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**BACKGROUND:** Spinal range of motion (ROM) is one of the AMA Guides criteria used to estimate level of impairment and subsequent compensation entitlement. Studies show that spinal ROM varies with age, gender and possibly race/ethnicity but adequate normative values for women in different age and racial/ethnic groups do not exist.

**PURPOSE:** To provide normative values of lumbar flexion and extension for women of different age and racial groups using inclinometric measurements and to compare lumbar flexion and extension values between age and racial groups.

**METHODS:** Participants were a cohort of free-living women who were recruited for the Women’s Injury Study (WIN) at the Cooper Institute in Dallas, Texas. Nine hundred and seventeen women between the ages of 20 and 83 (M=52 + 13) underwent an orthopedic examination that included lumbar spine flexion and extension measurement using an electronic inclinometer. Measurements were taken in the fully extended and fully flexed positions, respectively. This was done in order to remove the influence of initial resting posture and is appropriately termed “extreme of motion” (EOM) as opposed to ROM. Comparisons between age and racial groups were made using a 2-way MANOVA followed with appropriate post hoc tests.

**RESULTS:** Means (+ SD) were calculated for racial (Caucasian, N = 619, African-American, N =147) and age groups (young; 20-39yrs, n=126, middle; 40-59yrs, n=412, older; > 60yrs, n=228). Lumbar extension for African-American women (60.1°) was significantly greater (p<0.05) than for Caucasian women (52.6°) but flexion was not different (15.2° and 17.0°), respectively. Extension EOM for the young group (61.6°) was greater (p<0.05) than the middle (56.6°) and older (50.8°) groups. The extension difference between the middle and older groups was also statistically significant. Flexion EOM for the young group (20.1°) was greater (p<0.05) than the middle (15.2°) and older (12.8°) groups. The difference in flexion between the middle and older groups was not significant.

**CONCLUSIONS:** Normative values of lumbar extension are different for Caucasian and African-American women. Values for lumbar flexion and extension are different between age groups. Therefore, different criteria should be used to estimate impairment level in women of different racial and age groups.

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