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Health & Safety
SICK BUILDING SYNDROME (SBS)

What is sick building syndrome?

When you're at work, do you get headaches? Do you have difficulty breathing? are you groggy or nauseated? Do your eyes burn? Do you find yourself sneezing or coughing? And do you feel better when you leave the office?

If so, there's a possibility that you are working in a "sick" building. The "sick building syndrome" (SBS) is a recently recognized phenomenon, and unfortunately, an increasingly common one.

What causes sick building syndrome?

Most newly built or renovated offices have been designed with maximum energy efficiency in mind. The designs achieve this goal by reducing the amount of air leading in and out of buildings to a minimum level. While this results in savings in heating and air conditioning bills, it allows pollutants emitted from various sources within the building to build up. This situation is commonly referred to as "Tight Building Syndrome."

Major causes of SBS

1. Insufficient Air Supply – Circulating air must contain an adequate proportion of fresh outside air, otherwise it will only redistribute indoor air pollutants and contaminants, not dilute them. Also, when air is not changed or recirculated enough, microorganisms brought in by people or from contamination are more likely to spread. Guidelines for office buildings set by ASHRAE require circulation of a minimum of 20 cubic feet of fresh, outside air per minute, per person.

2. Chemical Contaminants of Pollutants – Asbestos, fiberglass, carbon monoxide, formaldehyde and cigarette smoke.

3. Volatile Organic Compounds – A large group of substances produced by the synthetic organic chemical industry become vapors or gases at ordinary temperatures. Many are toxic.

Volatile organic compounds can be found in office furniture, paint, adhesives, solvents, upholstery, draperies, carpeting, spray cans, construction materials, cleaning compounds, deodorizers, copy machine toners, felt-tip markers and typewriter correction fluids.

4. Microorganisms – Bacteria, viruses, molds and fungi – present in the air almost everywhere – are a common factor in office air pollution. Offices can be especially vulnerable to microorganisms, because fungi and bacteria find nourishment in inadequately maintained air circulation systems and in dirty washrooms.

Four steps to prevent SBS

STEP 1 - Eliminate as much tobacco smoke as possible. A firm no smoking policy is the best way to protect the health of all employees.

STEP 2 - Provide adequate ventilation. American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) standards require air circulation of a minimum of 20 cubic feet of fresh, outside air per minute, per person. Relative humidity should be kept between 30 and 60 percent.

STEP 3 - Regularly inspect, clean and disinfect every part of ventilating, heating or cooling device or systems, including humidifiers and dehumidifiers, air filters, air circulation pumps and blowers, and duct work.

STEP 4 - Eliminate or control specific chemical contaminants. Before a newly built or renovated office space is occupied, all solvents and chemicals should be "baked off." This can be done by heating the area up to 80-85 degrees for 12 hours and then ventilating with fresh outdoor air for 12 hours. Repeat this cycle as long as odors continue to be detected. During any renovation involving painting, carpet laying, tile work, etc., isolate the area through use of physical barriers and separation of ventilation systems. If possible, perform this type of work on evenings and weekends.