

# Reliability of Posture Analysis of Pictures

: Arch Phys Med Rehabil. 1989  
Apr;70(4):322-9.

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## Quantitative assessment of head and shoulder posture.

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Posture of the head, neck, and shoulders has long been recognized as a factor contributing to the onset and perpetuation of cervical pain dysfunction syndromes. Treatment regimens frequently include exercises and instruction for postural correction. Clinical assessment of posture, however, tends to be subjective in nature. The purpose of this study was to determine the reliability of a new objective technique of posture measurement and to establish normal standards for the technique. This study used a computer-assisted slide digitizing system called Postural Analysis Digitizing System (PADS) to determine characteristic values for head and shoulder girdle posture and characteristic range of motion for head protraction-retraction and shoulder protraction-retraction in a sample of able-bodied young men. PADS is a modification of a two-dimensional slide digitizing system developed for measuring trunk range of motion. Twenty male subjects were photographed in a neutral position, the maximally protracted position, and the maximally retracted position of the head and scapula. Ten subjects were evaluated once, and ten were evaluated twice. The slide photographs were analyzed using a computer-assisted digitizing system. Well-defined anatomic landmarks were used to determine angular relationships in the head, neck, and shoulders. The reliability of the system was tested by calculating an intraclass correlation coefficient, student t-test, and the percent error for each position. The positions were considered reproducible, and reliability of the system was

considered adequate for postural analysis. Mean values for the positions were 28.48 degrees, 51.97 degrees, and 62.09 degrees for head protraction, the neutral position, and head retraction, respectively.(ABSTRACT TRUNCATED AT 250 WORDS)

PMID: 2930348 [PubMed - indexed for MEDLINE]

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