



Chiropractic BioPhysics
CBP—The Science of Spinal Health

2010 CBP® Advanced--Full Spine Analysis & Techniques
Oct. 16-17; Chicago, IL

Course Title: CBP Advanced--Full Spine Analysis & Techniques

Instructors: Dr. Deed Harrison

Course Objective: This course provides an integrated education for the Doctor of Chiropractic in the science and art of full spine disorders. Detailed literature reviews covering the sagittal plane of the spine during pediatric development through age related change occurring in senior populations will be presented. Statistical correlations between each spinal region will be detailed so the Chiropractor understands how alterations in one region of the spine can influence regions above or below. A primary objective is to introduce the attendee to the anatomic variable of pelvic morphology (geometric alignment of the sacrum inside the ilia) and how variations and anomalies of pelvic morphology alter the sagittal plane alignment of the spine. Further, it will be explained how common anomalies such as how 4 lumbar vertebra, 6 lumbar vertebra, and transitional segments affect the sagittal plane alignment of the spine. In the end, details of case management using these topics will be covered using a variety of case studies for a comprehensive picture of clinical application of this course material. A survey of research material will be reviewed supporting the utilization and efficacy of CBP technique treatment methods across a population of patients with abnormal spine conditions.

Total Hours: 12

Saturday

9:00-11am

Review of Sagittal Plane Spinal Model Correlations and Basic Statistical Analysis

- Biomechanics of posture: Rotations and Translations of the head, thorax, and pelvis,
- Harrison sagittal plane model of the cervical lordosis, thoracic kyphosis, and lumbar lordosis,
- Pediatric, adult, and geriatric alignment for the sagittal spine curvatures,
- Statistical correlations using scatter plots and linear regression models will be detailed so the relationship between sacral angle, lumbar lordosis, thoracic kyphosis, cervical lordosis, and sagittal balance can be understood,
- Variables that influence/alter sagittal plane spine/posture alignment will be introduced: posture, age, vertebral shape, pelvic morphology, sacral morphology, 6 lumbar, 4 lumbar, and transitional vertebra.

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

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11am-1pm Pelvic Morphology Defined:

- Pelvic morphology is explained and defined: sacral geometry and connection of the sacrum to the ilia relative to the hip axis,
- Pelvic morphology measurement methods: Angle of pelvic incidence (API), Pelvi-sacral angle, PR-S1 pelvic radius method, and Posterior Tangent Pelvic Incidence Angle (PTPIA),
- Pelvic morphology and aging and normative data sets will be detailed.

(2 Hr. CE. Lecture, Anatomy)

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1pm-2pm LUNCH No CE Credits

2pm-3pm Detailed Overview of CBP Examination Procedures

- Structural based outcome measures: PosturePrint® Posture analysis and spine alignment;
- Functional based outcome measures: Range of motion, Algometry, Seng, etc;
- When and which outcome questionnaires: Numerical rating scale, Oswestry low back pain, Neck disability index, SF-36, SF-12, SF-10;
- 6-12 Visit Interim-examination: What outcome assessments to include and why?
- 24-36 Visit Re-evaluation: What outcome assessments to include and why?
- Long-term Follow-up Examination procedures: When should these be performed, What outcome assessments to include and why?

1 Hr. CE, Lecture, Examination

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3-6pm Pelvic Morphology Influence on Sagittal Plane Spine Alignment and Geometry

- Pelvic Morphology influence and correlation to sacral base angle,
- Pelvic Morphology influence and correlation to lumbar lordosis,
- Pelvic Morphology influence and correlation to sagittal translation/balance,
- Pelvic Morphology influence and correlation to thoracic kyphosis,
- Pelvic Morphology influence and correlation to cervical lordosis,
- Linear regression equations to use pelvic morphology to predict sagittal spine alignment in anomalies situations,
- Mock patient cases to assess pelvic morphology's influence on the spine/posture alignment.

1 Hr. CE. Lecture, Clinical Sciences all states

2 Hr. CE. Lecture, **Technique for CA**

2 Hr. CE. Lecture, **X-ray for all other states**

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Sunday

8am-10am Lumbar Spinal Anomalies

- 6-Lumbar vertebra: Normative lordosis values and global vertical axis line (VAL) at S1 for sagittal balance and postural alignment,
- 4-Lumbar vertebra: Normative lordosis values and global vertical axis line (VAL) at S1 for sagittal balance and postural alignment,
- Transitional vertebra: Normative lordosis values and global vertical axis line (VAL) at S1 for sagittal balance and postural alignment,

2 Hr. CE. Lecture, Clinical Sciences

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10am-Noon Clinical Case Management Applying Pelvic Morphology and Anomalies

- How to Choose which spinal region to treat/correct first for optimal spinal rehabilitation in simple and full spine subluxation conditions,
- Pelvic Morphology (API = angle of pelvic incidence) examples applied to sagittal plane posture/spine treatment methods and outcomes in a variety of patient conditions;

2 Hr. CE. Lecture, Technique-CBP

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