Once again, in this issue we feature research on the occupational health of firefighters with three more studies on health and work in firefighters. Fire-fighting is both potentially dangerous for firefighters and safety critical for the public. Ensuring fitness for task is key to public safety and the effective running of the service, and from the number of research papers being submitted to *Occupational Medicine* it appears to be an occupation of ever increasing research interest.

Cardiovascular events account for 45% of firefighter deaths on duty. Kiss *et al.* [1] looked at cardio-respiratory fitness in Belgian firefighters who failed the VO$_2$ max fitness criteria established by an expert working group in 2009. The authors found a strong correlation with age, body mass index (BMI) and total body fat; the latter being the strongest predictor. Perhaps no great surprise. But this is the first time to the authors’ knowledge that the correlation between VO$_2$ max and total body fat has been studied in firefighters. One of the weaknesses of the study was that the majority of the participants were volunteer firefighters who may have less time for exercise than professional firefighters. The authors concluded that there is a need for increased vigilance in firefighters over the age of 50 and for a more structured approach to healthy eating and exercise.

Substance misuse in safety critical workers is also a public safety issue. In the UK there are strict rules on drugs and alcohol for firefighters. Piazza-Gardner *et al.* [2] studied factors associated with alcohol consumption in US firefighters. They found that firefighters consume more alcohol than the general population. They also found an association with length of service and race, with white firefighters significantly more likely to binge drink than non-white firefighters. They did not go on to demonstrate a link between binge drinking and adverse work outcomes but concluded that alcohol use may have an adverse effect on force readiness and that intervention strategies should be considered.

Staying on the subject of firefighters, Gordon and Larivièrè [3] looked at physical and psychological factors associated with injury in forest firefighters. They found that older workers were more likely to sustain an injury requiring first aid, although paradoxically they found that firefighters with higher experience levels were less likely to be injured. They also found an association with personality traits including high levels of neuroticism and low levels of openness measured using the NEO Personality Inventory. However, the strongest association was with a history of previous injuries. So perhaps some firefighters are just more accident prone than others.

On a different note, the European Working Time Directive 1993/104/EC was adopted into UK law as the Working Time Regulations 1998. The statute imposed, with some caveats, a maximum 48-hour working week. The evidence on which the working time limits were based was at best incomplete. A Japanese study published in this issue [4] looked at the link between overtime and depression. The authors report a significant association (odds ratio 4.5) between new onset of depressive disorder and working more than 60 hours per week compared to working 50 hours per week or less, even when adjusted for age, lifestyle factors, work characteristics and socio-demographic factors. The main strengths of the study were a relatively large sample size, the 1-year prospective design and use of a validated questionnaire. However, they were unable to exclude sleep deprivation as a confounder. The authors recommend depression screening of employees working more than 60 hours per week but stop short of recommending working time limits. Perhaps 48 hours is about right after all.

Steven Nimmo  
Assistant Editor

### References