Objectives The goal of this study was to measure outdoor workers’ exposure to solar UVR in a Canadian setting, and to examine their sun protection behaviours at work and leisure.

Method Participants were recruited via trade unions and companies with outdoor operations. Workers wore an electronic dosimeter that measured UVR intensity once/minute for 5 working days and completed a questionnaire on skin cancer risk factors, sun protection behaviours, and job characteristics. Dosimeter data was converted to UVIndex and Standard Erythemal Dose (SED), an indicator for the potential for sunburn.

Results Seventy-eight outdoor workers were recruited. The workers were largely male (95%), with a mean age of 38 years. Workers that reported the most outdoor working hours had the highest measured UVR exposure (mean SED of 2.6; 8 times the level of those reporting ≥1 outdoor hour). Workers who reported the most outdoor hours at work also reported the most outdoor hours at leisure. Workers who reported using sleeve shirts, hats, and sunglasses at work ‘often or always’. Sunscreen and shade-seeking were low, with 29% and 8% reporting these behaviours at work, respectively. Despite reasonable protective behaviours, 70% of workers reported ≥1 sunburn last summer; this climbed to 80% among those who worked outside all day.

Conclusions Outdoor workers in Canada are at risk of high solar UVR exposure during the summer. They participate selectively in sun protective behaviours, optimising more often for clothing protection than sunscreen or shade protection. Most experience acute damage from exposure (i.e. sunburn) despite attempting to protect themselves.