

Evidence in Rehabilitation

In 2015, Shank Ganesh et al.¹⁸ published an article on the effects of joint mobilization applied to the facet joints of the lumbar spine. They wanted to see if changes that occurred as a result of applying joint mobilization to the spine remained for longer than just immediately post-treatment. The authors applied a grade III PA oscillation for 30 s at each level from T12 to L1 through L5 to S1 unilateral facet joints. They measured each subject's straight-leg raise motion before and after treatment, comparing the results to a control group. Twenty-four hours later, the measures were repeated. They found the immediate-change effects remained over the 24-hour time frame. This study is important in that it demonstrates that there may be more than immediate beneficial effects from joint mobilizations. It will be interesting to see what other benefits may occur with joint mobilization when there are changes in other factors such as the amplitude of force applied or the duration of treatment.

Cervical Spine

The most commonly used cervical spine joint mobilization techniques are outlined in the following sections. Descriptions of these techniques will primarily emphasize hand placement. The specific grade applied is determined by the patient's condition and

the treatment goals, but remember that grades I and II are used for pain relief and grades III and IV are used to improve range of motion. Regardless of the grade applied, hand placement is the same unless otherwise indicated. Refer to chapter 13 for a review of joint mobilization.

Joint Mobilization of the Cervical Spine

Spinal mobilization techniques are divided into three sections: cervical, thoracic, and lumbar spine segments. As you apply joint mobilization techniques, you must know how to position the patient in order for the treatment force to occur parallel to the plane of the joint. As you learn these joint planes and how to position the client, it is sometimes useful to have a spine model nearby to visually identify each vertebral level's position before joint mobilization techniques are applied.

LONGITUDINAL (DISTRACTION) MOVEMENT

Resting Position: Normal alignment of the head with the body.

Mobilization Technique: Distraction.

Indications: Relaxing technique used to gain patient's confidence.

Patient Position: Supine.

Clinician and Hand Positions: The clinician stands or sits by the head of the table, facing the patient. The patient's head is grasped and supported with one of the clinician's hands behind the head; the thumb and fingers are at the occiput. The other hand is placed under the chin (figure 18.2).

Mobilization Application: While maintaining the position of the upper extremities, the clinician leans back to produce a gentle longitudinal pull of the neck.

Notations: The hand on the chin is for positioning only; no force is directed into the chin. This is often the technique used to initiate a mobilization treatment session.

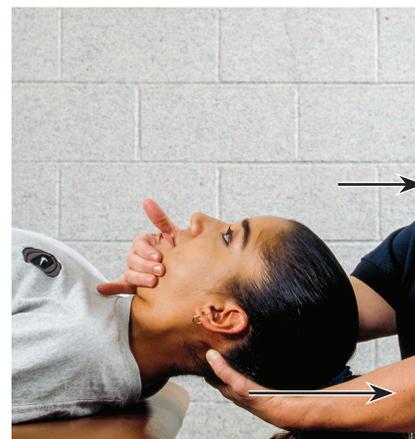


Figure 18.2

CENTRAL PA MOBILIZATIONS

Resting Position: The cervical spine is in good alignment to allow the clinician to identify the level being treated. Usually this is a position of proper alignment relative to the entire spine or slight cervical flexion to expose a specific joint. Instructing the prone patient to tuck the chin tends to flatten the cervical spine to provide good alignment for joint mobilization.

Mobilization Technique: Anterior glide.

Indications: Midline pain, unilateral pain, or spasm; decreased mobility.

Patient Position: The patient lies prone with his or her hands under the forehead and the chin slightly tucked. If a mobilization table or specifically designed prone pillow is available, either of these may be more comfortable for the patient; in either of these cases, the patient's hands are not under the forehead, but the arms are placed more comfortably at the sides.

Clinician and Hand Positions: The rehabilitation clinician stands at the head and places the thumbs on the spinous process with the fingers relaxed, along the sides of the neck (figure 18.3). C1 and C3 are usually too difficult to palpate, but C2, C4, C5, C6, and C7 can usually be readily identified.

Mobilization Application: The clinician applies PA pressure with the thumbs through movement of his or her trunk over the hands. The mobilization force is directed at a 45° angle because of the cervical facets' orientation. This angle usually coincides with the line of the patient's mandible.

Notations: The mobilization grades should be gentle at first; depending on the treatment goals, grades I and II are used to relieve pain while grades III and IV improve joint mobility.



Figure 18.3

UNILATERAL PA MOBILIZATIONS

Resting Position: The cervical spine is in good alignment to allow the clinician to identify the level to be treated. Usually this is a position of proper alignment relative to the entire spine or slightly flexed to expose the specific joint.

Mobilization Technique: Anterior glide on the articular pillar to either the left or the right of the spinous process; usually the painful side.

Indications: For lower cervical spine and for unilateral neck pain; decreased mobility.

Patient Position: The patient lies prone with his or her hands under the forehead and the chin slightly tucked.

Clinician and Hand Positions: The rehabilitation clinician stands on the side that is to be treated. The thumbs are placed on the articular pillar and with the downward force angled about 30° medially (figure 18.4).

Mobilization Application: The pressure is applied by the thumbs in a PA direction with a constant medially directed pressure to maintain position on the articular pillar. In this example, the right thumb is the palpating thumb while the left thumb delivers the mobilizing force. Notice that the vertical thumb position and 45° angle of the arm allow the clinician to change force angles to be able to apply the mobilization force parallel to the plane of the joint.

Notations: The head may nod slightly, but there should be no rotation motion if the pressure is applied correctly.



Figure 18.4