

# Long hours, fatigue, overwork

*Long hours and the resulting health problems of fatigue and overwork are common complaints reported by safety representatives and workers.*

According to the 2011 Census, Londoners are more likely to work longer hours than the national average and more likely to work in jobs requiring working 49 hours or more, 15.9%, compared to 13.3% nationally, of the 4.4 million economically active in London. The 2011 Labour Force Survey, showed those in construction generally work the longest hours. The shift away from manufacturing towards service industries has reduced average working hours throughout the UK; and recession has meant that 16% work part-time because they cannot find full time work.

## Who works the longest hours

Those in lower skilled jobs work the longest paid hours while managers work the most unpaid overtime. The Annual Survey of Hours and Earnings (ASHE) showed the three occupations that worked the longest average hours in the UK were:

- ▲ Crane drivers at 52.8 hours per week
- ▲ Heavy goods vehicles drivers at 48.4 hours per week
- ▲ Mobile machine drivers and operatives at 48.0 hours per week

This survey underestimates hours in jobs with unpaid overtime. In general lower skilled jobs work the longest paid hours while managers work the most unpaid overtime.

## Accidents

A recent review (Wagstaff, 2011) found shift work and long working hours present a substantial and well-documented detrimental effect on safety, but said in epidemiological terms

the differences may be considered "rather small" and of importance only if the accident incidence is high or if accidents may have large effects. It concludes: the findings are most relevant to safety-critical activities such as the transport and health sectors. Work periods >8 hours carry an increased risk of accidents that cumulates, so that the increased risk of accidents at around 12 hours is twice the risk at 8 hours. Shift work including nights carries a substantial increased risk of accidents, whereas "pure" night work may bring some protection against this effect due to resynchronization.

There are no clear indications of any age or gender being specifically susceptible to or protected against the effects of shift patterns on accident risk.

Evidence from the United States (Dembe, 2005) showed overtime was associated with a 61% higher injury hazard rate compared to jobs without. Working at least 12 hours per day was associated with a 37% increased hazard rate and working at least 60 hours per week was associated with a 23% increased hazard rate. A strong dose-response effect was observed, with the injury rate increasing in correspondence to the number of hours per day (or per week) in the workers' customary schedule. This study concluded "Results suggest that job schedules with long working hours are not more risky merely because they are concentrated in inherently hazardous industries or occupations, or because people working long hours spend more total time "at risk" for a work injury.

Strategies to prevent work injuries should consider changes in scheduling practices, job redesign, and health protection programmes for people working in jobs involving overtime and extended hours."

## Health effects

Studies have associated overtime and extended work schedules with an increased risk of hypertension, cardiovascular disease, fatigue, stress, depression, musculoskeletal disorders, chronic infections, diabetes, general health complaints, and all cause mortality. Systematic reviews generally have concluded that long working hours are potentially dangerous to workers' health. (Dembe 2005).

## Fatigue

An HSE briefing says: Fatigue does not have a clear scientific definition but is generally a feeling of tiredness and being unable to perform work effectively. Specifically, a fatigued person will be less alert, less able to process information, will have slower reaction times and less interest in working compared to a person who is not fatigued. The briefing quotes case studies which say:

- ▲ Frequent overtime can increase accident risks and so can long hours at work. For the first 8 or 9 hours in a shift, the accident risk is constant, but after 12 hours, the risk approximately doubles and after 16 hours, it trebles.
- ▲ Shift-workers, particularly those on rotating shifts, have a higher incidence of sick leave, a higher rate of visits to clinics at the work site, and poorer scores on a variety of measures of health. In one study, 62% of shift-workers complained of sleep problems, compared with 20% of day-workers.
- ▲ Shift-workers, and particularly night-workers, have a higher incidence of digestive disorders than day workers, and a slightly higher incidence of cardiovascular disease.
- ▲ Shift-work may also be a risk factor in such pregnancy outcomes as low birth weight and pre-term births.

## The Working Time Regulations 2002

Apply to workers not just employees, but don't cover the self-employed.

The core rights for most workers are:

- ▲ a maximum average working week of 48 hours, including overtime, over a reference period of 17 weeks; with agreement only the reference period can be extended to 52 weeks (annualised hours).
- ▲ a maximum of eight hours night work.
- ▲ a daily rest period of 11 hours.
- ▲ a day off per week.
- ▲ a rest break if working more than 6 hours.
- ▲ paid annual leave of 5.6 weeks.

UK workers can opt out of the 48 hour week it must be individual and in writing and the employer must keep records of these workers. The TUC has a model letter so that workers can opt back into the 48 hour week, it is at [www.tuc.org.uk/tuc/optout.pdf](http://www.tuc.org.uk/tuc/optout.pdf)

## Other Regulations

Some workers are covered by their own regulations; for example:

- ▲ **The Merchant Shipping (Hours of Work) Regulations 2002** give a daily rest requirement of 10 hours, and 77 hours weekly rest with only four weeks holiday.
- ▲ **The Civil Aviation (Working Time) Regulations 2004** limiting annual hours to 2,000 hours including overtime and flying time to 900 hours. Seven rest days a month, 96 a year, four weeks leave and adequate rest breaks.
- ▲ **The Road Transport (Working Time) Regulations 2005** set working hours as 48 on average

per week, 60 hours in a single week, 10 hours in any 24 hours. But the reference period can be extended from 4 to 6 months, and night work exceed 10 hours by collective agreement.

### Exclusions

Exclusions include the armed forces. Some workers are excluded from night work restrictions: drivers, guards, platform staff on the railways; security guards, caretakers; activities with a need for "continuity of service or production"; when there is a surge in activity including exceptional events, accidents and situations of imminent danger.

### Young Workers (15-18 years)

Their hours must not exceed 8 hours per day or 40 per week and the hours must not be averaged out over a longer period. They should not work nights, except in special cases.

## Office of Rail Regulation Recommendations

- ▲ **Daily rest** an average of 8.2 hours per 24 hours is required for safety critical workers. It is advisable to include a minimum rest period of 12 hours between consecutive shifts, increasing to 14 hours rest in the case of consecutive night shifts.
- ▲ **Rest days** allow 'cumulative fatigue' to dissipate. It says: "workers may benefit from regular (at least fortnightly) recovery periods of at least 48 hours" and this is particularly important for shift workers.
- ▲ **Rest breaks** A regular 10-15 minute break every two hours during the day and every hour during the night. For driving good practice would be

to plan a short break every three hours, with regular breaks throughout better than breaks near the start and end. A food and drink preparation area, quiet rest area, the facility to talk to colleagues and take a walk are positive points. For safety critical workers on nights it recommends being able to take a short nap (only 10 minutes to avoid grogginess on waking).

### Find out more

Labour Research Department *Working Time Regulations – Application and enforcement – a union guide* (April 2013). This gives detailed information about what and who the family of regulations apply to including case law examples and case studies. From: LRD, 78 Blackfriars Road SE1 8YX. Tel: 020 7928 3649, e-mail [info@lrd.org.uk](mailto:info@lrd.org.uk)

### References

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- ▲ Wagstaff AS, Sigstad Lie J-A.(2011) *Shift and night work and long working hours – a systematic review of safety implications*. Scand J Work Environ Health. 2011;37(3):173–185. doi:10.5271/sjweh.3146.
- ▲ Dembe AE, Erickson JB, Delbos RC, Banks SM, (2005) *The impact of overtime and long work hours on occupational injuries and illnesses: new evidence from the United States* Occup Environ Med 2005; 62:588–597. doi: 10.1136/oem.2004.016667.
- ▲ HSE Human Factors Briefing Note No. 10 *Fatigue*.
- ▲ Office of Rail Regulation (2012) *Managing rail staff fatigue*, January 2012.

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