

# Thigh muscle density linked to physical functioning in RA

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Thigh muscle density, as derived from computed tomography, appears to be a strong indicator of physical functioning and disability in rheumatoid arthritis patients, according to a study published in the August issue of *Arthritis & Rheumatism*.

(HealthDay) -- Thigh muscle density (TMD), as derived from computed tomography (CT), appears to be a strong indicator of physical functioning and disability in rheumatoid arthritis (RA) patients, according to a study published in the August issue of *Arthritis & Rheumatism*.

Henry R. Kramer, M.D., from Johns Hopkins University in Baltimore, and colleagues assessed thigh fat area (TFA), thigh muscle area (TMA), and TMD using bilateral midfemoral quantitative CTs in 152 patients with RA. Disability and [physical performance](#) were measured by the Health Assessment Questionnaire (HAQ), the Valued Life Activities (VLAs), and the Short Physical Performance Battery (SPPB), and the correlation with thigh-composition measures was evaluated.

The researchers found that, in multivariate analysis, older age, longer duration of sedentary activity, longer duration of RA, higher tender joint count, higher serum interleukin-6 levels, use of glucocorticoids, and nonuse of hydroxychloroquine all correlated significantly with lower TMD. About 63 percent of the variability in TMD was explained by RA characteristics. Higher TFA and lower TMD

correlated significantly and independently with higher HAQ scores, lower Short Form 36 health survey [physical functioning](#) scores, lower composite SPPB scores, and a higher proportion of affected obligatory VLAs. Lower TMA was not significantly associated with disability or physical performance measures.

"Thigh CT-derived measures of body composition, particularly fat area and muscle density, were strongly associated with disability and physical performance in RA patients, with RA disease features as potential determinants," the authors write. "Efforts to reduce fat and improve muscle quality may reduce disability in this population with impaired physical functioning."

Kramer is the recipient of an Abbott Medical Student Research Preceptorship award.

**More information:** [Abstract](#)  
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