

## NUCCA

### Why Upper Cervical?

Insert your own personal reasoning here!

# What is upper cervical?

- What's the reasoning behind it?
- How does adjusting the atlas help my lumbar or my thoracic problem?
- What is the difference between the techniques?
- Why is it important?

### Why doesn't the adjustment hold?

- Q: Why can we adjust T6 3x/week for 8 weeks and the segment won't hold?
- A: It's a minor. Not a major.

 ADJUST THE MAJOR SEGMENT FIRST.

# Improving HIO

- Doctor Wernsing:
- Condylar Circle
- 1934: Wernsing meets with BJ.
  - Atlas moves as if on the rim of a circle. Therefore we can talk about DEGREES of misalignment in ROTATIONAL MEASUREMENT
  - It's the difference between 0.2 mm and 2 mm.



# Grostic looks at the condyles <u>and</u> the surface of axis.

- From Ann Arbor, MI.
- John Grostic, PSC Class of 1933.
- Modified "toggle" along vector from x-ray analysis looking at the relationship between condyles and axis to C1.
- Post films!
- Founded Grostic technique (1946-64)
  - Ralph Gregory and Roy Sweat are Grostic Instructors

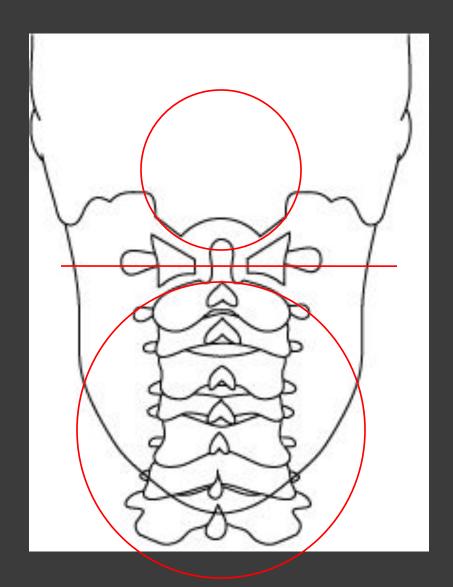


# What is orthogonality?

Head is 90 degrees to the plane of C1.

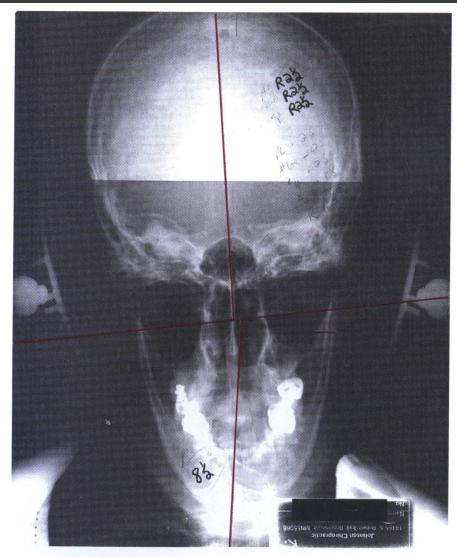
Plane of C1 is 90 degrees to the neck.

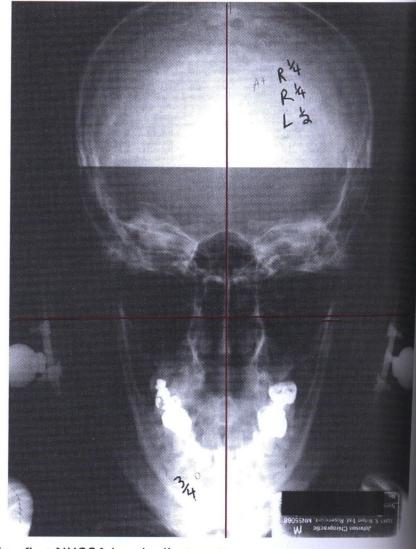
ORTHO means "TRUE" or "STRAIGHT"



Orthogonality looks at the atlas in relationship to the circle of the condyle and the circle of the superior articular surface of C2.

# What does orthogonality look like?





➤ FIGURE B-12 Before and after first NUCCA hand adjustment.

### NUCCA is Orthogonal.

ONLY ATLAS IS CONTACTED in the adjustment.

Considered full spine.

#### NUCCA is FULL SPINE?

If Atlas is misaligned, which vertebra is out of place?

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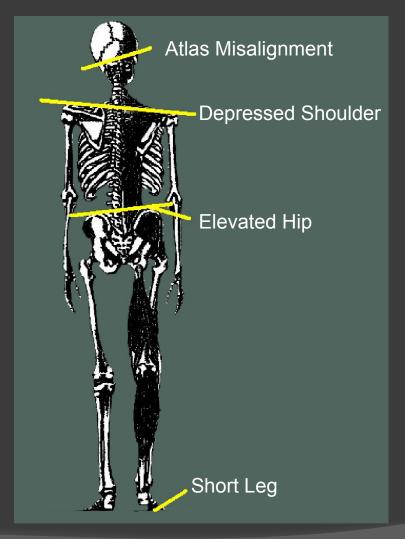
• All of them

#### NUCCA is FULL SPINE?

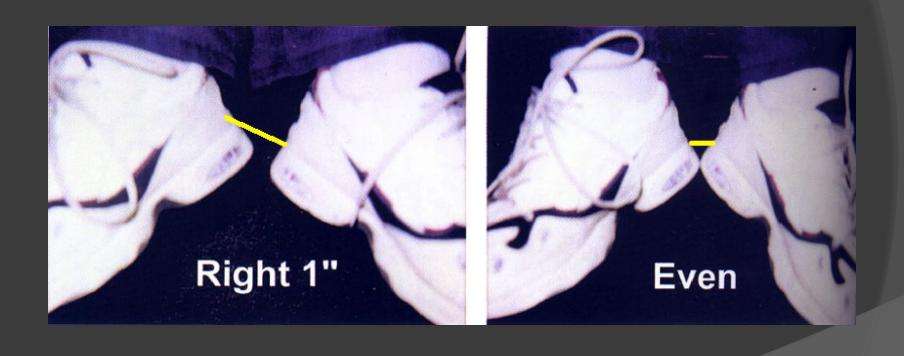
If Atlas is misaligned, which vertebra is out of place?

• All of them

# The spine and pelvis will reposition to compensate for the misaligned atlas.



# Correcting the head to the neck corrects the short leg.



## C1 affects posture

Postural indicators are some of the primary indicators of when to adjust or when NOT to adjust.





#### How does C1 influence posture?

- Righting reflex
- Vasculature Stasis or Ischemia
- Proprioception
- Brain stem/spinal cord traction

#### In Short:

- Accidents and injuries tear loose the connective tissue that holds the spine together.
- This creates a weakness and allows Atlas to break down into a misaligned position.
- For stability it locks into STRESSED position
- Unbalanced muscle contracture and unbalanced motion lead to abnormal wear and tear of the WHOLE SPINE.

### Compensatory Subluxations...

 Even if trauma initially occurs at another level in the spine, the top of the vertebral column misaligns along with the originally affected segment

 If T6 goes out, so does atlas. Correcting T6 without addressing the top of "the chain" will fail to create a *long-lasting* correction.

# Whole spine

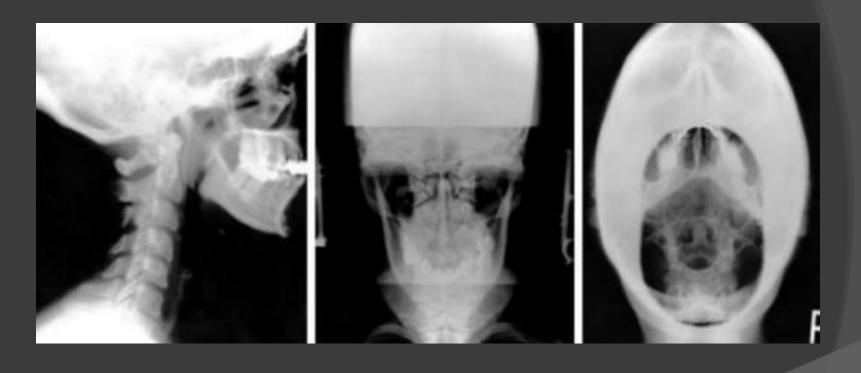
micalianment? 3.1° 13.7°

➤ FIGURE D-1 Before and after 5.5 months of Grostic care (5 adjustments; see Chapter 10 for case study).
Submitted by Dr. Kirk Eriksen.

#### Postural Change Significance:

- Indicator of a good adjustment.
- Still need post x-ray after first adjustment.
- BUT ALSO
- Correcting the misalignment can objectively predict restoration of the entire spine to a more normal and balanced position.

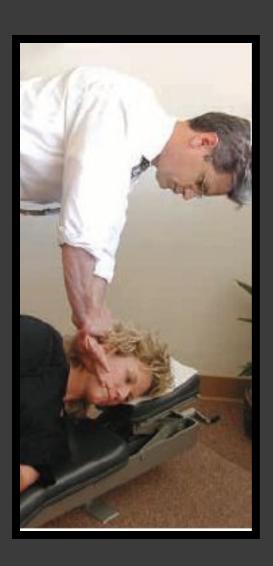
## X-ray quality and analysis is KEY



Lateral Cervical, Nasium and Vertex

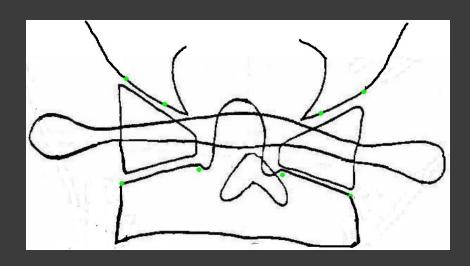
## **NUCCA** Adjustment

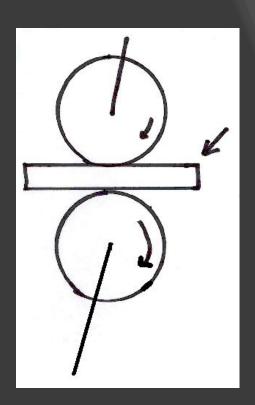
- Atlas is used as an anatomical lever
- Adjustment takes into account what will happen to C2 and occiput during the adjustment
- Gentle and vectored controlled force is applied down the ideal line of correction that will align the head and neck together at the same time
- Doctor uses 54 steps to put himself in the right position for the adjustment.
- No twisting or popping patients love it!
- Most patients feel nothing at all during the adjustment.



### How does it happen?

Occiput, C1 and C2 are all move together. Their anticipated movement is calculated before the adjustment. Atlas is then used as level to bring the skull and C2 back into the right position.





# What's the benefit of all this measurement?

REPRODUCABILITY.

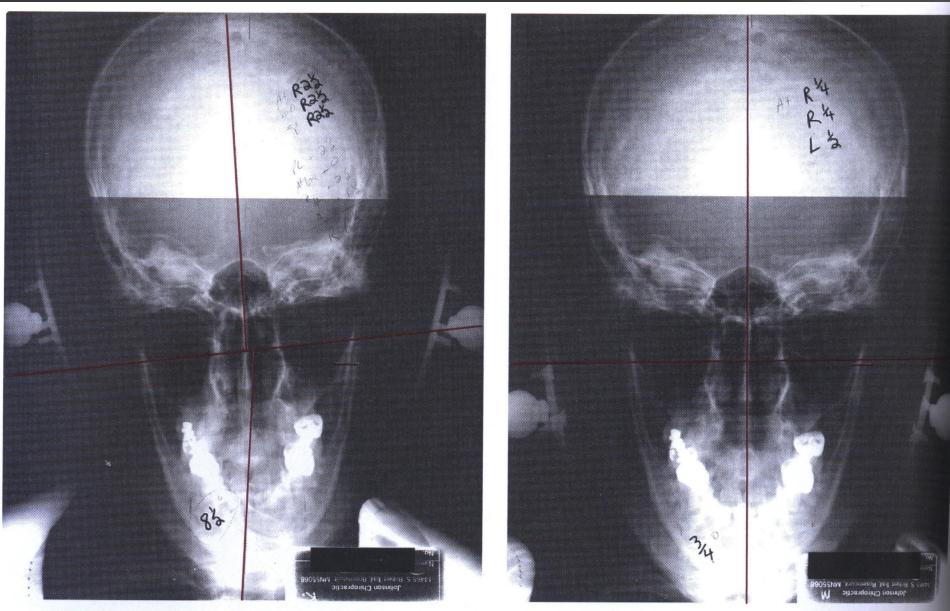
STABILITY.

- Time in alignment = INNATE THERAPY.
- Adjusting doesn't heal. Holding does.

# Chiropractic Evaluations of Subluxation

Pre vs Post

Patients should hold.



➤ FIGURE B-12 Before and after first NUCCA hand adjustment.

# So Why Consider Upper Cervical?