

# Allergy claims 'unproved'

Claims in Sweden that textile floorcoverings cause allergic reactions in some people have not been adequately proved, according to two Swedish scientists.

PROFESSOR Roshan L Shishoo and Alf Börjesson, of the Swedish Institute for Fibre and Polymer Research, in an article for *C&FR*, call on the carpet industry to speak out forcefully and refute claims of health risks in carpets.

They urge closer co-operation between the fibre industry, carpet manufacturers and carpet cleaning machine producers to develop a more easily cleanable carpet.

The use of carpets in Sweden has steadily decreased since 1975. However, the authors point out that the occurrence of allergic reaction and other environmental sensitivity in the general population has increased.

They write: Carpets constitute only a small proportion of the total floorcovering market in Sweden, having fallen from a market share of 40 per cent in the mid-seventies to only 2 per cent in 1992.

Since then there has been a small rise, up to 6.3 per cent in 1994. This is still low however compared with many European countries and the US.

## Intensive discussions

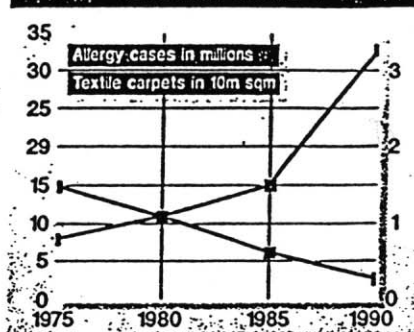
Back in the seventies there were intensive discussions in Sweden with some claiming that fitted carpets were breeding places for allergens and a source of harmful contaminants.

As a result Swedish consumers and specifiers for public buildings were fearful of possible allergic reactions with fitted carpets.

Two opposing interest groups were created. One consisted of organisations for allergy and asthma patients, medical expertise and buyers representing state authorities. This group argued against the use of carpets, describing them as health hazardous products.

The second group consisted of carpet suppliers and producers, medical experts and the Institute for Fibre and Polymer Research. This group presented factual evidence showing that there was no direct correlation between the frequency of allergic diseases and the use of carpets.

Swedish scene



There were various articles on medical-hygienic aspects of carpets in indoor environments. One such writer, Rylander, summarised his findings as follows:

- The level of exposure to allergens generally depends on the physical activities taking place in the premises.
- Carpets play a minor role in this connection.
- The quantity of airborne particles is largely dependent on the type of ventilation. However, the quantity of larger airborne particles increases with a higher level of physical activity on carpets.

These findings did not deter the first group from claiming that allergens or allergen containing particles in the textile structure are stirred up by people walking on carpets, thus creating a high level of airborne allergens, enough to cause reactions to allergy sensitive people.

This claim was repeatedly made by some medical experts and representatives of allergic patients to such an extent that it became accepted as fact. As a result consumers became more cautious about buying fitted carpets.

The sharp decrease in carpet sales has also to do with other factors such as the dramatic decrease in the number of new dwellings in Sweden. Swedish carpet import-export figures show a steadily decreasing trend.

In the early seventies public discussion started regarding the role of fitted carpets in initiating or adding to the problem of allergy. Articles were published in newspapers and medical journals.

The organisation for allergy and asthma patients argued that carpets should be banned in schools and other public buildings.

Carpet producers pointed out that it had not been proved beyond doubt that allergic patients became more sick as the result of being in a carpeted room.

Various authorities were approached by the group for allergy patients and their medical experts. They lobbied strongly, claiming that after a period of use carpets contained large quantities of dust, animal hair and other contaminants. Not even special cleaning techniques produced effective decontamination.

In 1977 and 1978 several unsuccessful motions were proposed in the Swedish parliament calling for carpets to be banned or used on a limited scale in public buildings.

The National Swedish Board of Health and Welfare set up an investigation committee. Among its findings were:

- Symptoms for sick building syndrome are more often seen in schools with carpets.
- Children suffering from asthma living in sanitised buildings develop more symptoms in classrooms with carpets.
- Investigations have shown a high level of airborne dust and airborne bacteria in rooms containing fitted carpet.

Building experts claimed that what was previously discussed under the heading 'allergy - textile floorcovering' actually concerned the relationship between 'allergy - ventilation - carpet cleaning'.

However, the investigating committee explained that even if cleaning and ventilation are important factors for indoor climate, the negative influence of carpets cannot be ignored.

It took account of existing knowledge on allergies and sensitivity to indoor environment, as well as the state of carpets in many localities at the time. The committee concluded that plain floorcoverings were preferable for public buildings and indoor environments, especially schools and office buildings.

Proposals in the committee's report in 1986 on allergic problems included:

Swedish imports - export of carpets (1000)

1988		1989		1990		1991		1992		1993		1994	
Export	Import	Export	Import	Export	Import	Export	Import	Export	Import	Export	Import	Export	Import
1985	6965	1642	5304	1301	3880	652	2584	358	1889	424	1333	380	1740

- Carpets in public places such as schools and offices should be replaced by plain floor;
- Carpets should not be used in new public buildings;
- Consumers and policy makers should be informed that carpets are an allergic risk factor for a large proportion of the population;
- There should be more work to improve the quality of carpets as well as cleaning methods to meet the requirements of consumers.

The Fibre and Polymer Research Institute and the organisation for Swedish carpet suppliers and producers protested against the report's main proposals and tried to explain the absence of a direct connection between carpets and allergic reactions.

The use of carpets in Sweden has steadily decreased since 1975, while the occurrence of allergic reactions has increased.

We argue that a further decrease in carpets will not mean improved conditions for most allergic patients. On the contrary they will miss the advantages of carpet such as comfort, insulation and low reduction.

The many representations by Swedish carpet suppliers and producers went unheeded by the investigating committee.

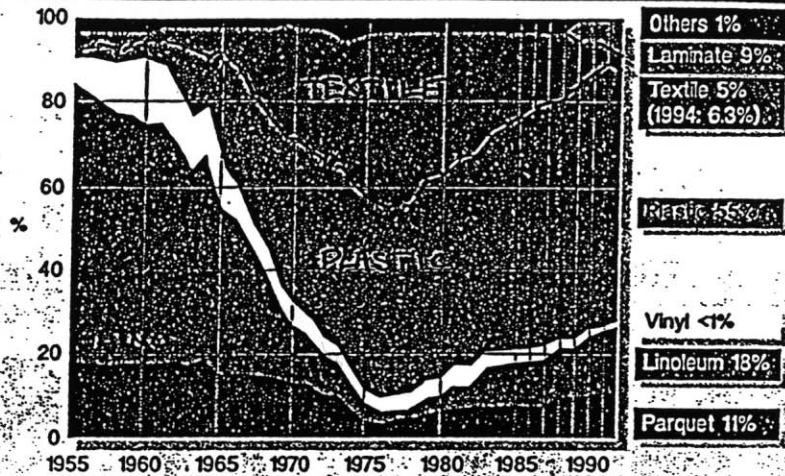
In 1992 our Institute restarted a study of airborne allergens in indoor environments.

We have developed a good analytic technique which is sensitive enough to detect the very small amount of allergens

**Production of new dwellings in Sweden 1990-1995**

	Apartments	Private homes	Total
1990	41,000	28,000	69,000
1991	35,000	22,000	57,000
1992	30,000	12,000	42,000
1993	14,000	4,000	18,000
1994 est.	9,000	3,000	12,000
1995 est.	11,000	4,000	15,000

**Distribution of different types of floorcoverings in Sweden (1955-1994)**



normally found indoors.

We believe that allergic reaction in sensitive people is associated not directly with the carpets, but with indoor air quality. This is determined by three factors: quality of floor- and wallcoverings; cleaning propensity of floorcoverings and ventilation or air exchange.

In 1990 there was a study of the sick building syndrome in 55 buildings housing different businesses, each employing at least 10 people. Only two of these 'sick' buildings had carpets.

The carpet industry, including fibre producers, must work towards developing simple but effective carpet cleaning methods.

For sustainable volume growth of carpets, there must be r&d efforts to get answers to the following questions:

- Are there more airborne allergens in rooms with carpets than without?
- What happens to the concentration of allergens during and after a suction cleaning?

- What exactly is the role of room ventilation regarding the residual concentration of allergens?
- What are the differences between different fibre types and different carpet constructions as regards the release of contamination and allergens from floorcoverings?
- How can an effective disassociation of allergens from carpets be achieved?
- How can low levels of airborne allergen in a carpeted room be achieved (for example, by air filtration, air exchange, etc).

The fibres industry, carpet manufacturers and carpet cleaning machines producers should co-operate closely to develop more easily cleanable carpets. Our Institute is prepared to participate in such a joint venture.

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