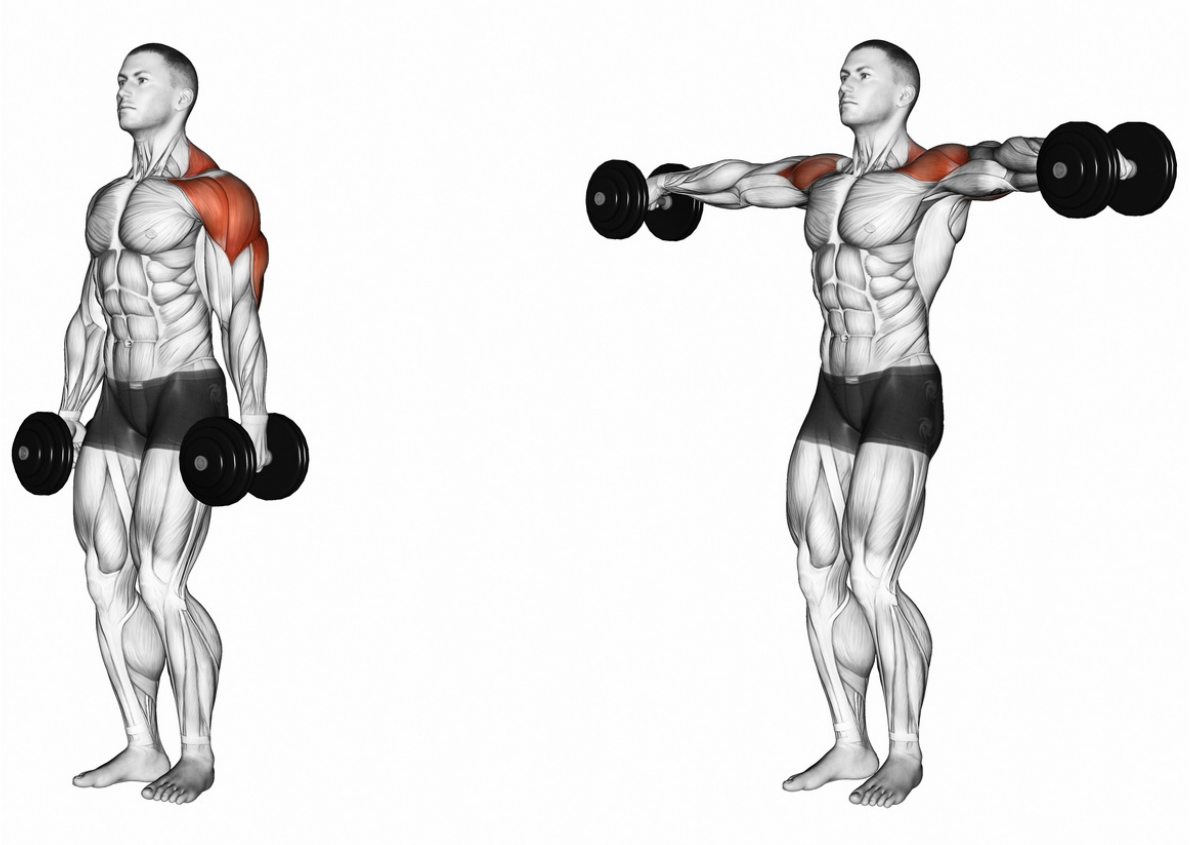
SHOULDER PRESS PROGRESSIONS
STUDY GUIDE

Description:

This course includes shoulder press variations and progressions, cues for better form, kinesiology, relative flexibility progressions, subsystem recruitment, and key points from relevant research. This study guide is designed to help you pass the final exam for this course, approved for 1 credit toward continuing education and the Certified Personal Trainer (CPT) Certification.



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"Shoulder Exercise and Shoulder Pressing Progressions"

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INTRODUCTION

Relative Flexibility:

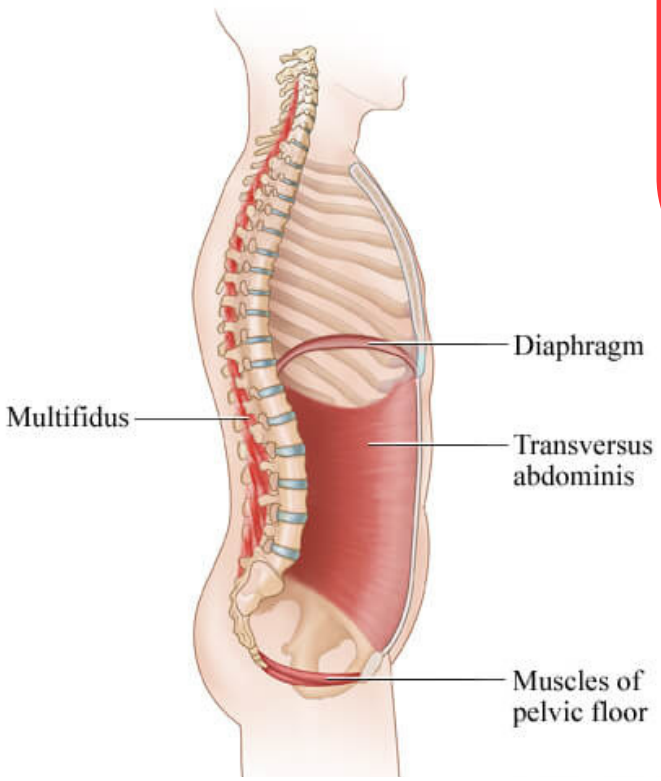
Relative flexibility progressions are general guidelines for exercise selection that can be used while correcting postural dysfunction/movement impairment. Individuals exhibiting signs of upper body dysfunction may reduce the chance of compensation by integrating shoulder/overhead pressing patterns in the following order:

- **Shoulder Scaption**
- **PNF Carry Away**
- **Sagittal Plane Overhead Press**
- **Scapular plane Overhead Press**
- **Frontal Plane Overhead Press**

Subsystems Recruited:

Pressing overhead requires significant trunk stabilization and coordinated recruitment of core subsystems. The intrinsic stabilization subsystem maintains segmental alignment of our lumbar spine, while balanced recruitment of the anterior oblique subsystem (AOS) and posterior oblique subsystems (POS) prevent excessive flexion, extension, lateral flexion, or rotation.

- **Intrinsic Stabilization Subsystem (ISS)**
- **Posterior Oblique Subsystem (POS)**
- **Anterior Oblique Subsystem (AOS)**



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KINESIOLOGY

Shoulder Abduction (Frontal Plane)

- **Prime Mover:**
  - Anterior and middle deltoids
- **Synergists:**
  - Supraspinatus
- **Antagonists:**
  - Latissimus dorsi, pectorals major (sternal head), teres major, coracobrachialis, long head of the triceps, infraspinatus, teres minor, subscapularis
- **Neutralizers:**
  - Posterior deltoid, infraspinatus and teres minor neutralize internal rotation force created by the anterior deltoids
- **Stabilizers:**
  - Rotator cuff: supraspinatus, infraspinatus, teres minor, and subscapularis
- **Fixators:**
  - Scapular muscles, intrinsic stabilization subsystem (ISS) and anterior oblique subsystem (AOS), & posterior oblique subsystem (POS)



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RESEARCH CORNER

The Overhead Press Exercise on Stable and Unstable Surfaces:

Research has compared EMG activity with unstable loads and unstable surfaces, during an overhead press. Research by Williams et al. demonstrated that an overhead press with weights suspended from a Bandbell® Earthquake bar (unstable load) elicited greater pectoralis major, scapular stabilizer (serratus anterior and rhomboids), trunk (rectus abdominis and erector spinae), and antagonist (latissimus dorsi and bicep) muscle activity when compared to stable loads. Prime mover (deltoid and tricep), external oblique, and rotator cuff muscle activity were similar when using the same weight with stable and unstable loads. However, Kohler et al. demonstrated that weights too heavy to be performed with unstable loads resulted in the greatest Prime mover and external oblique muscle activity. This implies that scapular stabilizer and trunk muscle activity increases with unstable loads, Prime mover and external oblique muscle activity are similar when similar weight is used for stable and unstable loads, and Prime mover activity may be greatest when performing stable loads that could not be performed with unstable loads.



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HEAD, TORSO, AND SCAPULA CUES

Optimal form/posture should be based on a mean range of bone and joint alignment that is absent of signs correlated with pain and injury (e.g. forward head posture, excessive thoracic flexion, shoulder girdle elevation, right to left asymmetry, etc.).

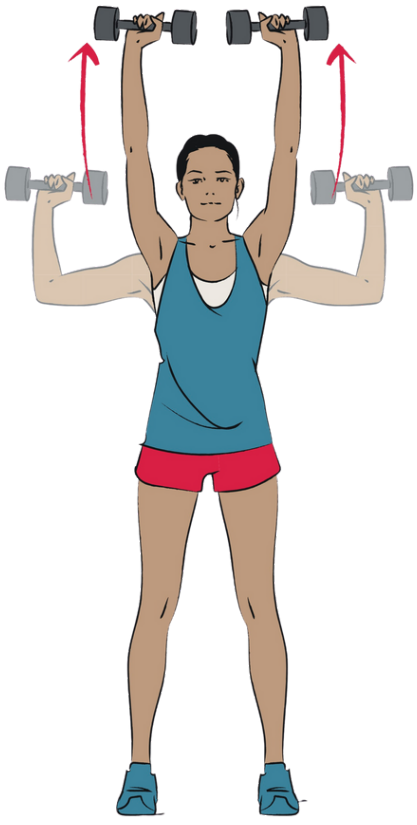
Although cues like “chest up”, “shoulders back”, and “chin tucked” may be appropriate for someone exhibiting signs of upper extremity dysfunction, they should not be cued to the extremes of these positions, nor should they be recommended to someone who does not exhibit signs of upper body dysfunction.

For example, “chest up” is an appropriate cue, until “chest up” results in excessive thoracic or lumbar extension, and “shoulder blades down and back” is a good cue until optimal scapula posterior tipping is exceeded to result in excessive retraction. And, “chin tucked” may be a great cue until exercises are attempted without the natural curves in the cervical or thoracic spine.

In short, our recommendation is that cueing is appropriately modified for the client and used to find neutral (optimal) alignment, not extreme positions.

Model of Optimal Form/Posture:

- 2nd toe pointing forward and under the ASIS
- Ankles, knees, and hips in alignment
- Pelvis neutral (absence of anterior or posterior pelvic tilt)
- Torso, scapula, and head in neutral alignment



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SAMPLE PROGRESSION:
Overhead Dumbbell Press Progression

- Seated bilateral overhead dumbbell press with back support
- Seated alternating overhead dumbbell press with back support
- Seated unilateral overhead dumbbell press with back support
- Seated bilateral overhead dumbbell press
- Seated alternating overhead dumbbell press
- Seated unilateral overhead dumbbell press
- Seated on ball bilateral overhead dumbbell press
- Seated on ball alternating overhead dumbbell press
- Seated on ball unilateral overhead dumbbell press
- Standing bilateral overhead dumbbell press
- Standing alternating overhead dumbbell press
- Standing unilateral overhead dumbbell press
- Single-leg bilateral overhead dumbbell press
- Single-leg alternating overhead dumbbell press
- Single-leg unilateral overhead dumbbell press
- Single-leg unstable bilateral overhead dumbbell press
- Single-leg unstable alternating overhead dumbbell press
- Single-leg unstable unilateral overhead dumbbell press

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SAMPLE PROGRAM

Goal: Upper Body Hypertrophy
(Strength/Stability Supersets)

Acute Variables:

- **Load/Weight:** Moderate (75-90% 1-RM)/Light (60-75% 1-RM)
- **Reps/set:** 6-12/6-12
- **Sets/exercise (or circuits):** 1-5 circuits
- **Rest between exercises:** 30 seconds
- **Rest between circuits:** 3 minutes (alternatively, can be performed in a circuit)
- **Training time:** 20 – 60 minutes (excluding warm-up)

Strength/Stability Super-sets Routine:

- **Chest:** Incline Bench Press and Asymmetrical Dumbbell Press on Ball
- **Back:** Kneeling Cable Pull Down and Rope Row
- **Shoulders:** Curl & Press and Single Leg Unilateral Abduction with External Rotation



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Complete review and bibliography:

Online Course: "Shoulder Exercise and Shoulder Pressing Progressions"

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