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Regular bleach use linked to increased fatal lung condition risk

The research involved data from more than 55,000 nurses in the US

The regular use of disinfectant cleaning products such as bleach has been linked to an increased risk of developing fatal lung conditions, researchers said.

A study by Harvard University and the French National Institute of Health and Medical Research (Inserm) found that using the products just once a week could increase a person's chance of developing chronic obstructive pulmonary disease (COPD) by nearly a third.

The research involved data from more than 55,000 nurses in the US, and scientists looked at exposure to specific disinfectants, including bleach, hydrogen peroxide, alcohol and chemicals known as quaternary ammonium compounds (quats), which are often used to disinfect surfaces such as floors and furniture.

All of these were associated with an increased risk of COPD of between 24% to 32% in the study.

Previous studies have linked exposure to disinfectants with breathing problems such as asthma, but it is believed this is the first piece of research to identify a link between disinfectants and COPD.

Dr Oriane Dumas, a researcher at Inserm, said: "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."



Dr Dumas will present the findings at the European Respiratory Society International Congress in Milan on Monday, where she will highlight that further research is needed to clarify the impact of disinfectant use in the home.

She added: "In particular, we need to investigate the impact on COPD of lifetime occupational exposure to chemicals and clarify the role of each specific disinfectant.

"Some of these disinfectants, such as bleach and quats, are frequently used in ordinary households, and the potential impact of domestic use of disinfectants on COPD development is unknown.

"Earlier studies have found a link between asthma and exposure to cleaning products and disinfectants at home, such as bleach and sprays, so it is important to investigate this further."

COPD is an umbrella term for a series of conditions affecting the lungs including emphysema, chronic bronchitis and chronic asthma.

The condition affects an estimated 1.2 million people in the UK, with nearly 30,000 people dying from the disease each year.

As part of the research, scientists looked at 55,185 female registered nurses enrolled in the US Nurses' Health Study II, which began in 1989.

They looked at those nurses who were still in a nursing job and with no history of COPD in 2009, and then followed them for approximately eight years until May 2017.

During that time 663 nurses were diagnosed with COPD. The nurses' exposure to disinfectants was evaluated via a questionnaire and other factors that could have distorted the results, such as the age, weight and ethnicity of the subjects, were taken into account.