

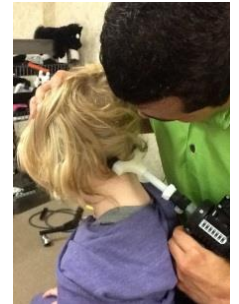
CASE PRESENTATION

The second phase of care, designed to influence spinal biomechanics, consisted of CMT. Supine thoracic, prone lumbar, side-posture pelvic manual manipulations, and seated cervical instrument-assisted manipulations were performed



Adjustments are delivered based upon the results of the x-rays. For instance, if the x-rays demonstrate a loss of the thoracic curve, no prone P-A adjusting of the thoracic spine is performed, only A-P supine adjustments. Side posture adjustments take into account the measured pelvic rotation, and utilize tractive forces rather than compressive forces.

CMT is applied to the cervical spine with the aid of a mechanical adjusting instrument. The goal is to reduce forward head posture and reduce any misalignments noted on the cervical x-rays. A mechanical instrument is used in lieu of manual CMT to avoid aggravating any hypermobility that may be present in the cervical spine.



The third phase of care, intended to impact neuromuscular function, consisted of three parts: reactive body weighting therapy, isometric spinal exercises, and vibration therapy



After CMT, the patient performs isometric lateral flexion and/or rotation exercises. In this picture, the patient is seated and laterally flexes to the left, then holds this position. Additional exercises may be performed either seated or standing, and either laterally flexed or rotated to either the left or right. The goal of these exercises are to engage and strengthen specific paraspinal muscles. Whole-body vibration therapy is applied while the patient performs these exercises in an attempt to enhance rehabilitation of the neuromuscular system.

The patient is positioned in an adjustable chair that combines axial traction with lateral traction, de-rotation, and whole-body vibration. Active isometric exercises are performed by the patient while they are in this chair. The goal is to restore normal sagittal spinal alignment, create a "mirror-image" of the patient's coronal and axial posture and spinal configuration, engage specific paraspinal muscle groups, and utilize vibratory stimulation to enhance neuromuscular rehabilitation.



Weights and/or cantilevers are strategically placed on the head, shoulders, torso, and/or hips, according to the patient's clinical and radiographic presentation. The patient stands on an unstable surface (such as an air-filled balance training disc), placed on top of a whole-body vibration platform (not shown). The purpose is to cause the paraspinal muscles of the body to react in a manner which will effect a de-rotation and de-translation of the spine, and to stimulate the neuromuscular pathways responsible for automatic postural control.



Patients were also instructed to perform at-home exercises and therapies designed to correlate with their particular case for 30-60 minutes, 2/day