

⌘2 Pause and Practice: Facilitating Bicep Control

This practice lab is an example of Facilitating Active Movement, Isometric-Eccentric-Concentric.

Starting Position

- Begin with your patient in sidelying on the involved side. Be sure your patient is lying on a fully protracted scapula before facilitation begins. *Do not have the patient lying on the head of the humerus.* “Bed Mobility & Positioning” from *Teaching Independence: A Therapeutic Approach* gives complete instructions for proper positioning methods.

Handling

- If possible, bring the arm to 90° of shoulder flexion (90° or above helps inhibit flexion synergy of the upper extremity.) Lightly support the elbow to maintain this position and do not allow the arm to pull into internal rotation with pronation.



Facilitation of Isometric Control

- Bring the arm to 90° of elbow flexion. Lightly support the wrist along the lateral surfaces. Try not to support the wrist or fingers on the flexor surfaces.
- Ask your patient to “hold” that position. Say, “**Don’t let it fall.**” Find the midway balance point of the forearm and wrist, between elbow flexion and extension. Gently release your grasp and allow the patient to take over control. See if they can keep it from falling.



Facilitation of Eccentric Control

- Next, allow the patient to lower their hand to the mat table. I keep one hand under their hand just in case they are not able to eccentrically control the biceps and their arm falls. As they lower their arm, they are using eccentric control of the biceps. Use words like “easy,” “smooth,” and “light” to help your patient. At first their movements may not be smooth. You may notice some “jerking.” With a few attempts, this should improve and the movements will become smoother.



Facilitation of Concentric Control

- Finally, we facilitate concentric control of the biceps. Remember that we are working on movement with selective, isolated control (movement that is not in a synergy pattern). With the additional effort involved, some patients may have difficulty maintaining controlled movement and abnormal patterns may return.
- Begin with the arm in 90° of shoulder flexion and full elbow extension. Ask the patient to bend his arm or “bring your hand to your mouth.” Place your hand between his face and his hand, just in case he does not have eccentric tricep control (triceps are needed to keep his hand from falling past 90° of elbow flexion). Remind your patient that slow, controlled movements are our goal.



Tips

Be aware of muscle fatigue. As our patient begins to get movement, we are often so pleased that we have them practice the movement many times. The patient will become frustrated as the muscle fatigues and he can no longer accomplish the same movement. Do not continue until the muscle fatigues. Instead, quit while you're ahead. Three or four attempts at eccentric or concentric movements may be enough, six or seven may be too many.