Our Sick Building Syndrome – Synopsis of the Issues facing Barbados

Presented by

HAROLD E. OXLEY  BSc MSc LFOH CMIOSH
Registered Occupational Hygienist
Chartered Safety and Health Practitioner
on behalf of Barbados Association of Professional Engineers
Our Sick Building Syndrome – Is There a Cure?

Working Definitions

- Syndrome
- SBS
- BRI
- MH
- IAQ
- Air Contaminant
- Acceptable Air
A "syndrome" is a group of signs and symptoms that occur together and characterize a particular abnormality or condition.”

(Merriam-Webster)
“The term "sick building syndrome" (SBS) is used to describe situations in which building occupants experience \textbf{acute health and comfort effects} that appear to be linked to time spent in a building, \textbf{but no specific illness or cause can be identified.}

The complaints may be localized in a particular room or zone, or may be widespread throughout the building.”

(MedicineNet.com)
“A set of symptoms related to chemical, particulate or biological exposure that cannot be related to a specific cause, but are alleviated when the occupant leaves the building.”

(Health Canada)
“A specific illness with a known cause that is a result of exposure to an indoor agent”

(Health Canada)
“a condition affecting a group of persons, characterized by excitement or anxiety, irrational behavior or beliefs, or inexplicable symptoms of illness.”

(Dictionary.com)
“The **physical, chemical and biological characteristics of indoor air** in non-residential workplaces with no internal industrial processes or operations, which can affect the comfort or health of the occupant”

*(Health Canada)*
The future of work may require focus on INSIDE Air Quality
Any physical, chemical or biological agent not normally present in the air, or found at abnormally high concentrations.
Acceptable Air is “air in which there are no known contaminants at harmful concentrations as determined by cognizant authorities and with which a substantial majority (80% or more) of the people exposed do not express dissatisfaction”

(ASHRAE)
Our Sick Building Syndrome – Is There a Cure?

Synopsis of the issues

- Health impact
- Productivity impact
- Capital costs
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Synopsis of the issues

- Health impact
Effects on Humans

- **Aesthetic** (unpleasant smells, discomfort)
- **Contact Irritation** (eyes, skin)
- **Respiratory Irritation** (sinuses, airways)
- **Allergenic** (eyes, sinuses, skin)
- **Narcotic** (sleepiness)
- **Infection** (viruses, bacteria, moulds)
Effects on Humans

- **Diseases** caused by mould and yeast-like fungi.
- **Invasion of living tissues** by fungi causing serious disease and even death (especially in immunocompromised individuals).
- **Localized microbial infections**, some of which may be very serious.
Organic Dust Toxic Syndrome (ODTS) - may occur after a single heavy exposure to dust contaminated with fungi, produces flu-like symptoms

Hypersensitivity Pneumonitis (HP) - may occur after repeated exposures to an allergen and can result in permanent lung damage
Effects on Humans

- **Aspergillosis** - infectious disease that can occur in immunosuppressed persons caused by several species of *Aspergillus*

- **Respiratory Infections** caused by *Histoplasma capsulatum* and/or *Cryptococcus neoformans* (often present in bird and bat droppings).
Effects on Humans

Minor symptoms and most prevalent health effects caused by exposure to various contaminants:

- eye irritation (itching and watering)
- nasal irritation, nasal congestion
- throat irritation
- coughing
- hoarseness, changed voice
- skin irritation, itching
- headache
- nausea
- fatigue
- changed sensation of taste

All of the above are essentially allergic or localized irritant responses.
Effects on Humans

- **Mental Health Issues** – psychological stress and stain

- **Low morale** – demotivated

- **Hysteria**

- **Mass Hysteria** - (also known as collective hysteria, group hysteria, or collective obsessional behaviour).
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Synopsis of the issues

- Productivity impact
Effects on Productivity

- Reduced functional and slow tempo of work by staff due to discomfort, malaise or mental due rest
- Staff in ‘sick bay’ rather than at workstation
- Staff spending time “checking with co-workers about odours, discomforts and feeling ill”
Effects on Productivity

- Lost time from frequent “walk outs” by staff claiming conditions to be intolerable
- High levels of “self absenteeism”
- Ultimately, protracted “certified medical leave”
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Synopsis of the issues

- Capital costs
Capital Costs

- Payment of salaries for “Presenteeism”
- Payment of overtime to make up for lost productivity
- Recruitment and payment of temporary staff
Capital Costs

- Payments for “unscheduled” Air Conditioning servicing
- Payments for “unscheduled” industrial / commercial cleaning
- Payments for “unscheduled” professional services (e.g. IAQ assessments, architectural modifications, engineering advice, etc.)
Capital Costs

- Unplanned expenditure on repairs and/or building maintenance works

- Unscheduled replacement of large fixed assets (e.g. 20 ton AC units)

- Payment for Legal representation against claims by staff for damages/compensation
Our Sick Building Syndrome –

These are the issues…

…Is there a Cure?

- Health impact?
- Productivity impact?
- Capital costs?
## All-partitite approach:

- Government
- Architects
- Engineers
- Builders
- Artisans
- Facilities Owners
- Service providers
- Employers
- Occupiers
- Employees
- Visitors
Q&A and Bright Ideas!
Thank You.

HAROLD E. OXLEY

REA Envirohealth International
Occupational & Environmental Health and Safety Consultants

Barbados • Ottawa • Toronto • Massachusetts
Tel: (246-) 436-5833 or 228-0634
Email: hoxley@rea.ca / rea-envirohealth@rea.ca

www.rea-ehi.com