

Statement from UKCPI in response to the print publication of a study on household cleaning sprays and adult asthma:

"The use of household cleaning sprays and adult asthma: an international longitudinal study"

Zock et al. *Am. J. Respir. Crit. Care Med.* 2007; 176: 735-741

UKCPI has noted the recent print publication of this multinational study, which gives some additional details on findings originally published in 2005, and which appears to repeat the electronic publication released in June 2007.

The authors report an association between frequent use of cleaning sprays and an increased risk of developing adult-onset asthma but they do not claim to have provided evidence demonstrating that use of sprays can cause asthma

Dr A N Williams, Director-General of UKCPI said "Asthma is an important disease which we must all take seriously. However, careful reading of this paper raises a number of issues which call into question the significance of the findings. The lack of any actual measurement of people's use of, or exposure to, cleaning products is a particular concern."

"The safety of consumers is the highest priority of our industries and the safety of our products is regularly checked and subject to rigorous controls, as well as stringent European legislation. Manufacturers carefully formulate products to ensure they are safe for humans and the environment. All products must also carry clear instructions for safe use and any appropriate safety warnings."

The study assesses exposure to cleaning products only from people's questionnaire answers recalling their usage habits. There was no actual measurement of product use or exposure. Importantly, the questionnaire asked only about the numbers of days per week that products were used and did not ask about the time spent using them*. Consequently it does not properly distinguish between people who may use cleaning products on the same day each week for many hours from others who use only a small amount of product each day.

In addition it is important to note that:

- Epidemiological studies of this kind can only suggest associations and not prove cause-effect links.
- Increased asthma risk among professional cleaners alluded to in the press release similarly remains only an observed association. Cleaning product use has not been demonstrated to cause asthma.
- Household cleaning products by their nature and in their use are inevitably associated with dirt and dust. Dust is seen as a risk factor for asthma and this potential confounder, and others such as environmental tobacco smoke, do not appear to be controlled for in this study. The authors give details of other confounding factors but not how they have adjusted for them

Points in the study which need to be further clarified include:

- Use of spray cleaning products varies considerably from one country to another. The data reported in the study shows that in the UK, for example, where usage of trigger and aerosol household cleaning sprays is relatively high, there is a **reduction** in the risk of asthma: in Norway, where the product usage is relatively low, there is an increase. These seem to contradict the paper's central conclusion.
- The criteria the study uses to record a new case of asthma appear to be weak, for example relying on self-reporting of symptoms and/or consumption of medication which may also be taken for other conditions
- It is an odd feature of the study that most of the new 'asthma' cases did not have 'bronchial hyper-responsiveness' (BHR) which is often considered an essential criterion for a diagnosis of asthma

Ends

Dr A N Williams, Director-General
UK Cleaning Products Industry Association
Tel: 01829 770055
www.ukcpi.org

Notes to Editors:

* Product use was categorised into just four groups according to the number of days on which a product may be used. However, some individuals may use cleaning products on 1 day a week for many hours while others may use only a small amount of product each day. This study does not take into account such differences resulting in a lack of clarity about exposure levels.

1. This paper looks specifically at the development of irritant asthma in adults. It should be remembered that the large growth rate in asthma in the last few decades has been in atopic asthma in children.
2. The recent SCHER (Scientific Committee on Health and Environmental Risks) Opinion on Risk Assessment on Indoor Air Quality considers, amongst other work, a number of studies of professional cleaning associated with asthma or its symptoms. It stated that although associations have been observed, cause and effect remains unclear because many other factors that may have an effect apart from products are also present. It also notes that frequent use of some product types may reflect living environments or lifestyles that contain other risk factors. (Dusts, mould and smoking are examples of such risk factors) SCHER concluded: *"Therefore, due caution is needed at present in the interpretation of the results."*
3. The importance of controlling dusts and their many components that can affect asthma is also highlighted in a newly published comprehensive review by Nielsen et al (Indoor Air 2007; 17:236-255), entitled, Do indoor chemicals promote development of airway allergies? The review concludes *"Clearly an overall prevention strategy for avoiding sensitisation and development of asthma should include clean buildings"*.