By Xantha Leatham

Fatal lung disease risk of fumes from household bleach

USING bleach and household disinfectants increases the risk of potentially fatal lung disease, a study has warned.

Regularly inhaling strong cleaning chemicals can increase the chance of developing chronic obstructive pulmonary disease (COPD) – usually associated with smoking – by almost a third.

The implications are especially serious for those who use the products in their daily working routine, such as nurses and cleaners.

Studies have previously linked exposure to disinfectants with breathing problems such as asthma, but far less attention has been paid to COPD.

Affecting 3 million Britons, COPD is a group of lung conditions that cause breathing difficulties including emphysema – damage to the air sacs in the lungs – or chronic bronchitis, which is the long-term inflammation of the airways.

The study, led by Dr Orlaime Dumas from the French National Institute of Health and Medical Research, looked at nurses who have to disinfect instruments and wards as part of their duties.

It looked at exposure to specific disinfectants such as glutaraldehyde, which is used on medical instruments, as well as bleach and hydrogen peroxide.

All of these were associated with an increased risk of COPD of between 24 to 32 per cent.

Dr Dumas said: ‘We found that nurses who use disinfectants to clean surfaces on a regular basis – at least once a week – had a 22 per cent increased risk of developing COPD. In our study population, 37 per cent of nurses used disinfectants to clean surfaces on a weekly basis and 19 per cent used disinfectants to clean medical instruments on a weekly basis.

The findings were based on more than 55,000 nurses taking part in the US Nurses’ Health Study II. It looked at those who were still working in 2009.

Researchers followed them for eight years, during which 863 were diagnosed with COPD.

The nurses’ exposure to disinfectants was evaluated via a questionnaire and took into account factors such as smoking, age, body mass index and ethnicity.

Dr Dumas added: ‘The potential adverse effects of exposure to disinfectants on COPD have received much less attention, although two recent studies in European populations showed that working as a cleaner was associated with a higher risk of COPD. To the best of our knowledge, we are the first to report a link between disinfectants and COPD among healthcare workers, and to investigate specific chemicals that may underlie this association.

‘Our findings provide further evidence of the effects of exposure to disinfectants on respiratory problems, and highlight the urgency of integrating occupational health considerations into guidelines for cleaning and disinfection in healthcare settings such as hospitals.’

She said more research needed to be carried out – particularly on the impact of a lifetime of exposure to the chemicals.

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