

# Efficacy of hands-on instructional training for the supine leg check – a feasibility study

LIFECHIROPRACTIC COLLEGE WEST

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The Hypertension pilot study utilizing the National Upper Cervical Chiropractic Association (NUCCA) Procedure screened potential subjects for study inclusion using supine leg check (SLC)<sub>1</sub>. The incentive for SLC study is obtaining prevalence of LLI in the US population in association with hypertension. This feasibility study examined a course of SLC instruction determining if it effectively trained examiners to perform at a high levels of agreement.

#### Methods:

Four untrained examiners with various levels of experience using a supine leg check participated in instruction. Before training, examiners were tested in their ability to utilize the SLC to agree in identifying an observed "short leg." After seven hours of training, the testing procedure was exactly repeated as before to ascertain if the course increased examiner agreement in identification of the "short leg."

#### **Results:**

Increased examiner percentage agreements indicate improvement in the examiners performance after being trained. Examiner agreement increased from 66% to 77% (intrarater) and from 60% to 70% (inter-rater) as a result of the hands-on training instruction.

#### **Discussion:**

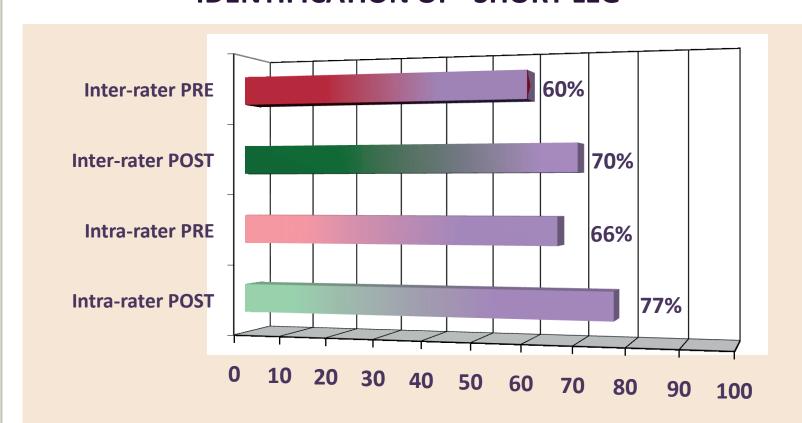
The goal in developing a SLC certification course is to train health professionals as reliable examiners to screen the US public for the prevalence of a leg length inequality (LLI). Validation of the SLC as a screening test for patient conditions can then justify management with chiropractic. NUCCA practitioners employ the SLC as a diagnostic procedure. The finding of LLI is critical in the patient care management. An overall 90% +/- 3% concordance in identification of an apparent "short leg" is the ultimate goal of the ongoing SLC reliability endeavor.

#### **Conclusion:**

The experience from this pilot study assists protocol design in revising and further developing the SLC training course to achieve the research objective required of a screening test. A data collection pilot study with a larger subject pool to investigate inter-examiner reliability of the SLC procedure is in planning stages.

1. Bakris G, Dickholtz M, Sr., Meyer PM, Kravitz G, Avery E, Woodfield C, et al. Atlas vertebra realignment and achievement of arterial pressure goal in hypertensive patients: a pilot study. J Hum Hypertens 2007; 21(5):347-352.

#### **IDENTIFICATION OF "SHORT LEG"**



Four examiners; Novice, second quarter Chiropractic student, Senior Clinic Intern tenth quarter, Chiropractor with 10 years experience in Upper Cervical Chiropractic, NUCCA practitioner with one year experience, checked two different cohorts of seven subjects, one before and one after SLC training.

#### RECRUIT EXAMINERS

⇒ Novice

 $\Rightarrow$  NUCCA DC

- ⇒ Senior Intern
- ⇒ DC with UC experience

## **STUDY SEQUENCE**

- ⇒ Sign consent form
- ⇒ Complete demographic form
- ⇒ Randomized to room assignment rubric

**RECRUIT SUBJECTS** 



### **Table for Supine Leg Check** (per Training Protocol) Note tape bisecting table to practice patient centering to mid-sagittal plane. An elevated platform allows a practitioner to better control their center of gravity throughout checking procedure.



The practitioner aligns her/his sagittal plane to the patient's sagittal plane assuring that lateral displacement of the practitioner's body will not cause error in leg checking.

# **SEVEN HOUR HANDS ON** TRAINING COURSE

PRE-TRAINING EXAMINER

**EVALUATION** 

⇒ Examiners assess 7 subjects as instructed, 'determine leg

length inequality of the patient

in the supine position, record

your findings on form

provided.'

- ⇒ Examiner's learn Supine Leg **Check Protocol from Certified NUCCA Instructor**
- ⇒ Hands on practice with instructor providing critque & feedback
- ⇒ Examiner's complete course evaluation

**POST-TRAINING EXAMINER** 

**EVALUATION** 

⇒ Examiners assess 7 subjects as instructed, 'determine leg

following the NUCCA SLC

your findings on form

provided.'

length inequality of the patient,

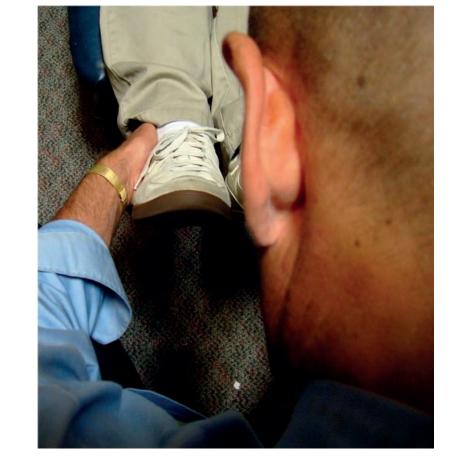
Protocol just learned, record

#### RECRUIT SUBJECTS

- ⇒ Sign consent form
- ⇒ Complete demograpghic form
- ⇒ Randomized to room assignment rubric



The distance from the center of each of the practitioner's knees to the imaginary line across the soles and heels of the patient's feet should be equal, thereby indicating that the practitioner's body is not rotated.



The patient's shoes are compared in establishing leg inequality by judging one shoe against the other at that point where the heel of the shoe attaches to the backstay.

This trial was conducted in accordance with the Good Clinical Practice/ International Conference on Harmonization guidelines, and LCCW Institutional Review Board with mandatory informed consent signed by all subjects.