

Thoracic kyphosis in those over 50 may not be a predictor of physical decline

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A recently published study in the *Journal of the American Geriatrics Society* has found that using CT scans to evaluate early signs of hyperkyphosis (extreme forward curvature of the upper spine) in people over age 50 does not help to identify those at risk of subsequent physical function decline. The article's conclusions are based on a study conducted at the Institute for Aging Research at Hebrew SeniorLife using information from The Framingham Heart Study - a collection of data from Framingham, MA residents and their offspring dating back to the 1940s.

To date, the natural history of hyperkyphosis is not well understood. In addition, most studies on the subject have focused on a population of adults over 65 years of age, many of whom may already have developed hyperkyphosis and impairments in physical function. If early signs of hyperkyphosis in a relatively younger population were to predict subsequent declines in physical function as they aged, this would put added importance on timely intervention to delay or prevent adverse outcomes for people before it is too late.

However, this particular study, titled, "Thoracic kyphosis and physical function in women and men: The Framingham Study" did not find a direct correlation between measurements of forward curvature in the upper back (kyphosis) and a decline in physical function.

Participants in the study included 1,100 people (604 women and 496 men) over the age of 50. The mean age for this cohort was 61 years of

age, younger than many other studies on the effects of kyphosis.

Lead author, Amanda Lorbergs PhD, said, "We anticipated that adults with worse thoracic kyphosis would be at risk for poor physical function. However, our findings suggest that a single measurement of spinal curvature from a CT image did not predict physical function." Elizabeth (Lisa) Samelson PhD, Associate Scientist at the Institute for Aging Research and Assistance Professor at Harvard Medical School, is the Principal Investigator of the study which is funded by a grant from the National Institute on Aging. Dr. Samelson added, "These results may indicate that identifying persons at risk for functional [decline](#) may require a different approach to measuring early changes in [spinal curvature](#), and/or more challenging tests to assess physical functioning."

Provided by Hebrew SeniorLife Institute for Aging Research

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