter Multistage Shuttle Test

LEFT Test

5-0-5 Test

T-Test

Correct answer: 20-Meter Multistage Shuttle Test

The Lower Extremity Functional Test (LEFT Test), T-Test, and 5-0-5 Test are better options for testing agility in soccer players because they are more specific to the sport. These tests involve movements such as quick changes of direction, deceleration, and acceleration, which are common movements in soccer. In contrast, the 20-Meter Multistage Shuttle Test is more focused on cardiovascular endurance.

The LEFT Test measures an athlete's ability to change direction quickly while maintaining balance and control.

The T-Test is a popular agility drill that requires players to run forward, backward, and sideways in a T-shape while touching cones with their hands. This test simulates the quick lateral movements required in soccer, making it an excellent choice for assessing horizontal agility in soccer players.

The 5-0-5 test is another test that measures lateral agility by having athletes run 5 meters to one side, 10 meters in the other direction, and then back to the starting point.

15.

When an athlete is performing a push-up test for muscular endurance, how long should the test last?

I. Until 60 seconds have elapsed

II. Until the low back arches

III. Until the athlete begins to feel tired

IV. Until the cervical spine extends

V. Until 30 seconds have elapsed

I, II and IV only

II, III and V only

I, II and III only

I and II only

Correct answer: I, II and IV only

I, II and IV only is correct because the push-up test for muscular endurance has three criteria for test cessation: 60 seconds of time, exhaustion without compensation, or compensations such as low back arch or cervical spine exhaustion occurring. During the test, the athlete lowers their body to touch a partner's closed fist placed under the chest. The total number of actual touches is recorded.

II, III and V only is incorrect because the test can last up to 60 seconds.

I, II and III only is incorrect because the athlete should push to exhaustion, not just feelings of tiredness.

I and II only is incorrect because the cervical spine extending is another compensation that will lead to stopping the test.

16.

When determining body composition in athletes, which of the following factors can serve to **decrease** the accuracy of the measurement?

Large amount of fat mass

Height

Sport played

Age

Correct answer: Large amount of fat mass

Large amount of fat mass is correct because taking skin-fold readings on very overweight or obese individuals can be difficult and has been shown to decrease measurement accuracy. Skin-fold measurements may not be the best body composition method for this population due to this fact and the possible discomfort of the individual. Instead, bioelectrical impedance, circumference measurements or simply scale weight may be the best methods to determine a starting point and evaluate progress.

Height, sport played and age are incorrect because they have no bearing on skin-fold measurement.

17.

You are performing a skinfold measurement for a client. Next up is the subscapular fold. Where is this located?

- **Back**
- Arm
- Thigh
- Torso

Correct answer: Back

The subscapular fold is located on the upper back, just below the lower tip of the shoulder blade (scapula).

To measure the subscapular skinfold, have the client stand with their arms relaxed by their sides. Locate the lower tip of the scapula, and then pinch a fold of skin and underlying fat tissue about 1-2 centimeters below the tip at a 45-degree angle to the spine. Make sure to pinch the skinfold parallel to the natural fold lines of the skin to obtain an accurate measurement.

18.

During the Shark Skill Test, how many practice runs are permitted?

One practice run per foot

One practice run for the jumping foot only

Two practice runs per foot

Three practice runs total

Correct answer: One practice run per foot

During the Shark Skill Test, one practice run per foot is permitted.

The Shark Skill Test is a dynamic movement assessment used to measure an athlete's lower extremity agility and change of direction ability.

Before the actual assessment begins, the athlete is permitted to take one practice run per foot to become familiar with the course and its specific pattern. The practice run helps the athlete to understand the course's layout, identify any potential obstacles or challenges, and improve their performance during the actual assessment.

19.

You have a client who wants to improve his powerlifting performance. Which of the following strength assessments is going to be ideal for estimating the one-repetition maximum for overall upper body strength for PRESSING musculature?

Bench press

Squat

Deadlift

Row

Correct answer: Bench press

The bench press is the best strength assessment for estimating the one-repetition maximum for overall upper body strength, specifically for the pressing musculature.

Be sure to have the client perform a light resistance warm-up of 8–10 reps. Give them a minute to rest before adding 10–20 pounds and having them perform 3–5 reps.

Again, give the client a 2-minute break.

Repeat these steps until the client fails at 3–5 reps.

A squat measures lower body strength.

The deadlift and row measure PULLING strength.

20.

Which of the following is comprised of an inflatable cuff, a pressure meter with an inflation bulb or valve, and a stethoscope; and is used to measure blood pressure?

Sphygmomanometer

Calipers

Stadiometer

Composition analyzer

Correct answer: Sphygmomanometer

Blood pressure is measured by using a sphygmomanometer, which is made up of an inflatable cuff, a pressure meter with an inflation bulb or valve, and a stethoscope.

Before measuring blood pressure, the athlete should sit down for 5–10 minutes with their legs uncrossed.

The trainer should place the appropriate size cuff on the left arm of the athlete, just above the elbow.

Place the stethoscope over the brachial artery using a minimal amount of pressure. Rapidly inflate the cuff to 20–30 mm Hg above the point when the pulse can no longer be felt at the wrist.

Next, the valve should be opened on the bulb to release the pressure at a rate of about 2 mm Hg per second. This is when it's essential to listen for the pulse while watching the pressure meter's reading decline.

From here, the trainer can determine the diastolic and systolic blood pressure.

21.

Which of the following is NOT a type of speed, agility, and quickness assessment?

Shark Skill Test

30-yard sprint

Lower Extremity Functional Test (LEFT)

5-10-15 Test

Correct answer: Shark Skill Test

Speed, Agility, and Quickness (SAQ) assessments measure a variety of variables including reaction time, acceleration speed, and maximal speed. The following are commonly used SAQ assessments:

- *30-yard sprint*
- *Lower Extremity Functional Test (LEFT)*
- *5-10-15 Test*
- *Three-Quarters Court Sprint*
- *T-Drill*
- *Pro Lane Agility Drill*

The Shark Skill Test is a power assessment that is designed to assess lower extremity agility and neuromuscular control.

22.

You notice that your client's shoulders are elevating during the pushing assessment. Which of the following muscles should you focus on strengthening?

Mid trapezius

Upper trapezius

Levator scapulae

Sternocleidomastoid

Correct answer: Mid trapezius

When you notice that your client's shoulders are elevating during the pushing assessment, it's essential to focus on strengthening the mid trapezius muscles.

The mid trapezius muscles are part of the trapezius muscle group, which is a large, diamond-shaped muscle located in the upper back. The mid trapezius fibers primarily function in scapular retraction and depression, which helps stabilize the shoulder blades and maintain proper shoulder alignment.

Elevated shoulders during the pushing assessment can indicate weakness in the mid trapezius muscles, as well as potential tightness in the upper trapezius and levator scapulae muscles.

Strengthening the mid trapezius can help to correct this imbalance and promote proper shoulder positioning during pushing movements. This, in turn, can improve overall movement quality, decrease the risk of injury, and enhance performance in various upper body exercises.

23.

Which of the following upper-body strength assessments would be optimal for a client who is a soccer player?

Push-up test

Bench press test

Deadlift test

Overhead press test

Correct answer: Push-up test

The push-up test would be an appropriate upper-body strength assessment for a soccer player. Soccer involves a lot of running and kicking, but upper body strength is still important for various aspects of the game, such as shielding the ball from opponents, jostling for position, and throwing the ball in from the sidelines. The push-up test can measure the muscular endurance and strength of the chest, triceps, and shoulders, which are all important muscle groups for soccer players.

24.

Which of the following is NOT a method of measuring body fat composition?

Sphygmomanometer

Skinfold measurements

Underwater weighing

Bioelectrical impedance

Correct answer: Sphygmomanometer

One important piece of information for a trainer is the body fat percentage of the client, especially if the goal is to alter body fat composition.

The best ways to measure a client's body fat percentage include the following:

- *Skinfold measurements with calipers*
- *Underwater weighing*
- *Bioelectrical impedance*

Blood pressure is measured by using a sphygmomanometer, which is made up of an inflatable cuff, a pressure meter with an inflation bulb or valve, and a stethoscope.

25.

Which of the following compensations during the overhead squat is likely if the athlete has overactive hip flexor and erector spinae muscles and underactive hamstrings and gluteus maximus muscles?

Arch of the low back

Knee valgus

Turning out of the feet

Arms falling forward

Correct answer: Arch of the low back

Arch of the low back is correct because this compensation is often seen in athletes with lower crossed syndrome (tight hip flexors and low back muscles, inactive posterior chain). Compensations of the lumbo-pelvic-hip complex are best observed from the lateral view during the overhead squat. Excessive forward lean of the torso, which is typically a result of similar muscular imbalances, can also be observed from this viewing position.

Knee valgus is incorrect because this is typically due to overactivity of the biceps femoris, adductor complex, TFL, and vastus lateralis.

Turning out of the feet is incorrect because this compensation is not associated with low back muscle imbalance.

Arms falling forward is incorrect because this compensation is due to underactive muscles of the upper back.

26.

A sports coach would like a Sports Performance Coach to perform a Harvard step test with their athletes. What cadence and for what duration should the test occur in order to obtain accurate results?

30 steps per minute for five minutes

60 steps per minute for five minutes

30 steps per minute for 3 to 3.5 minutes

60 steps per minute for 3 to 3.5 minutes

Correct answer: 30 steps per minute for five minutes

30 steps per minute for five minutes is correct because this is an exercise intensity and duration that should be submaximal for the majority of the athletic population. The main purpose of the Harvard step test is to determine an athlete's ability to recover from a specific amount of stress. Recovery heart rate is taken at intervals after activity cessation and these numbers are calculated into a fitness index.

60 steps per minute for five minutes is incorrect because this exercise intensity is too high to be considered submaximal.

30 steps per minute for 3 to 3.5 minutes is incorrect because this exercise duration is not long enough to allow one to settle in to using their aerobic system to fuel exercise.

60 steps per minute for 3 to 3.5 minutes is incorrect because the exercise intensity is too high and the duration is too short.

27.

A Sports Performance Professional is about to perform a battery of assessments with a team. Which of the following will **not** be ascertained from these assessments?

Injury diagnoses

Information about the athletes' structural status

Information about the athletes' functional status

The athletes' readiness for activity

Correct answer: Injury diagnoses

Injury diagnoses is correct because this is outside the scope of both the Sports Performance Professional and the sports performance assessment. This assessment is not designed to replace a medical examination. Athletes who exhibit any risk factors that may exclude them from exercise, or who experience pain during any of the assessments, should be referred to their personal physician or another qualified health-care provider.

The other answer choices are incorrect because they are insights given by a sports performance assessment.

28.

During the upper extremity strength assessment, how many minutes of rest should be provided in between each attempt?

2 minutes

1 minute

3 minutes

5 minutes

Correct answer: 2 minutes

During the upper extremity strength assessment (the bench press), it is recommended to provide two minutes of rest between each attempt.

The bench press is a classic compound exercise that involves multiple muscle groups, including the chest, shoulders, and triceps. It is commonly used in fitness assessments to evaluate upper body strength and muscle endurance.

Providing two minutes of rest between each attempt allows the muscles involved in the bench press to recover and recharge, ensuring that the client can perform at their best during the next attempt. It is important to note that the rest period should be standardized and consistent between attempts to avoid fatigue and minimize the risk of injury.

During the bench press, it is also essential to monitor the client's form and technique throughout the exercise. Poor form can increase the risk of injury and affect the accuracy of the results. By providing adequate rest and ensuring proper form, you can obtain reliable data that can be used to develop targeted exercise programs and track progress over time.

29.

According to the Landing Error Scoring System, which of the following would be considered a landing error?

Trunk not flexed at contact

Symmetric initial foot contact

Knee flexion greater than forty-five degrees

Knee over midfoot at initial contact

Correct answer: Trunk not flexed at contact

Trunk not flexed at contact is correct because the trunk should be flexed to absorb the force upon landing and then transfer that force to the subsequent jump. Not flexing the trunk will also prevent other joints, such as the knees and ankles, from performing properly during the landing. This landing error can increase an athlete's risk of injury.

Symmetric initial foot contact, knee flexion greater than forty-five degrees, and knee over midfoot at initial contact are incorrect because these are not landing errors.

30.

Which of the following sports performance tests could be used to determine accurate training intensities?

3 to 5 repetition bench press

Push-up test

Double-leg vertical jump

Skin-fold measurement

Correct answer: 3 to 5 repetition bench press

3 to 5 repetition bench press is correct because a one repetition maximum for this lift can be estimated from this test. This will then allow training intensities to be determined for the bench press exercise. Prescribing training intensities and loads during resistance training is imperative for achieving specific goals.

Push-up test is incorrect because training intensities cannot be derived from a muscular endurance test.

Double-leg vertical jump is incorrect because this measures total body bilateral power.

Skin-fold measurement is incorrect because these measurements are used to determine body composition.

31.

What is the MAIN purpose of proper posture?

Maintain enough structural efficiency to overcome constant forces

Secure normal length-tension relationships

Avoid postural distortions that can lead to strain

Promote tissue recovery

Correct answer: Maintain enough structural efficiency to overcome constant forces

Posture is considered the independent and interdependent alignment and function of all components of the Human Movement System. The MAIN purpose of proper posture is to maintain enough structural efficiency to overcome constant forces.

Structural efficiency is the alignment of the musculoskeletal system, which allows for your center of gravity to be maintained.

32.

When performing a circumference measurement on the thigh, what is the correct position of the measuring tape?

Ten inches above the top of the patella

Centered between the patella and the greater trochanter

At the widest portion of the buttocks

At the maximal circumference of the thigh

Correct answer: Ten inches above the top of the patella

Ten inches above the top of the patella is correct because this position can be easily replicated since it uses an easy-to-find anatomical landmark. This will increase the accuracy and reliability of the measurement. Circumference measurements can assess initial girth and changes in girth that are related to changes in body composition.

Centered between the patella and the greater trochanter is incorrect because this can be difficult to measure with the patella on the anterior of the thigh and the greater trochanter on the lateral aspect.

At the widest portion of the buttocks is incorrect because this is the position of the tape measure in the hip measurement.

At the maximal circumference of the thigh is incorrect because this is a subjective position that may be difficult to replicate.

33.

You have a new client and you want to measure their dynamic flexibility, core strength, balance, and overall neuromuscular control. Which of the following transitional postural assessments would be BEST to do that?

Overhead squat assessment

Pushing assessment

Pulling assessment

Sit-and-reach assessment

Correct answer: Overhead squat assessment

The overhead squat assessment is designed to measure dynamic flexibility, core strength, balance, and overall neuromuscular control. It is considered one of the most reliable and valid measures of lower extremity movement patterns, as long as the following checkpoints are monitored:

- *Feet*
- *Knees*
- *Lumbo-Pelvic-Hip Complex (LPHC)*
- *Shoulders*
- *Head*

34.

When taking the carotid pulse, which of the following factors are NOT required?

Test must be performed after a battery of performance assessments

Touch should be gentle

Test must be taken when athlete is calm

All similar assessments must be taken at the same time

Correct answer: Test must be performed after a battery of performance assessments

When taking the carotid pulse, the trainer must make sure the following conditions are met:

- *Touch should be gentle*
- *Test must be taken when athlete is calm*
- *All similar assessments (e.g., radial pulse) must be taken at the same time*

The test should NOT be performed after a battery of performance assessments; rather, this is a type of physiological assessment that needs to be taken BEFORE any type of body composition and performance assessment.

35.

A Sports Performance Coach is designing sports performance testing for a cross-country running athlete. Which of the following tests is the **least** appropriate to use with this athlete?

3 to 5 repetition bench press

1-mile run

Overhead squat test

Medical history

Correct answer: 3 to 5 repetition bench press

3 to 5 repetition bench press is correct because upper body strength is typically not a limiting factor in endurance running athletes. In order to aid an athlete in improving their performance, a Sports Performance Coach should choose tests that relate to the needs and abilities of the athlete's chosen sport. It is also important to ensure the safety of the athlete during the testing session.

1-mile run is incorrect because cardiorespiratory fitness is imperative to an endurance athlete.

Overhead squat test is incorrect because determining muscle imbalances can be useful for any athlete.

Medical history is incorrect because this can give insight into previous injuries or training to better prescribe future training.

36.

A Sports Performance Professional can use which of the following methods to measure body fat?

I. Skin-fold measurement

II. Circumference measurement

III. Body weight measurement

IV. Whole body plethysmography

V. Underwater weighing

I, IV and V only

I, II and IV only

III, IV and V only

All of these

Correct answer: I, IV and V only

I, IV and V only is correct because all of these measurements can be used to determine body fat percentage or the amount of fat mass, which can then be compared to total body mass to determine body fat percentage. The relative amount of lean body mass is important for most athletic activities. Measuring body composition is important to give an athlete a starting point from which to measure progress.

I, II and IV only is incorrect because a circumference measurement cannot determine whether the girth is fat or lean mass.

III, IV and V only is incorrect because measuring body mass alone cannot separate that mass into fat and lean proportions.

37.

Which sport utilizes an upper extremity strength assessment that involves bench pressing 185 pounds for the maximum number of repetitions?

Basketball

Football

Volleyball

Soccer

Correct answer: Basketball

Basketball is a sport that utilizes an upper extremity strength assessment that involves bench pressing 185 pounds for the maximum number of repetitions. This assessment is commonly used to evaluate the upper body strength and endurance of basketball players, who require significant upper body strength and power to perform various skills, such as shooting, rebounding, and defending.

Basketball players need to have strong chest, shoulder, and triceps muscles to generate the force necessary for explosive movements and quick changes of direction. The bench press assessment is a standardized way of measuring upper body strength and power.

38.

The 20-meter multi-stage shuttle test is a predictor of which of the following?

VO2 Max

Anaerobic power

Maximum heart rate

Aerobic endurance

Correct answer: VO2 Max

The 20-meter multi-stage shuttle test is a predictor of an athlete's VO2 max.

VO2 max is a measure of an athlete's maximal oxygen uptake during exercise and is a commonly used indicator of aerobic fitness. The 20-meter multi-stage shuttle test, also known as the beep test or the Yo-Yo test, is a test of an athlete's aerobic fitness that involves running back and forth between two lines 20 meters apart, timed to a series of beeps. The beeps start out slowly and gradually increase in speed, with shorter intervals between beeps. The athlete must reach the opposite line before the beep sounds, and then wait for the next beep before running back to the starting line.

The 20-meter multi-stage shuttle test is an effective predictor of an athlete's VO2 max, as it provides a standardized and objective measure of their aerobic fitness. The test has been shown to be highly correlated with VO2 max, making it a useful tool for assessing an athlete's aerobic capacity and for designing training programs to improve it.

39.

What does the Standing Soccer Throw measure and where in the body does it measure that?

Power of the core

Strength of the back

Endurance of the back

Strength of the arms

Correct answer: Power of the core

The Standing Soccer Throw measures the power of the core. This assessment involves standing with feet shoulder-width apart and in a staggered stance. The client throws a medicine ball as far as possible with an overhead motion. The distance of the throw is measured, and it reflects the power generated from the core muscles and upper extremities.

The core muscles play a crucial role in generating power for various activities, including throwing, punching, jumping, and kicking. The Standing Soccer Throw is a dynamic movement that requires coordination between the upper and lower body while generating maximal force from the core muscles.

By measuring the distance of the soccer ball throw, fitness professionals can assess the power generated from the core muscles and identify any limitations or weaknesses. This information can be used to develop targeted exercise programs to improve the client's core strength and power, which can enhance their overall fitness level and reduce the risk of injury during physical activity.

40.

When taking a circumference measurement from the thigh, where is the BEST place for the trainer to take the measurement?

10 inches above the top of the patella

5 inches above the top of the patella

10 inches above the top of the iliac crest

5 inches above the top of the iliac crest

Correct answer: 10 inches above the top of the patella

Circumference measurements can be another useful source of information when the goal is to alter body composition. The sites that NASM recommends include the following:

- *Neck*
- *Chest*
- *Waist*
- *Hips*
- *Thighs*
- *Calves*

When you take circumference measurements from the thigh, be sure to do so 10 inches above the top of the patella.

Also, be sure to hold the tape taut, and be consistent from measurement to measurement.

41.

When a client is undergoing the Sorensen Erector Spinae Test, to what degree should they extend their lumbar spine?

30 degrees

15 degrees

45 degrees

5 degrees

Correct answer: 30 degrees

The Sorensen Erector Spinae Test measures neuromuscular control and endurance of the spinal extensors.

Have the client lie prone on a treatment table. Next, instruct the client to extend the lumbar spine to 30 degrees, and hold this position for as long as they can while you record the time.

For reference, a normal test is usually around 30 seconds.

42.

During the pushing and pulling dynamic posture assessments, which of the following kinetic checkpoints are **not** a point of emphasis?

Ankle and foot complex

Lumbo-pelvic-hip complex

Head

Shoulder complex

Correct answer: Ankle and foot complex

Ankle and foot complex is correct because during these movements the ankle and foot complex is placed in a position of stability and only a catastrophic imbalance or weakness would lead to any compensation of this area of the kinetic chain. Pushing and pulling assessments are focused on determining if the head moves forward, if the shoulders elevate, or if the low back arches as compensation. All of these can be observed from a lateral view.

Lumbo-pelvic-hip complex, head, and shoulder complex are incorrect because these are kinetic checkpoints for the pushing and pulling assessments.

43.

During the overhead squat assessment, you notice that your client has an excessive forward lean from the lateral view. All of the following are underactive muscles **except**:

Soleus

Gluteus maximus

Anterior tibialis

Erector spinae

Correct answer: Soleus

During the overhead squat assessment, if your client has an excessive forward lean from the lateral view, the underactive muscles typically include the following:

- *Gluteus maximus*
- *Erector spinae*
- *Anterior tibialis*
- *Intrinsic core stabilizers*

Dealing with underactive muscles involves strengthening and activating them through targeted exercises and a well-rounded fitness program.

The soleus is considered an overactive muscle.

44.

Which of the following sports performance tests would be the **least** appropriate for a twelve-year-old soccer player who has never trained outside of practice before?

3 to 5 repetition squat

10-yard sprint

Horizontal jump

Blood pressure

Correct answer: 3 to 5 repetition squat

3 to 5 repetition squat is correct because this test involves a heavy load with an exercise that requires technical proficiency. This test is not likely to be safe for this athlete, and maintaining safety during testing (and training) is imperative for a Sports Performance Professional. Performing a sub-maximal load with a leg press machine would be a more appropriate method of determining lower-extremity strength for this athlete.

10-yard sprint is incorrect because this is a safe method of determining acceleration ability.

Horizontal jump is incorrect because this is a relatively safe method of determining bilateral lower-extremity power.

Blood pressure is incorrect because there is little risk associated with obtaining this measurement.

45.

If a 185-pound male athlete with 12% body fat gained five pounds of lean mass without decreasing any fat mass, what would his new body composition be?

11.7%

8.6%

12%

14.3%

Correct answer: 11.7%

11.7% is correct because fat mass = body weight x percent fat mass = 185 x .12 = 22.2 pounds, and new body composition = fat mass/body weight x100 = 22.2/190 x 100 = 11.7%. Body composition can measured through such methods as skin-fold measurement, underwater weighing or bioelectrical impedance. This information can be used to determine a goal weight or to assess progress.

8.6% is incorrect because this number would be found if dividing body weight by fat mass.

12% is incorrect because a change would have to occur if a change occurs in one type of mass and not the other.

14.3% is incorrect because this would be the athlete's body composition if they gained five pounds of fat mass.

46.

The goal of the single-leg horizontal hop is which of the following?

Distance

Height

Speed

Strength

Correct answer: Distance

The single-leg horizontal hop is designed to measure unilateral power and dynamic stabilization capabilities in a more dynamic fashion by focusing on distance, not height, as in the single-leg vertical hop.

This assessment can also be performed in the frontal and transverse planes of motion.

47.

To get a clear picture of an athlete's cardiorespiratory endurance during a 1-mile run, which of the following variables should be recorded?

I. Time taken to complete the test
II. Number of steps taken to complete the test
III. Heart rate immediately before the test
IV. Heart rate immediately after the test
V. Heart rate taken one minute after test is complete

I, IV and V only

I, II and IV only

III, IV and V only

I and IV only

Correct answer: I, IV and V only

I, IV and V only is correct because this will give information about the energy systems to provide energy for higher intensity activity, the metabolic cost of that exercise and the ability to recover from that exercise. This is one of the simpler cardiorespiratory tests, as the athlete is asked to run a mile in the best time they can. If proper training has occurred, this time should decrease when reassessed.

I, II and IV only is incorrect because the number of steps taken to complete the test is inconsequential to cardiorespiratory fitness.

III, IV and V only is incorrect because the heart rate taken immediately before a test is unlikely to give a true resting heart rate.

I and IV only is incorrect because the ability to recover from exercise is also an important aspect of cardiorespiratory fitness.

48.

A Sports Performance Professional is measuring the circumference of multiple areas of an athlete. Which of the following will **not** improve the validity and reliability of these measurements?

Pull the tape around the body area as tightly as possible

Ensure the tape measure is taut

Ensure the tape measure is horizontal and level

Perform the measurements in front of a floor length mirror to ensure proper positioning of the tape measure

---

Correct answer: Pull the tape around the body area as tightly as possible

Pull the tape around the body area as tightly as possible is correct because this will depress the tissue and give an inaccurate measure of the true girth. Adipose tissue can easily be moved aside or compressed to a greater extent than lean tissue. Therefore, pulling the tape around the body area is more likely to skew the results of an individual with more fat mass.

The other answer choices are incorrect because they will improve the validity and reliability of circumference measurements.

49.

During a pull-up test, which instructions can be given and enforced to ensure the validity and reliability of the test?

I. Grasp the bar with a pronated grip

II. Do not allow the body to swing

III. Do not kick or create momentum

IV. At the top, the athlete must reach the chin to hand level

V. At the bottom, the athlete's elbows must be locked

All of these

I, III and IV only

III, IV and V only

I, II and V only

Correct answer: All of these

All of these is correct because they all are components of a correctly performed pull-up. Having a standard of procedure during any sports performance testing is imperative to ensure the repeatability of the test and the true measurement of what the test is designed to assess. Consistency of procedure across each individual who performs the test and across each performance of the test throughout the athlete's career is key.

50.

When testing the various medicine ball throws to measure power, what is the correct approximate implement weight?

5% to 10% of body weight

5% to 10% of one rep maximum

20% to 30% of body weight

20% to 30% of one rep maximum

Correct answer: 5% to 10% of body weight

5% to 10% of body weight is correct because this relative load is specific to the ability that is being assessed during medicine ball throws. This ability is low load, high velocity power. The rotational medicine ball throw can measure this ability in the transverse plane, while the overhead and standing soccer medicine ball throws measure this ability in the sagittal plane.

5% to 10% of one rep maximum and 20% to 30% of one rep maximum are incorrect because measurement of a one rep maximum medicine ball throw is unsafe and not feasible.

20% to 30% of body weight is incorrect because this load is too high and will not be a good measure of high velocity strength.

51.

During the T-Drill, how many yards is the length of the leg of the T and the crosspiece of the T?

10 yards

5 yards

15 yards

20 yards

Correct answer: 10 yards

The T-Drill measures agility, reaction capabilities, and speed in multiple planes.

Four cones are positioned in a T.

The leg of the T is 10 yards in length, and the crosspiece of the T is also 10 yards in length.

Instruct the client to sprint the 10 yards to the cone in the middle of the crosspiece, shuffle to the cone on the right, then carioca to the left, and backpedal to the starting cone.

52.

After performing a 20-Meter Multistage Shuttle Test, a 21-year-old athlete is determined to have a VO2 of 48. Based on this result, what level of aerobic training would be appropriate for this athlete?

Zone 2

Zone 1

Zone 3

Zone 4

Correct answer: Zone 2

Zone 2 is correct because this athlete's VO2 would be considered average (between 44 and 50 for 20- to 24-year-olds). A Sports Performance Professional can use VO2 data to determine the appropriate cardio program in which to start a client. Those scoring in the poor or fair category should begin with zone 1 and those in the good or very good category can begin in zone 3.

Zone 1 is incorrect because this category is for 20- to 24-year-old athletes with a VO2 below 43.

Zone 3 is incorrect because this category is for 20- to 24-year-old athletes with a VO2 greater than 51.

Zone 4 is incorrect because this heart rate zone for cardiorespiratory exercise does not exist.

53.

During the overhead squat assessment, you observe an asymmetrical weight shift occurring. When you're creating a program for your client, which of the following exercises would be optimal to correct this issue?

Step-ups

Barbell back squats

Jump squats

Leg press

Correct answer: Step-ups

If you observe an asymmetrical weight shift during the overhead squat assessment, one exercise that can be used to correct this issue is the step-up.

The step-up is an exercise that focuses on developing stability and strength in the hips, legs, and core. It also helps to correct muscle imbalances between the left and right sides of the body. By performing this exercise, the client will develop better balance, coordination, and neuromuscular control, which can help to correct asymmetrical weight shifts during the overhead squat.

Other exercises that can help correct asymmetrical weight shifts during the overhead squat include single-leg deadlifts, split squats, lunges, and Bulgarian split squats. These exercises can be incorporated into a well-rounded training program that addresses the client's specific needs and goals and includes a variety of exercises to improve mobility, stability, strength, and power.

54.

What is the estimated maximum heart rate of a 24-year-old female basketball player?

196 beats per minute

204 beats per minute

220 beats per minute

176 beats per minute

Correct answer: 196 beats per minute

196 beats per minute is correct because maximum heart rate can be estimated through the formula 220 - age (196 = 220 - 24). This maximum heart rate can then be used to estimate targeted heart rate zones by multiplying this number by appropriate intensities. More accurate target heart rates can be determined using the Karvonen method, which also considers resting heart rate.

204 beats per minute, 220 beats per minute and 176 beats per minute are incorrect because these are not arrived at by the formula 220 - age.

55.

What is the fitness index of an athlete who completes the Harvard step test and whose heart beats 62 times between the 1 and 1.5 minutes after finishing?

88

242

1.5

44

Correct answer: 88

88 is correct because this is calculated using the short form fitness index. This is equal to (100 x test duration in seconds) / (5.5 x pulse count between 1 and 1.5 minutes) = (100 x 5 minutes x 60 seconds per minute) / (5.5 x 62) = 88. This fitness index would put the athlete within the "good" rating.

242 is incorrect because this number was calculated using the long form fitness index.

1.5 is incorrect because this was calculated without converting the test duration to seconds.

44 is incorrect because this was calculated as if the number of heartbeats was per minute instead of per thirty seconds.

56.

All of the following are recommended power assessments for basketball players **except**:

Single-Leg Squat Test

Single-Leg Vertical Jump

Shark Skill Test

Vertical Jump Test

Correct answer: Single-Leg Squat Test

While the Single-Leg Squat Test is a useful assessment for evaluating lower body strength and balance, it is not specifically designed to measure power in basketball players. Some recommended power assessments for basketball players include the following:

- *Vertical Jump Test*
- *Single-Leg Vertical Jump*
- *Shark Skill Test*

These assessments are designed to measure an athlete's explosive power and ability to generate force quickly, which are important for success in basketball.

57.

If you notice the knee moving inward during a single-leg squat assessment, which of the following is a probable overactive muscle?

Adductor complex

Medial hamstring

Medial gastrocnemius

Gluteus medius

Correct answer: Adductor complex

The single-leg squat assessment is designed to measure dynamic flexibility, core strength, balance, and overall neuromuscular control. It is considered one of the most reliable and valid measures of lower extremity movement patterns, as long as the following checkpoints are monitored:

- *Feet*
- *Knees*
- *Lumbo-Pelvic-Hip Complex (LPHC)*
- *Shoulders*
- *Head*

If you notice that the knee is moving inward, it is most likely because one or more of the following muscles are overactive:

- *Adductor complex*
- *Bicep femoris (short head)*
- *TFL*
- *Lateral gastrocnemius*
- *Vastus lateralis*

The medial hamstring, medial gastrocnemius, and gluteus medius are probable underactive muscles.

58.

All of the following are checkpoints of the Human Movement System during postural assessment EXCEPT:

Stomach

Feet

Lumbo-Pelvic-Hip-Complex (LPHC)

Shoulders

Correct answer: Stomach

Movement observations are critical for addressing any postural distortions and progressing a client's training program. NASM recommends that movement observations should relate to basic functions such as squatting, pushing, pulling, and balancing.

During observations, you want to follow each of the following checkpoints:

- *Feet*
- *Knees*
- *Lumbo-Pelvic-Hip-Complex (LPHC)*
- *Shoulders*
- *Head*

The stomach is NOT a movement observation checkpoint.

59.

You are performing an overhead squat assessment. You notice that your client has knee valgus. Which of the following is **not** a contributing factor to knee valgus?

Decreased hip abductor activity

Decreased hip abductor strength

Restricted ankle dorsiflexion

Increased hip adductor activity

Correct answer: Decreased hip abductor activity

Knee valgus, also known as "knock knees," is a common issue that can be observed during the overhead squat assessment. It occurs when the knees cave inward towards each other, which can increase the risk of knee injuries.

There are several contributing factors to knee valgus, including weak gluteus medius muscles, limited ankle dorsiflexion, and poor movement patterns. However, decreased hip abductor activity is not a contributing factor.

In fact, the gluteus medius muscles, which are responsible for hip abduction, are important in preventing knee valgus by keeping the knees in proper alignment during movements such as squats and lunges.

Decreased hip abductor strength: The hip abductor muscles, such as the gluteus medius, play a crucial role in stabilizing the hip and controlling the alignment of the knee. When the hip abductors are weak, they may not adequately counteract the inward forces acting on the knee, leading to knee valgus.

Restricted ankle dorsiflexion: Ankle dorsiflexion refers to the ability to bring the top of the foot towards the shin. When ankle dorsiflexion is restricted, it can limit the ability to properly shift the body's weight forward during movements like squats or lunges. This restriction can lead to compensatory movements, including knee valgus, as the body tries to find alternative ways to achieve the desired movement.

Increased hip adductor activity: The hip adductor muscles, such as the adductor magnus and adductor longus, are located on the inner side of the thigh. When these muscles become overactive or tight, they can pull the thigh inward, contributing to knee valgus. Excessive adductor activity can overpower the hip abductors, further compromising the alignment of the knee.

60.

Circumference measurements can be another useful source of information when the goal is to alter body composition. Which of the following is NOT a recommended circumference measurement site?

Triceps

Calves

Neck

Chest

Correct answer: Triceps

Circumference measurements can be another useful source of information when the goal is to alter body composition. The sites that NASM recommends include the following:

- *Neck*
- *Chest*
- *Waist*
- *Hips*
- *Thighs*
- *Calves*

The triceps are not a recommended measurement site for circumference measurements.

When you take circumference measurements, be sure to hold the tape taut and be consistent from measurement to measurement.

61.

Which of the following body composition methods uses air displacement to determine the amount of fat and lean mass?

Whole body plethysmography

Underwater weighing

Bioelectrical impedance

DEXA scans

Correct answer: Whole body plethysmography

Whole body plethysmography is correct because this involves a closed chamber in which air displacement is measured using the same principles as underwater weighing to determine body composition. The most common product using this technology is the Bod Pod. Though accurate, this equipment is expensive and may only be found in research settings.

Underwater weighing is incorrect because this method uses water displacement to measure body composition.

Bioelectrical impedance is incorrect because this method determines body composition based on the resistance of various tissues to an electric current.

DEXA scans is incorrect because this method uses small doses of radiation to determine body composition.

62.

Which of the following is **not** an approved site for circumference measurements?

Solar plexus

Chest

Thigh

Neck

Correct answer: Solar plexus

The solar plexus is not an approved site for circumference measurements.

Common approved sites for circumference measurements include the neck, chest, waist, hips, thighs, calves, and biceps, as these measurements provide valuable information about body composition, fat distribution, and progress during a fitness program.

63.

Which of the following is **not** a factor in obtaining an accurate resting heart rate measurement?

Only the radial pulse can be used

The average of three readings should be used

Readings should be taken at the same time, preferably in the morning

The athlete should be calm when measurement occurs

Correct answer: Only the radial pulse can be used

Only the radial pulse can be used is correct because the carotid pulse (with caution) or a heart rate monitor can be utilized to record resting heart rate. It is important, however, that whatever method is used, it is repeated each time for accuracy. Resting heart rate can be used to determine overall health, monitor training status and prescribe exercise intensity.

The other answer choices are incorrect because they are important factors in ensuring the accurate measurement of resting heart rate.

64.

Which of the following pieces of equipment is required to properly conduct a double-leg vertical jump?

Vertec

Stopwatch

Weighted vest

Agility ladder

Correct answer: Vertec

To properly conduct a double-leg vertical jump assessment, the Vertec is required.

The double-leg vertical jump is a common assessment used to measure an athlete's lower body power and explosiveness. The Vertec is a vertical jump measurement tool that consists of a pole with adjustable plastic vanes that can be set to different heights to measure the athlete's vertical jump height accurately.

During the assessment, the athlete stands next to the Vertec and jumps as high as possible, attempting to touch the highest vane possible. The difference between the athlete's standing reach and their highest touch is measured and recorded as the athlete's vertical jump height.

The Vertec is a valuable tool for measuring an athlete's vertical jump height accurately, providing coaches and fitness professionals with an objective measure of an athlete's lower body power and explosiveness. This can be useful for assessing the effectiveness of training programs and identifying areas for improvement.

65.

If you notice that the shoulders are elevating during a pulling assessment, which of the following is a probable UNDERACTIVE muscle?

Lower trapezius

Upper traps

Sternocleidomastoid

Levator scapulae

Correct answer: Lower trapezius

The pulling assessment allows the trainer to monitor and identify movement efficiency and potential imbalances in the upper body.

While a standing cable press is ideal, the pushing assessment can also be performed on a machine as well.

The three spots to watch out for are:

1. *Lower back: Does it arch?*
2. *Shoulders: Do they elevate?*
3. *Head: Does it move forward?*

If you notice that the shoulders are elevating during a pulling assessment, it is most likely because one or both of the following muscles are underactive:

- *Mid trapezius*
- *Lower trapezius*

The upper traps, sternocleidomastoid, and levator scapulae are probable overactive muscles.

66.

During a pull-up assessment, how many pull-ups should the client perform?

To exhaustion without compensatory movements

10

15

To exhaustion; compensatory movements are okay as long as the chin clears the bar

---

Correct answer: To exhaustion without compensatory movements

The pull-up assessment measures muscular endurance of the upper body, especially the pulling muscles.

Make sure your client grips the bar with the palms facing forward, then have them perform the pull-up to exhaustion. The total number of reps without compensatory movements, such as body swings, is recorded.

67.

You have a client who is a golf player and you need to assess their power. Given their sport, which of the following assessments would be most appropriate?

Rotation MB Throw

Squat Jump

Bench Press

Plank Hold

Correct answer: Rotation MB Throw

The Rotation Medicine Ball Throw is the most appropriate assessment to measure power for a golf player. The throwing motion in this test simulates the movement pattern used in the golf swing, specifically the transverse plane rotation. This assessment evaluates the client's ability to generate power from their core and transfer it through their upper body to produce a powerful throw. It is a quick and easy test that provides valuable information to design an appropriate training program to improve the client's power in golf.

68.

When instructing the set-up position for the Davies test, how far apart should the Sports Performance Professional have the athlete place their hands?

Three feet

Two feet

One foot

Four feet

Correct answer: Three feet

Three feet is correct because this distance (36 inches) is easily standardized and is far enough apart that every athlete, regardless of arm length, will be required to shift their center of mass when bringing one hand over to the other. However, arm length can alter the difficulty and ability to move quickly during the test. Therefore, it is best to compare these results to the athlete's previous results or to those of individuals of similar height.

Two feet and one foot are incorrect because this distance may be too short for taller individuals to have to shift their bodies during the test.

Four feet is incorrect because this distance may be too long for shorter individuals to be able to maintain a push-up position.

69.

Which of the following muscles is likely to be overactive if the shoulders elevate or the head protrudes forward during the pulling assessment?

Sternocleidomastoid

Hip flexors

Gastrocnemius

Deep cervical flexors

Correct answer: Sternocleidomastoid

Sternocleidomastoid is correct because this is one of the three muscles (which include the upper trapezius and elevator scapulae) that are likely overactive when the head protrudes forward and/or the shoulders elevate during the pulling assessment. This is also true for the pushing assessment. These assessments determine movement efficiency and identify muscle imbalances during pulling and pushing movements.

Hip flexors is incorrect because this muscle is likely to be overactive if the low back arches.

Gastrocnemius is incorrect because this muscle is not directly involved in the pulling assessment.

Deep cervical flexors is incorrect because this muscle is likely to be underactive if the head protrudes forward during the pulling assessment.

70.

A Sports Performance Professional wants to evaluate the function of the muscles of the upper extremity and look for muscle imbalances. Which dynamic posture assessment is the **most** appropriate for this purpose?

Overhead squat test

Landing error scoring system

Single-leg squat test

Single-leg star balance excursion test

Correct answer: Overhead squat test

Overhead squat test is correct because ability to keep the arms overhead during the movement will determine whether certain upper body muscles are overactive or underactive. The overhead squat test is performed with feet hip-width apart and arms reaching overhead; the athlete will then squat to the depth of sitting in a chair five times. Other dynamic posture assessments for the upper extremity include pushing and pulling tests.

Landing error scoring system is incorrect because the lower extremity is assessed during this test.

Single-leg squat test is incorrect because only the knee is observed during this assessment.

Single-leg star balance excursion test is incorrect because this is not a dynamic posture assessment.

71.

When the upper trapezius and levator scapulae are tight and overactive during a pushing assessment, which of the following compensations is **most** likely to happen?

Head migrates forward

Low back arches

Hip hike

Arm turns inward

Correct answer: Head migrates forward

When the upper trapezius and levator scapulae muscles are tight and overactive during a pushing assessment, the most likely compensation to occur is that the head migrates forward. This is also known as "forward head posture" or "poking chin posture."

The upper trapezius and levator scapulae muscles are located in the upper back and neck region. They are responsible for elevating and stabilizing the shoulder blades, as well as assisting in neck movements. When these muscles become tight and overactive, they can pull the head and neck forward, leading to the forward migration of the head.

Forward head posture can place excessive strain on the neck, upper back, and shoulder muscles, potentially causing discomfort and increasing the risk of injury. Addressing the tightness in the upper trapezius and levator scapulae muscles through targeted stretching and strengthening exercises can help to correct this compensation, improve overall movement quality, and reduce the risk of injury during pushing movements.

72.

Which of the following is NOT a skinfold measurement site, according to the Durnin formula?

Calves

Biceps

Subscapular

Iliac crest

Correct answer: Calves

While there are many equations for measuring body fat percentage, NASM recommends the Durnin formula for calculating upper body fat.

All measurements are performed on the right side of the body, unless injuries or scarring prevents this.

The four measurement sites of the Durnin formula include the following:

- *Biceps*
- *Triceps*
- *Subscapular*
- *Iliac crest*

The calves are NOT a recommended body fat measurement site, according to the Durnin formula.

73.

An athlete is discovered to be prescribed with a bronchodilator for their asthma. What effect is this expected to have on their resting heart rate?

No effect

Decrease heart rate

Increase heart rate

None of these

Correct answer: No effect

No effect is correct because bronchodilators affect the pulmonary system, not the cardiovascular system. Bronchodilators are typically prescribed to correct or prevent bronchial smooth muscle constriction in individuals with asthma or other pulmonary diseases. It is important for a Sports Performance Professional to understand the effect of some primary classes of drugs but to never administer, prescribe or educate on the usage and effects of any of these medications.

Decrease heart rate is incorrect because this is more likely to occur if the athlete is taking a beta blocker or a vasodilator.

Increase heart rate is incorrect because this is more likely to occur if the athlete is taking a nitrate or antidepressant.

74.

During an overhead squat assessment, you notice that your client's feet are turning out from the anterior view. Which muscle is most likely **not** involved in this compensation?

Adductor complex

Lateral gastrocnemius

Soleus

Biceps femoris

Correct answer: Adductor complex

If your client's feet turn out during an overhead squat assessment from the anterior view, the adductor complex is not likely to be involved in this compensation.

Instead, the overactive muscles causing this compensation typically include the following:

- *Lateral gastrocnemius*
- *Soleus*
- *Biceps femoris (short head)*
- *Tensor fascia lata (TFL)*

To address overactive muscles, a combination of flexibility training and corrective exercises should be incorporated into your client's fitness program. This could include foam rolling, static stretching, and strengthening underactive muscles.

75.

One of your client's arms has a circumference of 15.8". Which of the following would be the proper blood pressure cuff size?

Adult large cuff

Child cuff

Adult thigh cuff

Adult cuff

Correct answer: Adult large cuff

According to the NASM guide to blood pressure cuff size chart, if your client has an arm circumference of 15.8", you would need to use an adult large cuff. Here is the full guide on arm circumference measurements and corresponding cuff size, for reference:

- *Up to 13.4" - Adult cuff*
- *13.7"–17.3" - Adult large cuff*
- *17.7"–20.4" - Adult thigh cuff*

Blood pressure is measured by using a sphygmomanometer, which is made up of an inflatable cuff, a pressure meter with an inflation bulb or valve, and a stethoscope.

Before measuring blood pressure, the athlete should sit down for 5–10 minutes with their legs uncrossed.

The trainer should place the appropriate size cuff on the left arm of the athlete, just above the elbow.

Place the stethoscope over the brachial artery using a minimal amount of pressure. Rapidly inflate the cuff to 20–30 mm Hg above the point when the pulse can no longer be felt at the wrist.

Next, the valve should be opened on the bulb to release the pressure at a rate of about 2 mm Hg per second. This is when it's essential to listen for the pulse while watching the pressure meter's reading decline.

From here, the trainer can determine the diastolic and systolic blood pressure.

76.

If the internal obliques of the same side are overactive during a single-leg squat assessment, which of the following will most likely happen?

Inward trunk rotation

Outward trunk rotation

Hip hike

Knee moves inward

Correct answer: Inward trunk rotation

If the internal obliques of the same side are overactive during a single-leg squat assessment, the most likely outcome is an inward trunk rotation. The internal obliques are abdominal muscles that function primarily in trunk rotation, lateral flexion, and compression of the abdomen.

When the internal obliques on one side become overactive or tight, they can cause an imbalance in the torso, pulling it inwards towards the same side during the single-leg squat assessment. This inward trunk rotation can indicate muscle imbalances and may lead to compensations in other areas of the body.

Identifying this issue can help fitness professionals design targeted stretching and strengthening exercises to address these imbalances, improve overall movement quality, and reduce the risk of injury.

77.

A client reveals that they are taking antidepressants. While it shouldn't affect exercise performance, which of the following best describes what **might** occur?

Increase heart rate / Decrease blood pressure

Decrease heart rate / No effect on blood pressure

Increase heart rate / Increase blood pressure

No effect on heart rate / Decrease blood pressure

Correct answer: Increase heart rate / Decrease blood pressure

Some antidepressants may increase heart rate, while others may have the opposite effect and decrease blood pressure. It's important for the trainer to consult with the client's healthcare provider to understand the specific medication and its potential effects on exercise performance.

78.

What is the FIRST equation to follow in order to calculate fat mass vs. lean body mass?

Body fat percentage X scale weight

Scale weight - fat mass

Body fat percentage + fat mass

Scale weight / body fat percentage

Correct answer: Body fat percentage X scale weight

In order to be able to compare fat mass vs. lean body mass, it's important that the personal trainer first find out the client's fat mass. They can do that by following this formula:

- *Body fat percentage X scale weight*

Body fat percentage can be calculated in a number of ways, including skinfold measurements or bioelectrical impedance. Once this has been established, the trainer can then move on to the next step in the formula:

- *Scale weight - fat mass*

This equation will allow the trainer to determine lean body mass.

Here's an example to illustrate these two equations:

You have a 27-year-old female client who weighs 130 pounds. The sum of her four skinfolds equals 55 mm, and carries about 28% of her body weight as fat.

- *0.28 (body fat percentage) X 130 (scale weight) = 36 pounds of body fat*
- *130 (scale weight) - 36 pounds of body fat = 94 pounds of lean body mass*

79.

During a shark skill test pattern that took ten seconds to complete, an athlete's hands came off their hips twice, their foot went into the wrong square once, and their foot turned diagonally five times. What is this athlete's final total time?

10.3 seconds

10.8 seconds

14 seconds

11.5 seconds

Correct answer: 10.3 seconds

10.3 seconds is correct because the athlete performed three faults during the test (hands off the hips twice and foot in the wrong square once) which adds 0.3 seconds to their time (0.1 second for each fault). Rotating the foot so that it orients diagonally is not a fault during this test. The shark skill test measures lower-extremity agility and neuromuscular control.

10.8 seconds is incorrect because rotating the foot is not a fault and would not result in 0.5 seconds added to the time.

14 seconds and 11.5 seconds are incorrect because only 0.1 second is added for each fault.

80.

For which of the following reasons would you have a client perform the Standing Soccer Throw assessment?

To measure total power of the core and upper extremities

To measure total body strength and power

To estimate the one-rep max on total body power

To measure total body transverse plane strength and power

Correct answer: To measure total power of the core and upper extremities

The Standing Soccer Throw assessment is meant to measure the total power of the core and upper extremities.

The client begins by holding a medicine ball, with their feet staggered.

Using the proper soccer throw-in technique, the client brings their arms over their head and throws the medicine ball forward as far as possible. The distance thrown is measured.

81.

Which strength assessment combination would be optimal for a client who plays hockey?

Bench Press and Squat (5 RM)

Overhead Press and Deadlift (5 RM)

Clean and Snatch (5 RM)

Lunge and Jump Squat (5 RM)

Correct answer: Bench Press and Squat (5 RM)

Hockey requires a combination of upper and lower body strength and power, making the 5-repetition maximum Bench Press and Squat assessments an ideal choice for testing hockey players.

These tests measure the maximum amount of weight a client can lift for a specific number of repetitions, providing insight into their overall strength and power in key muscle groups used during hockey. Additionally, these assessments are commonly used in off-ice hockey training programs, making them a relevant choice for evaluating a hockey player's fitness level.

82.

How fast will an athlete need to run between the lines of cones during the fifth stage of the 20-meter multistage shuttle test?

6.5 miles per hour

7.3 miles per hour

9.7 miles per hour

10.5 miles per hour

Correct answer: 6.5 miles per hour

6.5 miles per hour is correct because the running speed during the first stage is 5.3 miles per hour and the speed is increased by 0.3 miles per hour during each stage. At the fifth stage there will have been four speed increases, or a total of 1.2 miles per hour. This field test is designed to estimate aerobic power and predict VO2 max.

7.3 miles per hour is incorrect because a 0.5 increase occurs in kilometers per hour, not miles per hour, each minute.

9.7 miles per hour is incorrect because the 8.5 starting point is for kilometers per hour, not miles per hour.

10.5 miles per hour is incorrect because this represents what would be the speed in kilometers per hour, not miles per hour.

83.

A golf coach wants to measure his athlete's core strength. Which of the following performance tests should be suggested by the Sports Performance Coach to perform this task?

Double-leg lowering test

Single-leg star balance excursion test

Davies test

Push-up test

Correct answer: Double-leg lowering test

Double-leg lowering test is correct because this test will effectively assess the neuromuscular control and strength of the core. This test is performed by lying supine with a slightly inflated blood pressure cuff under the lower back to determine a change in position. The legs begin at ninety degrees and are slowly lowered until a compensation occurs.

Single-leg star balance excursion test is incorrect because this test measures dynamic balance and neuromuscular efficiency.

Davies test is incorrect because this test measures upper extremity agility and stabilization.

Push-up test is incorrect because this test measures muscular endurance of the pushing muscles of the upper body.

84.

The single-leg balance excursion test allows a Sports Performance Professional to determine if an athlete has neuromuscular control in which of the following planes of motion?

All of these

Sagittal

Frontal

Transverse

Correct answer: All of these

All of these is correct because the procedure of the test involves the athlete reaching the opposite leg in the sagittal, frontal and transverse planes. The allows the Sports Performance Professional to assess in which plane of motion the athlete has the least amount of control. The range of motion of all three planes can also be determined during this test.

85.

You are going to perform a core stability assessment for a client who is a basketball player. Which of the following core stability tests would be recommended to use?

Davies Test

Sit-Up Test

Arm-Leg Raise Test

Plank Test

Correct answer: Davies Test

The Davies Test is a core stability assessment that is often used for athletes, especially basketball players. The Davies Test is a good assessment for basketball players because it focuses on trunk endurance and stability, which are important for the sport.

Basketball involves a lot of rapid changes in direction and explosive movements, such as jumping, pivoting, and twisting. These movements require a stable core to transfer force effectively from the lower body to the upper body and to maintain balance and control during quick movements.

The Davies Test evaluates an athlete's ability to stabilize their trunk while performing movements that simulate basketball-specific actions. It includes a variety of exercises, such as diagonal chopping, high plank with leg lift, and single-leg squat touchdown, that challenge the core in different planes of motion and directions.

By assessing an athlete's core stability with the Davies Test, coaches and trainers can identify areas of weakness and develop targeted training programs to improve core strength and stability, which can translate to better performance on the court.

The Sit-Up Test is a fitness assessment that measures an individual's abdominal muscle strength and endurance by counting the number of sit-ups performed in a given time period, typically one minute.

The Arm-Leg Raise Test is a functional exercise assessment that evaluates core stability, balance, and coordination by measuring the ability to simultaneously lift and hold the opposite arm and leg while maintaining a stable position on hands and knees.

The Plank Test is a fitness assessment that evaluates core muscle strength and endurance by measuring the duration an individual can maintain a proper plank

position with the body in a straight line, resting on the forearms and toes.

86.

Static posture is used to measure which of the following attributes of the body?

Independent and interdependent alignment

Function

Movement

Flexibility

Correct answer: Independent and interdependent alignment

Independent and interdependent alignment is correct because this defines the structural efficiency of the human movement system. This structural efficiency is what allows our center of gravity to be maintained over a base of support. Structural efficiency is needed to overcome the constant forces being placed on the body (i.e., gravity).

Function and movement are incorrect because they are measured by observing dynamic posture.

Flexibility is incorrect because this is measured through dynamic posture and range of motion tests.

87.

How far down should the client lower themselves during a push-up assessment?

About 4 inches from the ground

To the ground

About 1 inch from the ground

About 2 inches from the ground

Correct answer: About 4 inches from the ground

During a push-up assessment, the client should lower themselves to a depth of about 4 inches from the ground or about the size of a closed fist.

The push-up is a fundamental exercise that primarily targets the muscles in the chest, shoulders, and triceps, while also engaging the core and lower body muscles to stabilize the body.

Lowering the body to a depth of about 4 inches allows for a full range of motion, ensuring that the muscles in the upper body are properly engaged and worked. However, it is essential to ensure that the client maintains proper form throughout the exercise to minimize the risk of injury and achieve accurate test results.

To perform a proper push-up, the client should start in a plank position with their hands shoulder-width apart and their feet together or slightly apart. From there, they should lower their body towards the ground, keeping their elbows tucked close to their body, and their core engaged. The depth of the push-up should be until the chest is about 4 inches from the ground, and then they should push back up to the starting position, fully extending their arms.

88.

To perform a blood pressure measurement, which two pieces of equipment are required?

Sphygmomanometer and stethoscope

Skinfold caliper and stethoscope

Sphygmomanometer and heart rate monitor

Goniometer and stopwatch

Correct answer: Sphygmomanometer and stethoscope

Sphygmomanometer and stethoscope is correct because the sphygmomanometer is used to occlude and allow blood flow and the stethoscope is used to listen for the pulse as the pressure is slowly decreased. Blood pressure is measured by inflating the cuff of the sphygmomanometer slightly above normal blood pressure before slowly releasing the pressure. The stethoscope is placed under the cuff to listen for the when the pulse is first heard (this is the systolic pressure) and for the point when the pulse disappears (the diastolic pressure).

Skinfold caliper and stethoscope is incorrect because the skin fold caliper is used to determine body composition.

Sphygmomanometer and heart rate monitor is incorrect because a heart rate monitor does not allow one to hear a pulse.

Goniometer and stopwatch is incorrect because neither joint range of motion nor duration is measured to determine blood pressure.

89.

You want to measure a client's lateral speed and agility. Which would be the **best** assessment for this purpose?

Lower Extremity Functional Test

40-yard dash

Vertical jump test

Davies Test

Correct answer: Lower Extremity Functional Test

If you want to measure a client's lateral speed and agility, the best assessment for this purpose is the Lower Extremity Functional Test.

The Lower Extremity Functional Test is a dynamic movement assessment that involves the client moving laterally in a side-to-side motion, touching cones or markers placed at regular intervals. The client must perform different movements as they go from side to side, including backpedaling, sprints, and side shuffles. The client's speed and agility are measured based on the time it takes to complete the test.

This assessment is ideal for measuring lateral speed and agility, which are crucial components of many sports and activities that involve quick changes of direction. The Lower Extremity Functional Test can identify any limitations or weaknesses in these areas and help develop targeted exercise programs to improve the client's lateral speed and agility.

The 40-yard dash is a sprint test covering a distance of 40 yards, commonly used to assess an individual's speed, acceleration, and explosive power.

The Vertical Jump Test is a performance assessment used to measure an individual's explosive lower body power, in which the participant jumps as high as possible from a standing position, typically by measuring the difference between their standing reach height and their maximum jump height.

The Davies Test is a functional upper body assessment used to evaluate upper extremity agility, stability, and endurance, in which the participant performs a rapid alternating hand movement exercise, typically touching two markers set 36 inches apart while maintaining a push-up position for a predetermined period of time.

90.

You are performing a circumference measurement around the waist. There is no apparent narrowing of the waist. Where should you measure?

Across the navel

Level of the hip bones

At the lowest rib

Two inches below the bottom of the ribcage

Correct answer: Across the navel

When performing a waist circumference measurement and there is no apparent narrowing of the waist, you should measure across the navel (belly button). To accurately measure the waist circumference in this situation, follow these steps:

1. *Have the client stand with their feet shoulder-width apart and their weight evenly distributed on both legs.*
2. *Ensure that the client's abdomen is relaxed.*
3. *Locate the client's navel (belly button).*
4. *Use a flexible, non-stretch measuring tape to wrap around the waist at the level of the navel, making sure the tape is parallel to the floor.*
5. *Ensure that the tape is snug but not too tight and that it doesn't compress the underlying soft tissue.*
6. *Record the waist circumference measurement at this point, usually to the nearest 0.1 inch (0.25 cm) for accuracy.*

Measuring at the level of the navel is a reliable method for assessing waist circumference when there is no apparent narrowing of the waist.

91.

During a squat assessment, your client successfully completes the required 3-5 repetitions and they are entering a two-minute break. How much weight should be added to the barbell for the next round?

10% to 20% of the initial load

5% to 10% of the initial load

15% to 25% of the initial load

20% to 30% of the initial load

Correct answer: 10% to 20% of the initial load

During a squat assessment, after the client has successfully completed the required 3-5 repetitions, and they are entering a two-minute break, it's recommended to add 10% to 20% of the initial load to the barbell for the next round. This is a safe and effective way to progressively increase the load and challenge the client's strength and stability while minimizing the risk of injury.

Adding too much weight too quickly can lead to poor form, compensations, and increased risk of injury, while adding too little weight may not provide enough challenge to elicit significant strength gains. The recommended increase of 10% to 20% of the initial load allows for a gradual progression and ensures that the client is working at an appropriate level of difficulty.

During the squat assessment, it is also essential to monitor the client's form and technique, ensuring that they maintain proper squat mechanics and range of motion. If the client is unable to complete the required repetitions in the proper form, it may be necessary to decrease the load and reassess their strength and movement quality before continuing with the assessment.

92.

During the 300-Yard Shuttle, how far apart should you place each of the cones?

25 yards

20 yards

15 yards

10 yards

Correct answer: 25 yards

During the 300-Yard Shuttle, the cones should be placed 25 yards apart.

The 300-Yard Shuttle is a test of an athlete's anaerobic endurance. It involves running back and forth between two cones placed 25 yards apart for a total of six round trips, covering a total distance of 300 yards. The athlete must touch the line at each end with one hand before changing direction and running back to the other line.

After five minutes of rest, the test is repeated.

93.

Which of the following would you **not** add penalty time for during the Shark Skill Test?

Hands on hips

Non-hopping leg touches the ground

Foot goes into the wrong square

Foot does not return to the center square

Correct answer: Hands on hips

During the Shark Skill Test, hands on hips are not penalized, because this position is required to perform the test.

The Shark Skill Test is a dynamic movement assessment used to measure an athlete's lower extremity agility and change of direction ability.

During the test, athletes are required to place their hands on their hips to ensure that they are not using their upper body to help them change direction or balance. This position is a requirement of the test and is not penalized.

However, if an athlete touches the non-hopping leg to the ground, jumps into the wrong box, takes their hands off their hips, or the hopping foot does not return to the center square, penalty time will be added to their total time. The amount of penalty time adds 0.10 seconds per mistake.

94.

Which of the following power assessments would **not** be appropriate for a client who plays soccer?

Pull-Up Test

Double-Leg Vertical Jump

Overhead MB Throw

Shark Skill Test

Correct answer: Pull-Up Test

The Pull-up test primarily measures upper-body muscular endurance and strength, which may not be as relevant for soccer players who require more lower-body power and agility in their movements on the field. Therefore, it may not be the most appropriate power assessment for soccer players.

The Double-Leg Vertical Jump is a great test for measuring the lower-body power and explosiveness of a soccer player, which is important for movements such as jumping, kicking, and changing direction quickly.

The Overhead MB Throw is another effective power assessment that measures the player's total body power and explosiveness. This test is particularly useful for measuring the upper-body and core strength required for shooting, passing, and tackling in soccer.

The Shark Skill Test is an agility-based test that simulates the quick change of direction and rapid acceleration and deceleration movements required in soccer. This assessment is particularly relevant to soccer players, since agility is crucial for maintaining possession of the ball and avoiding defenders.

In contrast, the Pull-up test primarily measures the upper-body strength of an individual and is less relevant for soccer players who require power and agility in addition to upper-body strength. Therefore, the Double-Leg Vertical Jump, Overhead MB Throw, and Shark Skill Test are better options for assessing power and agility in soccer players.

95.

If you want to measure the muscular endurance of the upper body, which of the following tests would be **most** appropriate for your assessment?

Push-up

Bench press

Cable press

Dumbbell fly

Correct answer: Push-up

If you want to measure the muscular endurance of the upper body, the most appropriate test for your assessment would be push-ups. Push-ups are a fundamental bodyweight exercise that primarily targets the muscles in the chest, shoulders, and triceps, while also engaging the core and lower body muscles to stabilize the body.

Push-ups are an effective way to evaluate the muscular endurance of the upper body, as they require the muscles to perform repeated contractions against a submaximal load for an extended period. By measuring the number of push-ups an individual can perform in a set time or until failure, fitness professionals can assess their upper body muscular endurance and track their progress over time.

The push-up test is a commonly used assessment tool in fitness testing, as it requires no equipment and can be easily performed in a variety of settings. It can also be modified to suit the fitness level of individuals of all ages and abilities by adjusting the number of repetitions or the difficulty of the exercise.

Improving muscular endurance through targeted exercise programs, including push-ups, can lead to significant improvements in overall fitness, functional movement, and reduced risk of injury during physical activity. Thus, the push-up test is a valuable addition to a comprehensive fitness assessment, allowing for the development of personalized exercise programs that cater to an individual's specific fitness goals and needs.

96.

Your client is a football player and you need to perform a strength assessment for him. Which of the following would **not** be a relevant strength assessment for you to do with your client?

Deadlift (10 RM)

Bench press (5 RM)

Squat (5 RM)

Power clean (5 RM)

Correct answer: Deadlift (10 RM)

The 10-repetition maximum deadlift would not be an ideal choice for a strength assessment. A strength assessment should focus on heavier weights with lower repetition in the 4 to 6-rep range. Therefore, the bench press, squat, and power clean — tested for 5 RM — would be ideal.

The purpose of a strength assessment for a football player client is to measure the maximal amount of force they can produce in specific movements and muscle groups.

This information can help to identify areas of weakness, set training goals, and track progress over time. It can also be used to develop a customized training program that is tailored to the individual needs and goals of the client.

97.

Which of the following is **not** one of the recommended postural assessment sites for a posterior view?

Ankles

Head

Pelvis

Hip joints

Correct answer: Ankles

During a postural assessment, it is important to view a client from both an anterior and posterior view. When viewing a client from a posterior view, there are several recommended assessment sites to observe, including the head, shoulders, scapulae, iliac crests, and feet.

However, the ankles are not one of the recommended sites for a posterior view postural assessment.

This is because the ankles are more relevant to observe from a lateral view, as this is where many ankle and foot injuries and imbalances occur. By focusing on the recommended sites for a posterior view, a personal trainer can gain valuable insight into a client's postural alignment, muscle imbalances, and potential areas of weakness or injury risk.