

ORIGINAL ARTICLE**JBMR[®]**

Association Between Components of Body Composition and Scoliosis: A Prospective Cohort Study Reporting Differences Identifiable Before the Onset of Scoliosis

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ABSTRACT

There is an increasing body of research suggesting that low body weight is associated with scoliosis, but this is based on case-control studies, which are prone to bias. No studies have investigated the components of body weight: fat and lean mass. We have therefore carried out the first population-based prospective study of the association between fat and lean mass at age 10 years assessed by dual-energy X-ray absorptiometry (DXA), with presence of scoliosis at age 15 years using the Avon Longitudinal Study of Parents and Children (ALSPAC). All children with scoliosis at age 10 years were excluded. Of 5299 children at age 15 years, 312 (5.9%) had scoliosis.