

# Quiz Policies

## **Eligibility**

The NCSF online quizzes are open to any currently certified fitness professional, 18 years or older.

## **Deadlines**

Course completion deadlines correspond with the NCSF Certified Professionals certification expiration date. Students can obtain their expiration dates by reviewing either their certification diploma or certification ID card.

## **Cancellation/Refund**

All NCSF continued education course studies are non-refundable.

## **General Quiz Rules**

- You may not have your quiz back after sending it in.
- Individuals can only take a specific quiz once for continued education units.
- Impersonation of another candidate will result in disqualification from the program without refund.

## **Disqualification**

If disqualified for any of the above-mentioned reasons you may appeal the decision in writing within two weeks of the disqualification date.

## **Reporting Policy**

You will receive your scores within 4 weeks following the quiz. If you do not receive the results after 4 weeks please contact the NCSF Certifying Agency.

## **Re-testing Procedure**

Students who do not successfully pass an online quiz have the option of re-taking. The fees associated with this procedure total \$15 (U.S) per request. There are no limits as to the number of times a student may re-test.

## **Special Needs**

If special needs are required to take the quiz please contact the NCSF so that appropriate measures can be taken for your consideration.

## Lift Correctly – Optimize Gains (Volume III: The Military Press)

### *Introduction*

In this segment of the series “lift correctly – optimize gains” we cover aspects related to the proper technique for the military press. The term military press is used to describe a standing front overhead barbell press. Biomechanically, it differs from a dumbbell shoulder press or machine overhead press. A key difference is that it is performed in a closed-kinetic chain stance with closed-circuit loading. This combination provides specific biomechanical/muscular challenges as well as limitations. The incorporation of a closed-kinetic chain places greater demands on central stability as well as total muscle recruitment; whereas the closed-circuit reduces localized stability, increasing loading potential. The use of barbells over dumbbells tends to reduce range of motion (ROM) potential but adds to the loading capacity of the movement. In any case, personal trainers should recognize that overhead pressing in general is relatively taxing on the shoulder complex and joint segments of the lower spine if not performed properly. The primary concern is heavy loading of an open glenohumeral joint, combined with requisite segment mobility involving muscles and connective tissues that are often tight or restricted due to postural distortions. This can include the pectoralis major and minor, latissimus dorsi and the joint capsule itself. Personal trainers must take extra care to ensure proper technique to optimize gains while limiting the risk for injury or aggravation of inherent borderline issues (e.g., tight internal rotators, risk for shoulder impingement). With attention to proper form the military press can be a great tool for increasing deltoid strength or hypertrophy based on the loading and set/repetition schematics used. It will also promote shoulder complex function as well as increased total body force coupling and connectivity.

It is important to state that overhead barbell pressing only occurs in front of the head. Behind the head pressing is understood to be contraindicated regardless of the exerciser’s intent. The anterior and medial heads of the deltoid serve as the prime movers for the military press, which receive secondary assistance from the triceps brachii as the arms fully extend. The rotator cuff is also highly involved from a stability standpoint to ensure proper shoulder-elbow positioning and force transfer through the glenohumeral joint. The trapezius and serratus anterior also provide support, functioning as phasic stabilizers to facilitate proper shoulder complex (scapular) positioning and force coupling so that reaction force can transfer effectively to the arms from the trunk. The forces created to resist the load during the military press ultimately begin at the ground; indeed, a major objective of the lift is to challenge the transfer of ground reaction force to the bar with acceleration force through the shoulders. Energy is partly captured in the trunk to provide central stability for stable shoulder complex function, and is further supported by local stability of the glenohumeral joint. The majority of tension is placed on the deltoids over the duration of the repetitions performed. Any neuromuscular gain in energy capture occurs in the muscles of the glenohumeral joint as well as the arms. Again, this clarifies the military press as being well suited for strength and/or hypertrophy training.

### *Basic Teaching Cues*

Trainers can utilize the following teaching cues to help ensure proper performance of the military press. The first logical step in this process is ensuring a proper starting position. To accomplish this, the client attains an upright standing position with the feet positioned roughly hip-to-shoulder width and facing forward. The hips and trunk should be aligned to enhance central stability for optimal force transfer during the upward pressing movement. The back is kept flat to ensure a neutral spine and should not be extended for mechanical gain. Many exercisers incorrectly flex the hips and arch the back to create faulty but effective stability.

The barbell starts at the top of the chest with the arms flexed with the wrists and elbows aligned directly under the bar; forearms perpendicular to the floor. The head should be held slightly back, enough to ensure the bar will not contact the chin. To initiate the concentric phase, the shoulders are flexed and then abducted to accelerate the barbell off of the chest. This is followed by fluid elbow extension to continue the bar's vertical movement. During the pressing action a neutral spine position should be maintained to avoid a backward arch. Full ROM has been engaged once the arms are fully extended overhead in alignment with the shoulders and heels, but not forcibly locked. When the barbell is at the terminal end point, the biceps should nearly align with the ears to ensure the load is not pressed out in front of the body or allowed to migrate backward. Trainers can help ensure this top position by cueing clients to “push their head through the window” - their arms being the window frame. This teaching cue should not promote cervical flexion or retraction but rather help maintain neutral positioning of the spine and the load over the base of support. From here, the resistance is then lowered under control back down to a position at the top of the chest. During this deceleration phase, a neutral spine position is still be maintained. The weight should not be allowed to bounce off of the chest/shoulders during repetitions; but rather light contact should be made before pressing the bar back upward. Spotting for the military press can be employed during the concentric phase to provide assistance as needed at the distal aspects of the humerus near the elbows. Spotting assistance should not be applied directly at the elbow joints themselves. The trainer will need to stand behind the client to provide this assistance.

Start



End



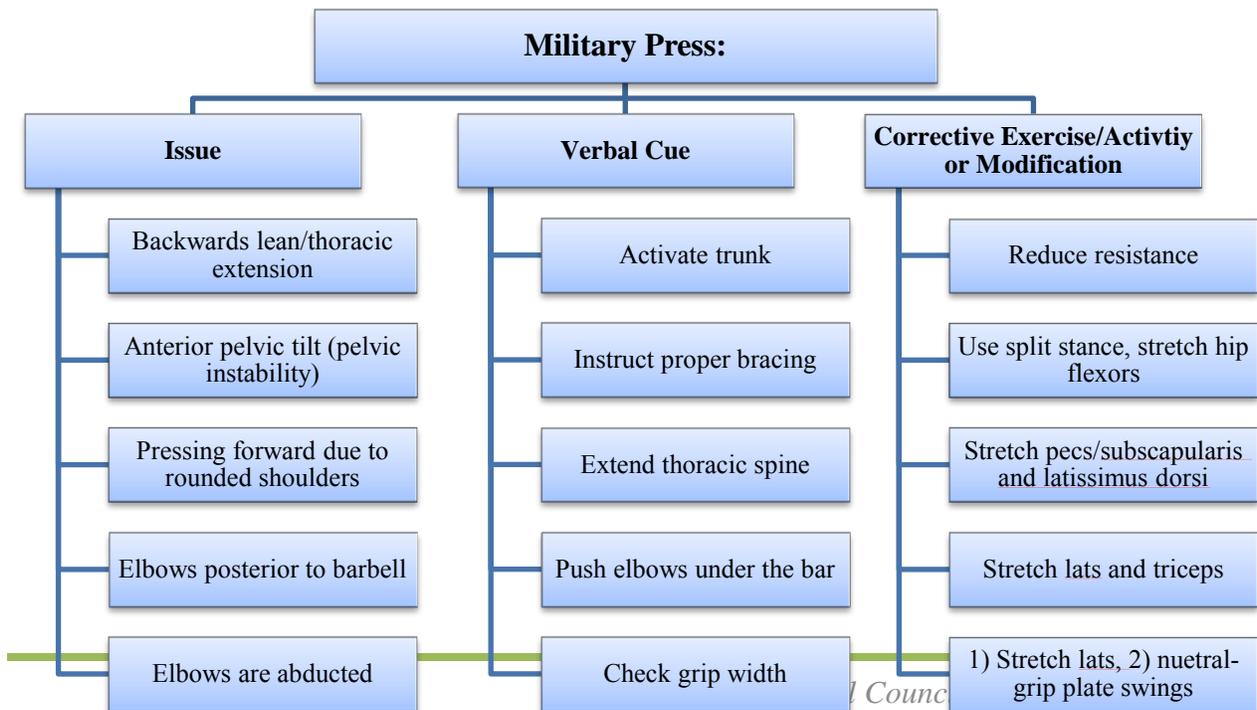
As mentioned earlier, performing the military press behind the head is considered contraindicated, but is nonetheless commonly performed in fitness facilities. Personal trainers must understand why this movement should not be employed because many clients will see others doing it and will inquire as to why they do not. The reasoning is very simple – pressing behind the head increases joint stress and risk for injury while providing no additional training benefits compared to correct form. As mentioned previously, overhead pressing, even with proper form, can compromise the shoulder among at-risk individuals as excessive force is placed upon an open joint. To reduce this stress and prevent damaging humeral head translation, the lift should always be performed in front of the head without ballistic transition. Pressing behind the head and using ballistic repetitions places greater stress on connective tissues of the rotator cuff and shoulder capsule. Additional external rotation and cervical flexion (as needed to press behind the head) further increases the risk for injury.



Incorrect Technique

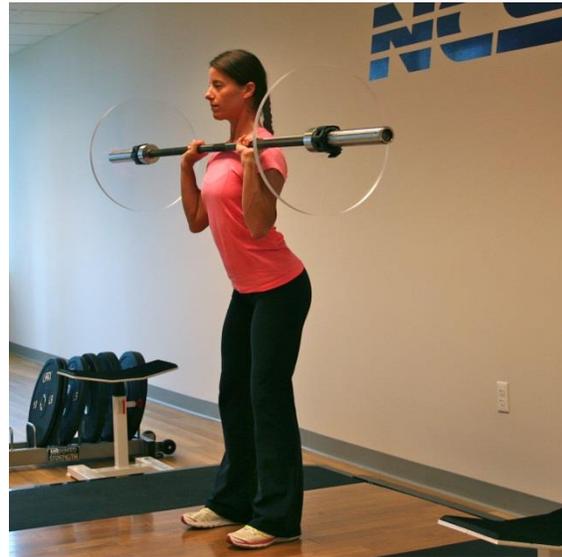
*Corrective Strategies*

The following figure illustrates common biomechanical and technique issues experienced during the military press, and what the trainer can do to fix these issues if they are present.





Backwards Lean



Anterior Pelvic Tilt



Abducted Elbows

### *The Hitch Press*

Considering the significant musculature involved throughout the kinetic chain as well as the central/peripheral stability demands, many clients will present with some sort of compensatory movement if they are new to the lift as detailed previously. Furthermore, as with many other exercises, clients will find some way to “cheat” the movement to try to make it easier (especially if load is excessive). Oftentimes this involves hip and knee and sometimes ankle extension to assist the movement with vertical

momentum. Perhaps surprising to those who have not heard of it, there is a “cheating variation” for the military press which can be useful to provide overload for stronger clients (when performed correctly). This movement is commonly referred to as a hitch press. During the hitch press, rather than attaining a rigid trunk and hips, the movement takes advantage of initial momentum for positional gain. The bar starts on the chest with mild hip and thoracic spine flexion and then is accelerated to the chin with the use of hip, knee and thoracic spine extension. The limited ROM of the “cheat” action allows the spine to remain aligned. The hitch press pops the bar to the chin so the shoulders can facilitate greater movement speeds at the normal mechanically-disadvantaged position; where shoulder flexion-abduction transfers. This allows 10-20% higher lifting loads above the military press, and helps initiate motor learning for dynamic connectivity during overhead ballistic exercises such as a push press.

# Quiz Rules

## **What Do I Mail Back to the NCSF?**

Students are required to submit the quiz answer form.

## **What do I Need to Score on the Quiz?**

In order to gain the .5 NCSF continued education units students need to score 80% (8 out of 10) or greater on the CEU quiz.

## **Where Do I Mail My Quiz Answer Form?**

You will mail your completed answer form to:

**NCSF**

**Attn: Dept. of Continuing Education**

**5915 Ponce de Leon Blvd., Suite 60**

**Coral Gables, FL 33146**

## **How Many CEUs Will I Gain?**

Professionals who successfully complete the any continuing education quiz will gain .5 NCSF CEUs per quiz.

## **How Much does each quiz cost?**

Each quiz costs the student \$15.00.

## **What Will I Receive When The Course Is Completed?**

Students who successfully pass any of the NCSF online quizzes will receive their exam scores, and a confirmation letter.

## **How Many Times Can I Take The Quizzes For CEUs?**

Individuals can take each NCSF quiz once for continuing education credits.

## Lift Correctly – Optimize Gains (Volume III: The Military Press)

### CEU Quiz

1. Which of the following statements concerning the military press is correct?
  - A. The military press is an open-chain, open-circuit exercise
  - B. The military press is a closed-chain, open-circuit exercise
  - C. The military press is a closed-chain, closed-circuit exercise
  - D. The military press is an open-chain, closed circuit exercise
2. Which of the following muscles functions as a phasic stabilizer during the military press?
  - A. Posterior deltoid
  - B. Biceps
  - C. Anterior deltoid
  - D. Serratus anterior
3. Which of the following is correct concerning proper form when the arms are fully extended overhead during the military press?
  - A. A slight posterior pelvic tilt should be engaged to improve trunk activation
  - B. Increasing the lordotic arch in the lower back will minimize stability
  - C. The barbell position should be slightly anterior to the body
  - D. The biceps should be approximately aligned with the ears
4. *True or False?* Spotting assistance during the military press should be provided at the elbows as triceps strength is often a limiting factor for the lift.
  - A. True
  - B. False
5. Which of the following statements concerning behind the head pressing is correct?
  - A. Pressing behind the head does not improve deltoid activation
  - B. Pressing behind the head increases the quantity of stress placed upon connective tissues
  - C. Pressing behind the head increases the risk for damage caused by humeral head translation
  - D. All of the above are correct

6. Which of the following would be most useful for a client who demonstrates excessive hyperextension of the lower back while performing the military press?

- A. Use a split stance
- B. Stretch the external rotators
- C. Stretch the triceps and latissimus dorsi
- D. Perform band Y-reaches as a corrective measure

7. Which of the following would be the most useful verbal cue for a client that presses the bar forward into the sagittal plane during the military press due to rounded shoulders?

- A. Activate your core
- B. Sit your hips back
- C. Extend your thoracic spine
- D. Push your elbows under the bar

8. *True or False?* A “cheating variation” of the military press known as the power press may be useful for stronger clients (when performed correctly).

- A. True
- B. False

9. Having a client perform split-stance unilateral presses rather than the standard military press would be useful for which of the following issues?

- A. Forward pressing into the sagittal plane
- B. Hyperextension of the shoulders
- C. Abducted elbow positioning
- D. Pelvic instability

10. According to the article, the hitch press allows for \_\_\_\_\_ greater lifting loads when compared with the military press.

- A. 5-10%
- B. 10-20%
- C. 25-30%
- D. 50%

# Quiz Answer Form

FIRST NAME \_\_\_\_\_ LAST NAME \_\_\_\_\_ M.I. \_\_\_\_\_

TITLE \_\_\_\_\_

ADDRESS \_\_\_\_\_ APT. \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

COUNTRY \_\_\_\_\_ POSTAL CODE \_\_\_\_\_

CERTIFICATION NO. \_\_\_\_\_ CERTIFICATION EXP. \_\_\_\_/\_\_\_\_/\_\_\_\_

MEMBERSHIP NO. \_\_\_\_\_ MEMBERSHIP EXP. \_\_\_\_/\_\_\_\_/\_\_\_\_

Quiz Name	Member Price	Total
	\$15	



Discover



Visa



Mastercard



Amex



Check/Money Order

Account No. \_\_\_\_\_

Exp. Date \_\_\_\_\_

Security Code \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

## Quiz Answers

- |          |           |
|----------|-----------|
| 1. _____ | 6. _____  |
| 2. _____ | 7. _____  |
| 3. _____ | 8. _____  |
| 4. _____ | 9. _____  |
| 5. _____ | 10. _____ |

Fill in each blank with the correct choice on the answer sheet. To receive 0.5 CEUs, you must answer 8 of the 10 questions correctly.

Please mail this Quiz answer form along with the proper enclosed payment to:

NCSF  
5915 Ponce de Leon Blvd., Suite 60  
Coral Gables, FL 33146

Questions? 800-772-NCSF