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Physical occupational exposures and healthy life expectancy in a French occupational cohort

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Abstract To examine the relationships of strenuous and hazardous working conditions and night work with healthy life expectancy (HLE). The sample contained male gas and electricity workers from the French GAZEL cohort (n=13654). Six measures of physical working conditions were examined: Self-reports from 1989 and 1990 of ergonomic strain, physical danger, night work and perceived physical strain; company records of workplace accidents and a job-exposure matrix of chemical exposures. Partial HLEs (age 50–75) relating to 1) self-rated health and 2) chronic health conditions, obtained from annual questionnaires (1989–2014) and company records, were estimated using the multi-state life table method and microsimulation. The analyses were adjusted for social class and occupational grade. Participants who reported more physically demanding and dangerous work did not have shorter partial life expectancy but had shorter healthy life expectancies in terms of both chronic illness and self-rated health. No differences were observed in relation to night shift work. Strenuous and hazardous work may contribute to ill health in later life, which has implications for individuals' quality of life as well as healthcare use and labour market participation.

