

*F Tuchsén et al. Occ. Env. Med. (2006) Vol.63 p 451 – 455*

### **A 12 year prospective study of circulatory disease among Danish shift workers**

The study finds evidence of a weak link between shift work and increased risk of circulatory disease.

The cohort included 927 men and women working non-day shifts. The main cohort of 4,579 workers worked day shift only during the 12 years study period. All were free of diagnosed circulatory disease at baseline.

Outcomes were assessed by reference to a national database of hospital attendance. Other variables assessed were: smoking history, BMI, exposure to environment tobacco smoke, sitting or standing at work, temperature at work, noise, monotony, interpersonal conflict, sexual harassment, ergonomic discomfort, job insecurity, control over work rate, social support, emotional demands.

The risk of incident circulatory disease was related to shift work even after all other variables had been corrected for. RR = 1.3 (95% CI = 1.1 to 1.6). The attributable fraction of circulatory disease in the whole population was estimated to be 5% (i.e. nationally, among workers, 5% of circulatory disease was attributable to shift working).

#### Comment

Most of the circulatory disease burden in this cohort would be heart disease.

The excess risk due to shift working is not sufficient for causal presumption among shift workers or the general working population.

It is unusual to find that smoking status and BMI were not strong predictors of circulatory disease; this casts some doubt on the overall validity of the experiment. Noise, psychosocial variables, (apart from job insecurity) and passive smoking were unrelated to outcome.

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