P94 MEDICAL SURVEILLANCE OF BLOOD LEAD LEVELS IN BRITISH WORKERS

Charlotte Young,[1] Andrew Darnton[2] [1]*Health & Safety Laboratory, Buxton, UK;* [2]*Health & Safety Executive, Bootle, UK*

10.1136/oemed-2011-100382.308

Objectives Lead exposure and absorption can lead to many adverse health effects. Statutory monitoring of blood-lead levels in British workers has been undertaken since 1982 in order to prevent the occurrence of lead-related health problems. Our objective was to describe trends in worker blood-lead levels between 1982 and 2010.

Methods All British workers with the potential for significant exposure to lead are required to undergo medical surveillance including regular recording of their highest blood-lead level. Doctors supply an annual summary of measurements and numbers of workers suspended from work, categorised by age, sex, industry sector and blood-lead level. Summary statistics based on measurements supplied through 2010 were described and time trends in levels were investigated.

Results In 1982, 22 217 workers were under medical surveillance; this fell to 7162 in 2010. The majority of these were male (95%); this remained broadly constant over the period. In 1982, 1.7% of males and 20.3% of females had measurements above the suspension limits (80 µg/100 ml and 40 µg/100 ml). The suspension limit for males was reduced to 70 µg/100 ml in 1986; both were further reduced in 1998 to 60 µg/100 ml and 30 µg/100 ml. Despite these reductions, 0.8% of males and 1.2% of females had measurements above these limits in 2010. The majority of individuals under surveillance were employed in smelting, refining, alloying and casting.

Conclusions There was a downward trend in the number of workers under medical surveillance, along with a reduction in the percentage of workers with high blood-lead levels and suspensions from work.