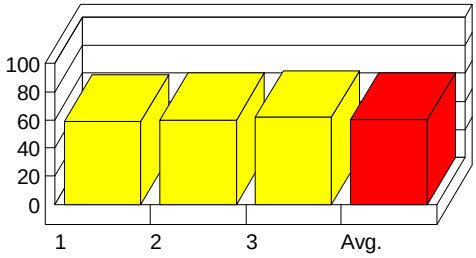
Cervical Analysis Report:

Subject Name: Sample Patient
Date of Birth: 5/2/63
Sex: Female

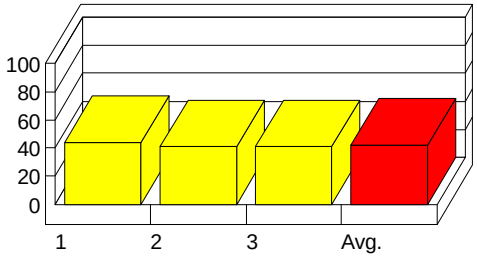
Subject Number: 123-45-6789
Exam Date: 03/16/1998
Height/Weight: 167.64 cm / 59.0 kg

A cervical analysis is administered to accurately and reliably evaluate an individual's cervical ability as it relates to human kinesiology and biomechanics. The range of motion (ROM) examination objectively measures and documents the cervical motion and it's subsequent limitations, if any. The biomechanical predictions provide improved comprehension of the subject's cervical mechanisms and posture. In addition to documenting baseline motion limitations, all measures can be utilized as a part of a progressive measurement sequence which will help assess the need for future treatment.

Flexion

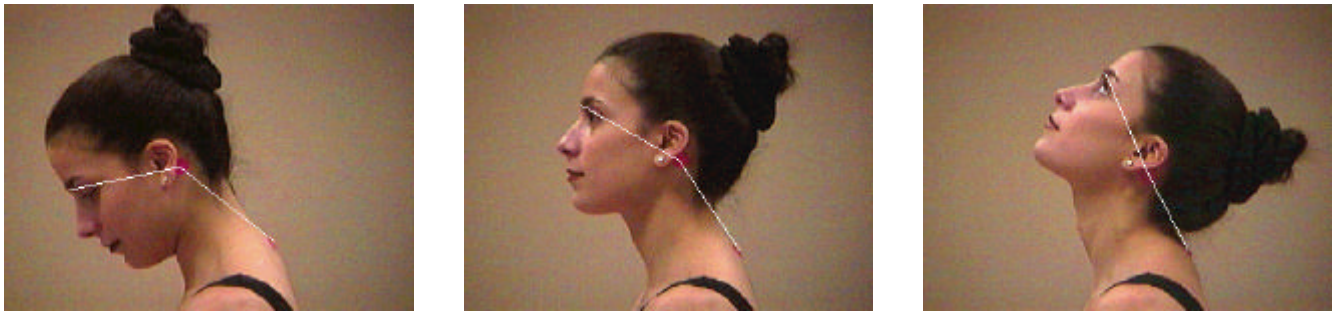


Extension

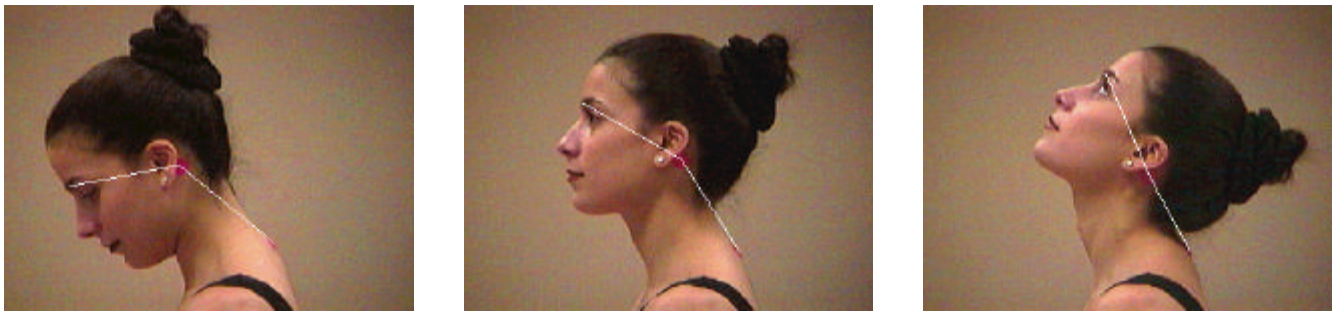


Cervical Analysis Report - Flexion/Extension: Patient, Sample

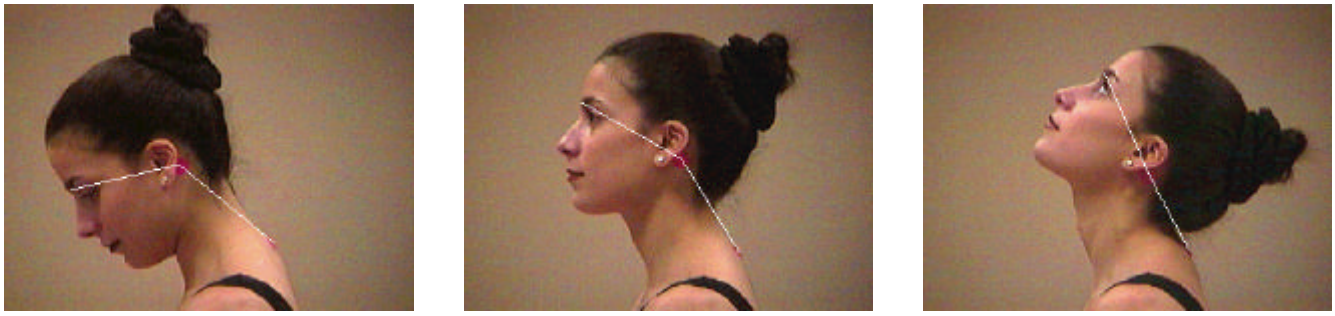
Trial 1



Trial 2



Trial 3



Cervical Flexion/Extension ROM Values											
	Trial 1			Trial 2			Trial 3			Total	
	CG	CR	T	CG	CR	T	CG	CR	T	AVG	CV
Flexion	18°	41°	59°	19°	41°	60°	19°	43°	62°	60.3°	2.5%
Neutral Position	124°	151°	n/a	122°	150°	n/a	122°	150°	n/a	n/a	n/a
Extension	-6°	-38°	-44°	-4°	-37°	-41°	-4°	-37°	-41°	-42.0°	4.1%

Averaged Biomechanical Predictions for C6/C7			
	Shear	Compression	Torque
Flexion	-13.8 N	64.4 N	2.7 N-m
Neutral Position	16.8 N	-55.1 N	1.7 N-m
Neutral Position	-8.8 N	9.1 N	1.2 N-m

CG = Cervical Glide CR = Capital Rotation T = True Total Motion

Glossary of Terms:

COEFFICIENT OF VARIATION (CV): A statistical measure of relative dispersion for a data set. This measure can be used to show consistency of effort for each position tested. A CV of greater than 15% could indicate poor consistency of effort for the position tested.

BIOMECHANICS: The application of mechanics to the living human body.

COMPRESSION: Occurs when equal and opposite loads are applied toward the surface of the vertebrae.

SHEAR: Occurs when a force is applied parallel to the surface of the vertebrae.

TORQUE: Or moment of a force, is the product of a force times the perpendicular distance from it's line of action to the axis of motion (or potential motion). Force x Distance.

CAPITAL ROTATION (CR): The degree of cranial rotation occuring at the the level of the mastoid process.

CERVICAL GLIDE (CG): Anterior or posterior horizontal translation of the cervical vertebrae originating at the C7/T1 spinal level.

References:

1. Smith LK, Weiss EL, Lehmkuhl LD., Brunnstrom's Clinical Kinesiology, 5th Edition., F.A. Davis Company., 1996.
2. Soderberg GL., Kenesiology, Application to Pathological Motion, 2nd Edition., Williams & Wilkins., 1997.
3. Enoka RM., Neuromuscular Basis of Kinesiology, 2nd Edition., Human Kinetics., 1994.
4. Gray H., Anatomy, Descriptive and Surgical, 1901 Edition., Running Press., 1994.
5. Nordin M, Frankel VH., Basic Biomechanics of the Musculoskeletal System, 2nd Edition., Lea & Febiger., 1989.
6. Magee DJ., Orthopedic Physical Assessment, 2nd Edition., Human Kinetics., 1994.
7. Ozkaya N, Nordin M., Fundamentals of Biomechanics., Van Nostrand Reinhold., 1991.
8. American Medical Association., Guides to the Evaluation of Permanent Impairment, 4th Edition., 1994.

Virtual X-Ray: Cervical Analysis

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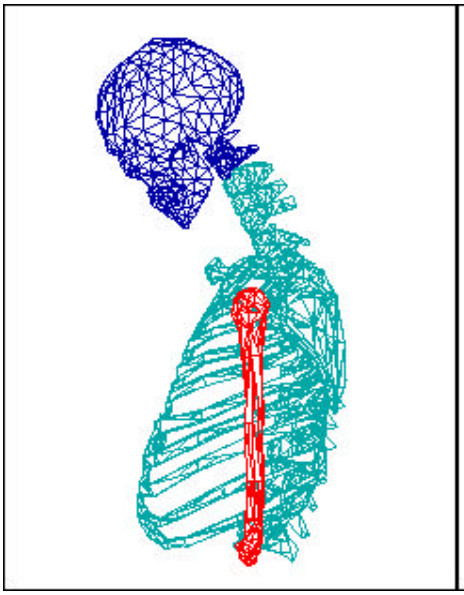
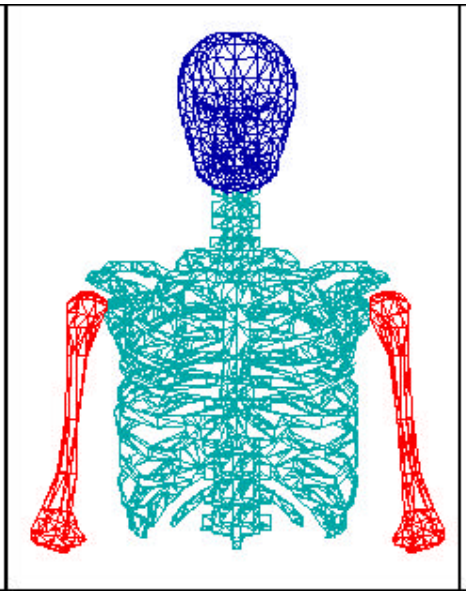
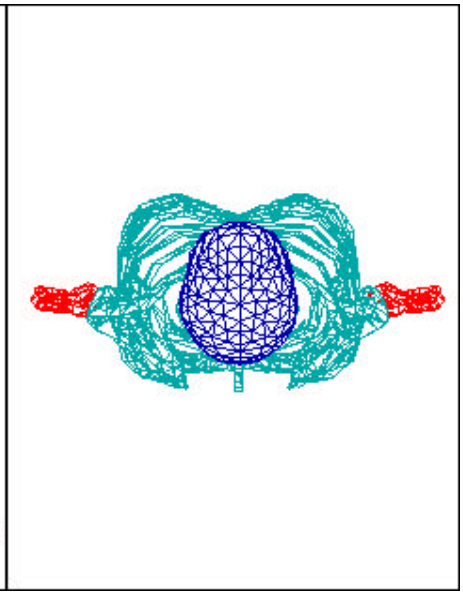


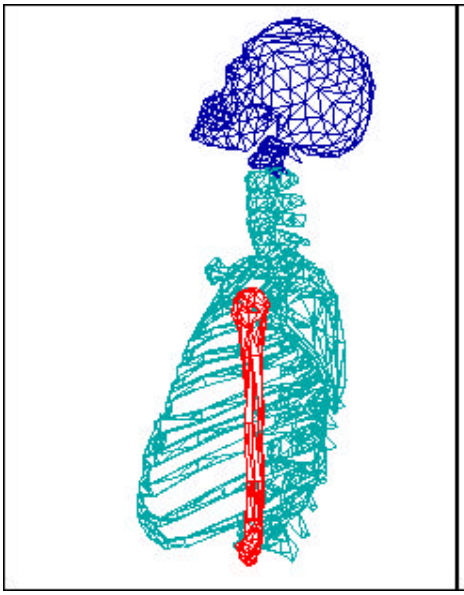
Flexion



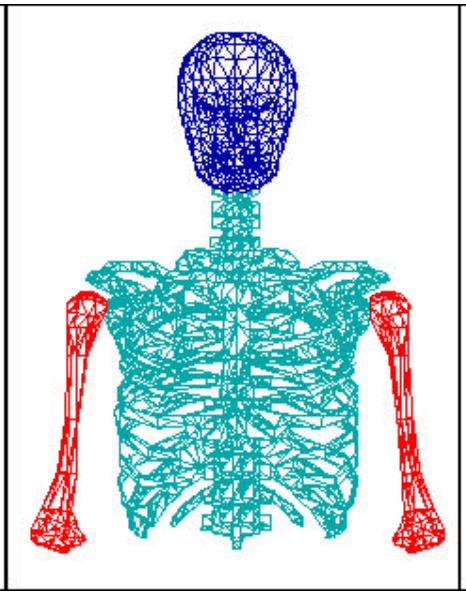
Right Lateral Flexion



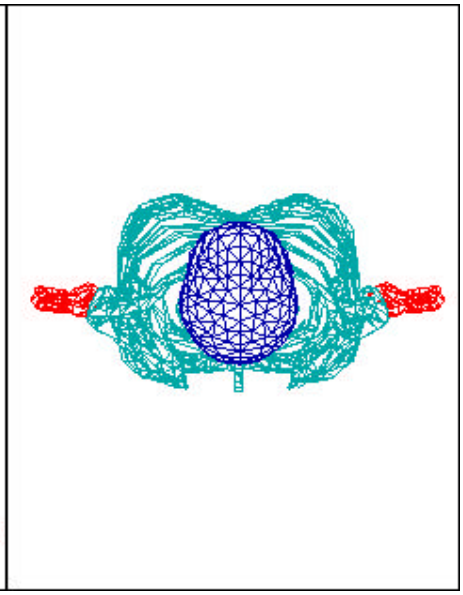
Right Rotation



Extension



Left Lateral Flexion



Left Rotation