



**Chiropractic BioPhysics**  
*CBP—The Science of Spinal Health*

**2010 CBP® Instrument Adjusting & Upper Cervical Seminar**  
**May 22-23, Newark, NJ**

**Course Title:** Mirror Image Instrument Adjusting & Upper Cervical Analysis

**Instructors:** Dr. Deed Harrison, Dr. Pete Lope, Dr. Joe Ferrantelli

**Course Objective:** This course provides an integrated education for the Doctor of Chiropractic in the science and art of upper cervical spinal disorders with application to instrument adjusting for full spine postural subluxations and joint fixations. The Chiropractor will learn how posture displacement influences the upper cervical spine as well as normal joint kinematics and instability analysis of the upper cervical spine. The biomechanics and neurophysiological mechanisms of instrument adjusting techniques will be reviewed with indications for different techniques of segmental versus postural adjusting. Corrective global postural subluxation set-ups for the head, thoracic cage, and pelvis with a hand-held instrument used to adjust the upper cervical area will be reviewed as will segmental adjusting techniques for upper cervical subluxation/displacements. The DC will learn at least one proper side and opposite side type of set up for each of the head to thoracic spine postures and the DC will learn one proper side and opposite side type of set up for each of the very common full spine postures. Upper cervical flexion/extension subluxation/fixations of the occiput on atlas and their corrective adjustments will be described and demonstrated. The details of case management using these instrument adjusting methods will be covered using a variety of case studies for a comprehensive picture of clinical application of this course material. Last, a survey of research material will be reviewed supporting the utilization and efficacy of the course materials in patient populations

**Total Hours:** 12

**Saturday**

**9:00-10:00**

**Upper Cervical Positioning & Analysis Studies**

- Introduction to postural and spinal analysis using a cartesian coordinate system, relative & absolute rotation angles, degrees of freedom, basic theorems,
- Introduction to upper cervical analysis, reliability studies, assessments,
- Clinical outcome studies of upper cervical Chiropractic adjustments.

**1 Hr. CE. Lecture, Biomechanics/Examination**

**D. Harrison, P. Lope, J. Ferrantelli**

**10am-Noon**

**Biomechanics and Neurophysiology of Instrument Adjusting**

- Biomechanics of instrument adjusting: Tuning into the resonant frequency of the joint complex,
- Neurophysiology and muscular effects of instrument adjusting,
- The effects of spinal degeneration and injury on spinal stiffness and applications to instrument adjusting.

**2 Hr. CE. Lecture, Principles of Practice/NMS Diagnosis**

**D. Harrison, P. Lope, J. Ferrantelli**

**Noon-1pm**

**Review of 3-D vs. 2-D Postural/Spine Analysis**

- Evaluation of the posture and spine using postureprint and postureray,
- Proper Patient Positioning:
  - A. Spinal projection.

**1 Hr. CE, Lecture, Principles of Practice**

**J. Ferrantelli, D. Harrison, P. Lope**



1:00-2:00	LUNCH	NO CE Credit
2:00-4:00	<b>Head Posture and Upper Cervical Spine Kinematics</b> <ul style="list-style-type: none"><li>Analyzing the upper cervical spine in lateral head translations,</li><li>Analyzing the upper cervical spine in axial (y-axis) head rotations,</li><li>Analyzing the upper cervical spine in lateral flexions of the head.</li></ul>	<b>D. Harrison, P. Lope 2 Hr.</b>
	<b>2 Hr. CE, Lecture, Principles of Practice for CA Only</b> <b>CE, Lecture, X-ray for all other states</b>	
4:00-6:00	<b>Practical Stations</b> <ul style="list-style-type: none"><li>Hand-held cervical instrument for AP viewed postures (standing),</li><li>Hand-held cervical instrument for AP viewed postures (side posture),</li><li>Hand-held cervical Instrument for Lateral viewed postures,</li><li>Hand-held instrument for segmental joint subluxation/fixation adjusting,</li><li>PosturePrint &amp; postureray training demonstrations.</li><li>Upper Cervical specific adjustments on the drop table.</li></ul>	<b>D. Harrison, P. Lope, J. Ferrantelli</b>
	<b>2 Hr. CE, Lecture/Lab, Technique – CBP</b>	
<b>Sunday</b>		
8:am-10am	<b>Mirror Image Instrument Adjusting Setups &amp; Upper Cervical Specific</b> <ul style="list-style-type: none"><li>Head to thoracic single, double, and triple combination postural/spine adjustments,</li><li>Thorax to pelvis single, double, and triple combination postural/spine adjustments,</li><li>Pelvis to feet single, double, and triple combination postural/spine adjustments,</li><li>Full spine postural/spine adjustments</li></ul>	<b>D. Harrison, P. Lope</b>
	<b>2 Hr. CE, Lecture/Lab/ Technique-CBP</b>	
10am-11am	<b>Upper Cervical Kinematics and Instability</b> <ul style="list-style-type: none"><li>Anatomy and Biomechanics of the upper cervical spine,</li><li>Flexion/extension kinematics of the upper cervical spine,</li><li>Lateral bending and axial rotation kinematics of the upper cervical spine,</li><li>Instability cutoff values of upper cervical spine movements.</li></ul>	<b>D. Harrison, J. Ferrantelli</b>
	<b>1 Hr. CE, Lecture/Anatomy</b>	
11am-Noon	<b>Drop Table Adjustments for Upper Cervical Subluxations/Fixations</b> <ul style="list-style-type: none"><li>Flexion subluxation/fixation of the occiput on atlas,</li><li>Extension subluxation/fixation of the occiput on atlas,</li><li>Flexion fixation/subluxation of the atlas on C2,</li><li>Extension fixation/subluxation of the atlas on C2,</li><li>Pseudo-subluxation of C2 to C3.</li></ul>	<b>D. Harrison, P. Lope</b>
	<b>1 Hr. CE. Lecture; Technique-CBP</b>	