
**Abstract**

Although it is widely accepted that persons become shorter as they grow older, most estimates of the rate of decline are based largely on cross-sectional studies and are confounded by secular changes and individual variation. The present study uses a mixed series of longitudinal physical measurements, obtained by the Busselton Population Studies Group, for nearly the entire adult population of Busselton, Western Australia. All persons in the sample who had a minimum of three measures at 3-year intervals are included in our analysis, regardless of health. Random regressions analysis of the individual height and age data is used to estimate the expected rate of decline of stature with age. A significant sex difference was found, with females declining at a greater rate than males, particularly after the age of 40.