

Shift work as a health risk

HBoggild et al. Scandinavian Journal of Work, Environment and Health. Apr (2001) Vol.27 #2 p 87.

A study of shift-work patterns and association with biomarkers for ischaemic heart disease (IHD).

The study was undertaken in a large number of different hospital wards. Lipids and lipoproteins levels in blood samples, taken from hospital staff, were used as biomarkers of risk of IHD.

Shift patterns were then adjusted, by extensive consultation, and any effect on these biomarkers, analysed.

Several simultaneous changes were made to shift patterns and in some wards some members of staff were allowed to retain their unchanged shift pattern.

The study aimed to make the following changes to shift patterns:

- Max of 3-4 consecutive nights followed by an extra day off to sleep.
- Regular and predictable schedules with accommodation for the demands of predicted social life commitments.
- Choice of day and evening or, day and night.
- Minimising weekend work.

Reductions in risk markers were barely significant, but with more reduction for the more complete shift reorganisation.

The extensively consultative process for the wards that took part in the change programme, could be a factor to account for the change in biomarkers.

Comment

If shift work had been shown to create significantly increased risk of IHD there would have been further pressure to regulate the working hours of hospital staff. This has not been shown by this work

The choice of optimum shift pattern is however of interest. It is likely that further studies, perhaps using more sensitive outcome measures e.g cortisol levels, will adopt this idealised shift system.

As it is, the research provides only a tenuous link with EL.

It is conceivable that improvements in biomarker levels were indirectly linked to the shift pattern changes that were made. Maybe only the better wards agreed to participate? Maybe the consultative process provided other opportunities for change?

