

Work environment – sick building syndrome (SBS) >

This information bulletin was prepared in response to common questions asked about sick building syndrome.

Identification

Sick Building Syndrome (SBS) was first widely recognised in the mid-1970s, around the time of the energy crisis and the resulting trend toward energy conservation.

Because the heating, cooling and moving of air in buildings accounts for a significant portion of their energy consumption, sealing buildings to make them energy-efficient has become the norm, leaving occupants dependent on mechanical systems rather than open windows for outside air and ventilation.

A building is said to manifest SBS when a substantial proportion of building occupants complain of symptoms producing discomfort.

The symptoms suggestive of SBS

SBS, is not restricted to air-conditioned offices and also occurs in factories and homes, is concerned with various non-specific symptoms that tend to occur together. The common symptoms can be summarised as:

- eye, nose and throat irritation;
- sensation of dry mucous membranes and skin;
- erythema (skin rash);
- mental fatigue (lethargy);
- headaches, high frequency of airway infections and coughing;
- wheezing, itching and allergic reactions, unspecified hypersensitivity;
- nausea; and
- dizziness

The causes of SBS

Many of the SBS symptoms, such as stuffy noses or headaches are not uncommon in the general population and it is difficult to determine whether the incidence of these complaints is above normal. There appears to be no single cause for SBS but rather a number of factors that have been implicated in the development of SBS, these include:

putting safety first >



- Air-conditioning related factors such as dry eyes, dry throat and dry skin from low humidity, odour problems from poorly maintained systems with gross microbiological overgrowth and a sensation of stuffiness from inadequate make-up of outdoor air;
- Environmental pollution, such as tobacco smoke, chemicals emitted from office fabric and furnishings, cleaning solvents, exhaust fumes being vented in from car parks and mould spores from damp carpet;
- Ergonomic factors such as poor workplace design, inadequate lighting, too much lighting or glare and excessive noise;
- Psychological and social factors such as poor working conditions, reaction to being 'sealed-in' a building, poor management and low morale.

Control

Due to the complex nature of SBS, we do not completely understand it. Complaints or concerns about air conditioning and unsatisfactory indoor work environment should be treated seriously by management and thoroughly investigated to determine whether complaints are significant.

Prompt investigation and feedback of results to those affected is very important in demonstrating a commitment by management to take positive steps to resolve the issue.

Many SBS complaints can be largely prevented and/or resolved by conventional occupational health and safety management techniques which include:

- Ensuring the building's ventilation system is maintained according to Australian Standard ([AS 1668.2](#)) and functioning effectively.
- Maintaining a high standard of cleanliness in the workplace.
- Ensuring a consultative mechanism is available to discuss air conditioning and other SBS contributing factors between employees and management.

(Reference: Australian Standard 1668.2 - 1991 *Mechanical ventilation for acceptable indoor air quality*).

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