

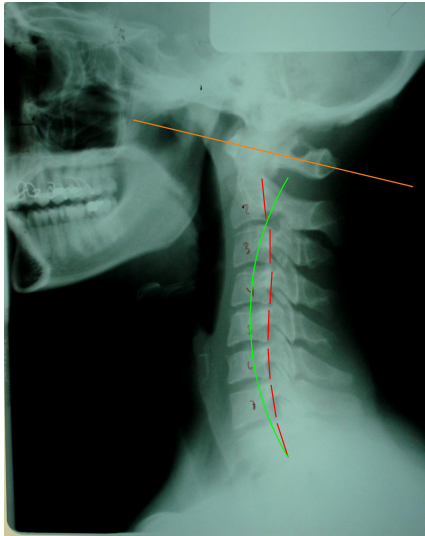


X-RAY Biomechanical Report Comparison

**Lateral Cervical Projections:
3/31/2012 vs. 6/1/2012**

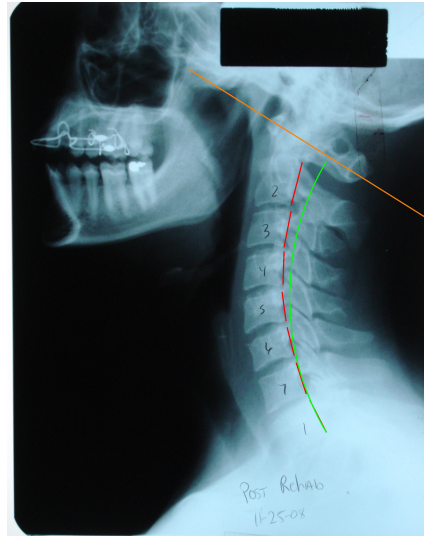
Name: Amy McCallin
Date of Birth: 4/6/1980

1: Lateral Cervical 3/31/2012



Anterior Posterior

2: Lateral Cervical 6/1/2012



Anterior Posterior

This green line represents the Normal Spinal Position and expected path of the posterior longitudinal ligament.

This red line represents the patient's position known as George's Line. This is the path of the posterior longitudinal ligament.

RRA per Segment	Normal Values	Xray 1 Values	Versus Normal	Xray 2 Values	Versus Normal	% Change: Xray 1 to 2	Translation per Segment	Xray 1 Values *	Xray 2 Values *	% Change: Xray 1 to 2
C1 to Horiz.	-29.0°	-19.5°	32.8%	-36.9°	27.2%	89.2%				
C2-C3	-10.0°	5.7°	157.0%	-3.3°	67.0%	157.9%	C2-C3	1.0 mm	-0.2 mm	120.0%
C3-C4	-8.0°	3.6°	145.0%	-9.3°	16.3%	358.3%	C3-C4	0.7 mm	-0.4 mm	157.1%
C4-C5	-8.0°	-1.7°	78.8%	-9.6°	20.0%	464.7%	C4-C5	-1.0 mm	-1.3 mm	30.0%
C5-C6	-8.0°	-5.7°	28.8%	-6.2°	22.5%	8.8%	C5-C6	-0.7 mm	-0.7 mm	0.0%
C6-C7	-8.0°	-5.1°	36.2%	-3.8°	52.5%	25.5%	C6-C7	-0.2 mm	-0.6 mm	200.0%
C7-T1	-8.0°	-9.0°	12.5%	-9.4°	17.5%	4.4%	C7-T1	-0.7 mm	-0.2 mm	71.4%

RRA = Relative Rotational Angle

* Values in Red Exceed Established Normal

Global Analysis	Normal Values	Xray 1 Values	Versus Normal	Xray 2 Values	Versus Normal	% Change: Xray 1 to 2
ARA C2-C7	-42.0°	-3.2°	92.4%	-32.2°	23.3%	906.3%
Translation C2-C7	0.0 mm	6.7 mm	6.7 mm	1.9 mm	1.9 mm	71.6%

ARA = Absolute Rotational Angle of Measurement



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Cervical Morphology	Average Values	Xray 1 Values	Versus Average	Xray 2 Values	Versus Average	% Change: Xray 1 to 2
C2 Pos. body of C2 relative to APL	n/a	70.8°	n/a	72.3°	n/a	2.1%
T1 Endplate line to horizontal	n/a	23.2°	n/a	32.2°	n/a	38.8%

APL = Atlas Plane Line

Upper Cervical Measurements	Normal Values	Xray 1 Values	Versus Normal	Xray 2 Values	Versus Normal	% Change: Xray 1 to 2	Clinical Significance Xray 2
Powers Ratio	0.9 to 1	Not Digit.	n/a	Not Digit.	n/a	n/a	
Basilar Impression (Macrae's method)	n/a	Not Digit.	n/a	Not Digit.	n/a	n/a	
Atlanto-Dental Interspace	≤ 3 mm	1.5 mm	WNL	1.3 mm	WNL	13.3%	WNL
Spinal Canal Diameter	> 13 mm	27.5 mm	WNL	25.9 mm	WNL	5.8%	WNL

WNL = Within Normal Levels
ONL = Outside Normal Levels

Signature electronically applied by Dr. Joe Ferrantelli