

REGION OF OTTAWA-CARLETON  
RÉGION D'OTTAWA-CARLETON

REPORT  
RAPPORT

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DATE                        24 June 1999

TO/DEST.                 Co-ordinator, Community Services Committee

FROM/EXP.                Medical Officer of Health

SUBJECT/OBJET         **UPDATE ON SCHOOL PORTABLES -  
 (CSC MOTION NO. 28 (98))**

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**DEPARTMENT RECOMMENDATION**

**That the Community Services Committee receive this report for information.**

**BACKGROUND**

In December 1998 the Health Department brought a report to CSC on Portable Classrooms - Health Concerns. At that time, the Committee made three recommendations and asked to be updated on the issue. This report is provided to update the Committee on progress made. The three recommendations made by the CSC on December 17, 1998 were as follows:

1. That the Health Department be directed to continue its efforts to aggressively deal with air quality issues in portable classrooms and work with school boards on this matter; that the Department report back in six months on progress. Further, that the Medical Officer of Health be directed to meet with the Community Working Group on Education, West Carleton Township to ascertain what assistance can be provided, and that there be a report back on progress in the new year.
2. That the Medical Officer of Health in his regular update to physicians, include information on portables and mould.
3. That the Health Department request that all school boards in Ottawa-Carleton distribute to all students an Information Sheet on the potential health risks to children and that information currently distributed on moulds be relayed to parents. That this information sheet also contain the Health Departments phone number.

## REPORT ON ACTIONS TO DATE

### **Recommendation # 1: Continue to aggressively deal with indoor air quality issues in portable classrooms and work with School Boards on the matter, and meet with the Community Working Group on Education in West Carleton Township to offer assistance.**

The Health Department has been actively engaged in indoor air quality issues in portable classrooms since we last reported to Community Services Committee. Activities to date include:

- Met with representatives of the School Boards on February 18, 1999 to discuss mould and carbon dioxide issues in portable classrooms. The purpose of the meeting was to ensure that all boards were following the protocols they had developed for dealing with mould and moisture issues and to share information and experiences.
- The Medical Officer of Health meets regularly with the directors of the school boards and has had ongoing discussions about school portable issues.
- Participated in the development of training materials with the Ottawa-Carleton Catholic School Board on the topic of investigating mould and moisture issues in portables. The Department also assisted in a mould awareness training session for over 300 maintenance staff of the same school board in March 1999.
- The Department has, from December 1998 to the present, investigated approximately 10 complaints from parents across the Region regarding mould in portable classrooms. In some cases further testing was required by the school boards and in others, minor problems were identified and repairs made. The Health Department continues to investigate all complaints or concerns made about the safety of classroom environments.
- Attended school council meetings at three schools in the Region to discuss the issue of mould and carbon dioxide in portable classrooms and answer questions from school staff and parents.
- Reviewed materials sent from the Ontario Ministry of Health Public Health Branch on the topic of mould in portables. Inspection staff were updated on emerging issues and recommended inspection protocols. This information was shared with School Board staff.
- Participated in three teleconference calls with Medical Officers of Health and School Board officials across Ontario regarding the issue of mould in portable classrooms. This was an opportunity to discuss the issue on a province-wide basis and learn from the experiences of other jurisdictions.

Margot Humphries made a presentation at the CSC in December about this issue on behalf of the Community Working Group on Education in West Carleton Township. She has indicated to the Health Department that this group has not been pursuing the issue of air quality in school portables. However, the health department has been in contact with a group of concerned parents in West Carleton Township called the "Huntley Air Quality Committee", on a regular basis since the fall of 1998. This parent group reports to the Huntley Centennial School Council. The Medical Officer of Health and health department staff have had several telephone discussions with the group about the portable classroom issue, the potential of conducting a health status survey and structural issues in the portable classrooms.

The group undertook a survey of their own which they shared with the Health Department in April 1999. The Health Department commented on the survey and looked into their complaints further by an analysis of absenteeism at the school which compared rates in portable classrooms to non-portable classrooms. On average, absenteeism was found to be higher among students in the non-portable classrooms.

After attending a school council meeting at Huntley Centennial Public School in May 1999, and hearing of the continued concerns of some parents, the Health Department conducted a survey to determine asthma rates at the school. Two hundred and five parents completed the survey taken home by the 572 students at the school, a 36% response rate. Asthma rates were found to be roughly 24% in both portable and non-portable classrooms, approximately double the rates of the general paediatric population. This higher than expected level in both portables and non-portable settings is most likely attributable to a higher response rate by the parents of asthmatic children. The results will be followed up and may warrant a second survey designed to include the entire school population. The bus tragedy at the school around the time the survey was distributed may have limited the response rate.

The Health Department will share this information with parents and the School Board and continue to work with any group who has concerns about the health and safety of portable classrooms.

### **Recommendation #2: Update to Physicians**

The April 1999 Physicians Update newsletter contained an article and a fact sheet for physicians on the topic of mould in portables and indoor air in general. The newsletter is distributed to all 2000 physicians listed in Ottawa-Carleton. The article and information sheet are attached in Annex A. Physicians were encouraged to call the Health Department for more information if needed.

### **Recommendation #3: Information to Students through School Boards**

All four school boards participated by sending out an information sheet to students on the topic of indoor moulds (Annex A) in the spring months of 1999 to students. The documents were available in French and English. The Health Department phone number was listed as a contact for questions or concerns. We received several inquiries after the distribution from parents with specific questions about mould in both school and home environments. All inquiries were followed up, and complaints investigated.

*Approved by*  
*Robert Cushman, MD, FRCPC*

# INDOOR MOULDS

## *Information Sheet*

### A MESSAGE FROM THE REGION OF OTTAWA-CARLETON HEALTH DEPARTMENT

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#### **What Are Moulds?**

Moulds are members of the fungus family, along with mushrooms and yeast. There are thousands of different types of moulds, and they are almost always present in air, indoors and outdoors. Moulds play an important role in helping to compost decaying materials like plants. But they can pose health risks as well.

#### **How Do Moulds Grow?**

Moulds can get inside buildings through doors, windows, heating, ventilation and air conditioning systems, and through small openings and cracks in walls and foundations. They can also be brought in on clothing, shoes and the skin and hair of people and pets.

Indoors, moulds need two things in order to grow: nutrients (food) and moisture. Nutrients available indoors include dust, lint, dander, building materials and furnishings. Moulds usually grow in areas which are damp or humid in places like bathrooms, air ducts, humidifiers, porous insulation, fan coil units, and condensation or drip pans. They can also grow on building materials such as drywall, ceiling tiles, carpet, wallpaper, window casings, and foundation walls, especially if these are damp or wet.

#### **How Can Moulds Affect Your Health?**

When most kinds of moulds are present in indoor air at the same level as outdoors, they usually do not pose a health risk. Moulds that grow indoors are usually different from typical outdoor moulds, and can pose more risks to health.

Moulds can release spores (their offspring) and various chemicals into the air. When mould levels build up in indoor air and dust, this can trigger allergies and asthma in some people. Certain types of moulds can be even more hazardous, especially when they actually *grow* on indoor surfaces. Some moulds can produce toxins, which can poison indoor air and cause illness. Exposure to

elevated levels of indoor moulds can affect health in four major ways:

- **Irritation**, causing symptoms like eye, throat and skin irritation.
- **Allergies**, including symptoms similar to hay fever, asthma attacks (between 10% and 30% of asthmatics are allergic to moulds), and dermatitis. Allergies to indoor moulds may not be detected by standard allergy tests, which measure reactions to outdoor moulds.
- **Toxicity**, which can cause headaches and flu-like symptoms like fever and cough, diarrhea and fatigue. Breathing in mould toxins has been linked to serious illnesses and with sick building syndrome (SBS).
- **Infection**, normally a risk only for people with severely weakened immune systems, such as those on chemotherapy and people living with HIV/AIDS, and for victims of severe burns whose skin has been badly damaged. Only certain moulds can cause infection.

#### **Who is at Risk?**

Anyone can be affected by moulds, but some people are more susceptible than others, including:

- people with asthma or allergies to moulds;
- infants and young children, whose lungs are still developing; and
- people with weakened immune systems.

#### *Factors that increase the risk to health include:*

- exposure to high levels of moulds;
- exposure to moulds for a long period of time, or repeated exposures to elevated levels for short periods; and
- exposure to those species of mould which can produce toxins (poisons).

## **What is *Stachybotrys atra*?**

*Stachybotrys atra* (or *chartarum*) is one species of mould which can produce toxins (poisons). It is dark green to black in colour, and grows on cellulose-based materials like wood, paper and drywall when these have been damp or wet for prolonged periods of time. It does not grow on food or on materials like bathroom tiles, and does not grow in the body.

*Stachybotrys* has been linked to severe illness and deaths of several infants in Cleveland. The infants developed bleeding of the lungs. It is suspected, though not proven, that the infants were exposed to high levels of mould toxins by breathing *Stachybotrys* spores. The toxins produced by *Stachybotrys* can cause hemorrhage. Infants are more susceptible to airborne toxins than older children and adults because their lungs are growing very quickly.

There is little documentation available about how commonly *Stachybotrys* occurs in indoor environments. Until more studies have been done, experts recommend that infants under 1 year of age should not be exposed to buildings with mould problems or unrepaired water-damage. This is good advice for people of all ages.

## **What Can You Do About Moulds?**

The best way to reduce indoor mould contamination is to prevent or control conditions which encourage their growth. All surfaces and furnishings should be kept as clean and as dry as possible. Water leaks or condensation problems should be remedied without delay. Caution must be used during mould clean-up, which can release spores into the air. A professional can provide guidance on proper clean-up measures.

For serious contamination problems, such as after a flood, professional advice is highly recommended. If you notice moulds or moisture accumulation in public buildings like schools, you should notify the principal or superintendent.

Because there are very many types of fungi, most of which have not been well studied, the health effects of exposure to indoor moulds are only beginning to be understood. Experts recommend that people should not live or work in mouldy buildings. If you or a family member experience symptoms which are severe or long-lasting, consult your doctor to determine if moulds are a possible cause.

## **Where Can You Get More Information?**

The following agencies can provide information on indoor moulds, their health effects, proper mould clean-up procedures, and advice on health problems related to indoor air quality. Further information is also provided in the Region of Ottawa-Carleton Health Department's *State of the Environment Report: Focus on Indoor Air Quality*, available from the Health Department and at public libraries throughout Ottawa-Carleton.

### **Region of Ottawa-Carleton Health Department**

Telephone: (613) 722-2200

### **Canada Mortgage and Housing Corporation**

Telephone: (613) 748-2367

TDD: (613) 748-2447

Internet: <http://www.cmhc-schl.gc.ca/>

### **The Lung Association CAN-DO Program**

1-800-97-CANDO



# LES MOISSISSURES À L'INTÉRIEUR

## Feuille d'information

### UN MESSAGE DU SERVICE DE LA SANTÉ DE LA RÉGION D'OTTAWA-CARLETON

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#### Que sont les moisissures?

Les moisissures font partie du groupe des champignons parasites, de même que les champignons et les levures. Il y a des milliers de types différents de moisissures et elles sont presque toujours présentes dans l'air, à l'intérieur et à l'extérieur. Les moisissures ont un rôle très important parce qu'elles favorisent le compostage des matières en décomposition, par exemple les plantes. Elles peuvent cependant menacer la santé.

#### Comment se reproduisent les moisissures?

Les moisissures se propagent dans les édifices par les portes, les fenêtres, les systèmes de chauffage, de ventilation et de climatisation, ainsi que par les petites ouvertures et fentes dans les murs et fondations. Elles peuvent aussi s'imprégner dans les vêtements, les souliers, la peau et les cheveux des gens, les poils des animaux domestiques.

Deux éléments sont essentiels à la reproduction des moisissures à l'intérieur : les éléments nutritifs (aliments) et l'humidité. Les éléments nutritifs à l'intérieur comprennent la poussière, la peluche, les substances allergènes animales, les matériaux de construction et les meubles. Les moisissures se reproduisent habituellement dans des endroits humides - notamment la salle de bain, les conduites d'aération, les humidificateurs, l'isolant poreux, les ventilateurs et les cuvettes ramasse-gouttes ou de condensation. Elles peuvent aussi se reproduire sur les matériaux de construction, par exemple, les cloisons sèches, les carreaux du plafond, les tapis, le papier peint, les cadres des fenêtres et les murs des fondations, surtout s'ils sont humides ou mouillés.

#### Quelles peuvent être les répercussions des moisissures sur la santé?

Lorsque la plupart des types de moisissures sont dans l'air à l'intérieur en concentration équivalente à celle de l'extérieur, elles ne sont habituellement pas un risque pour la santé. Les moisissures qui se reproduisent à l'intérieur sont habituellement différentes de celles de l'extérieur et peuvent poser davantage de risques pour la santé.

Les moisissures peuvent produire des spores (résultat de la reproduction) et dégager diverses substances chimiques dans l'air. Lorsque la concentration de moisissures augmente dans l'air et la poussière, certaines personnes peuvent avoir des allergies et faire de l'asthme. Il y a même des types de moisissures plus dangereuses, surtout si elles se *reproduisent* sur des surfaces intérieures. Certaines moisissures peuvent dégager des toxines qui peuvent empoisonner l'air à l'intérieur et causer la maladie. L'exposition à une concentration élevée de moisissures à l'intérieur peut avoir quatre principales répercussions sur la santé :

- **Irritation** : Les toxines peuvent occasionner des symptômes comme l'irritation des yeux, de la gorge et de la peau.
- **Allergies** : Vous avez, par exemple, des symptômes semblables à la fièvre des foins, à des crises d'asthme (de 10 % à 30 % des asthmatiques sont allergiques aux moisissures) et à la dermatite. Les tests standard de dépistage des allergies mesurent les réactions aux moisissures à l'extérieur, mais ne repèrent pas nécessairement les allergies aux moisissures à l'intérieur.
- **Toxicité** : Elle peut causer des maux de tête et des symptômes de grippe comme la fièvre et la toux, la diarrhée et la fatigue. Il est prouvé que respirer des toxines de moisissures cause des maladies graves et le syndrome des bâtiments malsains (SBM).
- **Infection** : L'infection est habituellement un risque uniquement pour ceux qui ont un système immunitaire gravement affaibli, c.-à-d. les patients en chimiothérapie, les personnes atteintes du VIH/SIDA, et les grands brûlés dont la peau est gravement endommagée. Seules certaines moisissures peuvent causer l'infection.

#### Qui sont à risque?

Les moisissures peuvent toucher tout le monde, mais certaines personnes ont moins de résistance :

- les asthmatiques et ceux qui sont allergiques aux moisissures;

- les bébés et les jeunes enfants dont les poumons sont encore en croissance; et
- ceux qui ont un système immunitaire affaibli.

### **Certains éléments accroissent le risque pour la santé :**

- l'exposition à une concentration élevée de moisissures;
- l'exposition aux moisissures pendant une longue période, ou l'exposition réitérée à des concentrations élevées pendant de brèves périodes; et
- l'exposition aux types de moisissures qui peuvent dégager des toxines (poisons).

### **Qu'est ce que le *Stachybotrys*?**

Le *Stachybotrys atra* (ou *chartarum*) est un type de moisissure qui peut dégager des toxines (poisons). C'est une substance sombre, verte ou noire, qui se reproduit sur les matières à base de cellulose, notamment le bois, le papier et le papier peint qui ont été humides ou mouillés pendant des périodes prolongées. Cette moisissure ne se reproduit ni sur les aliments ou les matériaux comme les tuiles de la salle de bain, ni dans l'organisme.

Le *Stachybotrys* a été lié à une maladie grave et au décès de plusieurs bébés à Cleveland. Les poumons des bébés ont commencé à saigner. Il est possible, mais il n'y a pas de preuve, que les bébés aient été exposés à des concentrations élevées de toxines de moisissure en respirant des spores de *Stachybotrys*. Cette moisissure dégage des toxines qui peuvent causer une hémorragie. Les bébés sont plus fragiles aux toxines dans l'air que les enfants plus âgés et les adultes parce que leurs poumons sont en croissance très rapide.

Ce problème n'est pas très bien connu. Il y a très peu de renseignements sur la méthode de reproduction habituelle du *Stachybotrys* à l'intérieur. Jusqu'à ce que d'autres études soient faites, les experts recommandent d'éviter, pour les bébés de moins d'un an, les édifices qui ont des problèmes de moisissures ou qui sont endommagés par l'eau si les dommages n'ont pas été éliminés. Voilà un bon conseil pour tous, peu importe l'âge.

### **Comment réagir aux moisissures?**

Le meilleur moyen de réduire la contamination par les moisissures à l'intérieur est d'empêcher ou de contrôler les conditions qui en favorisent la reproduction. Il faut tenir toutes les surfaces et les meubles propres et secs le plus possible. Il faut réparer les fuites d'eau et régler les problèmes de condensation sans retard. Il faut être prudent lors du nettoyage des moisissures qui peuvent dégager des spores dans l'air. Un professionnel peut fournir des conseils sur les méthodes appropriées de nettoyage.

Les conseils d'un professionnel sont fortement recommandés pour les problèmes graves de contamination, surtout après une inondation. Si vous remarquez une accumulation de moisissures ou une augmentation de l'humidité dans des édifices publics, par exemple les écoles, il faut en informer le directeur ou le surintendant.

Étant donné qu'il y a de nombreux types de champignons parasites dont la plupart n'ont pas fait l'objet d'une étude approfondie, nous commençons à peine à comprendre les répercussions que l'exposition aux moisissures à l'intérieur peut avoir sur la santé. Les experts recommandent aux gens de ne pas habiter ou travailler dans des édifices où se propagent les moisissures. Si des membres de votre famille ou vous-même avez des symptômes graves ou persistants, consultez le médecin pour déterminer si les moisissures sont une explication possible.

### **Vous voulez davantage d'information?**

Les organismes suivants peuvent fournir de l'information sur les moisissures à l'intérieur, leurs répercussions sur la santé, les méthodes appropriées de nettoyage des moisissures et des conseils sur les problèmes de santé liés à la qualité de l'air à l'intérieur. *Le Rapport sur l'état du milieu : Priorité à la qualité de l'air intérieur* du Service de la santé de la Région d'Ottawa-Carleton fournit aussi davantage d'information. Vous pouvez l'obtenir au Service de la santé et dans les bibliothèques publiques d'Ottawa-Carleton.

#### **Service de la santé de la Région d'Ottawa-Carleton**

Téléphone : (613) 722-2200

#### **Société canadienne d'hypothèques et de logement**

Téléphone : (613) 748-2367

ATS : (613) 748-2447

Internet : <http://www.cmhc-schl.gc.ca/>

#### **Programme FAIRE de l'Association pulmonaire**

1-800 97-CANDO

