GET THE FACTS
AND WORK SMARTER
If you’re in the plastering profession, there are health risks you should know about. Getting the facts will help you work smarter and avoid certain practices that could lead to occupational asthma and rhinitis.

Dust from sanding, for instance, is among the main risk factors that can cause or aggravate these respiratory diseases.

FIND OUT
ABOUT ASTHMA
Asthma is a chronic respiratory disease that makes breathing—especially exhaling—difficult.

Asthma usually results from allergies to certain substances in your environment. Its main symptoms are coughing, shortness of breath, wheezing and tightness in the chest. Asthma can also be accompanied by symptoms of rhinitis and conjunctivitis.

Asthma in the workplace can be:
- Caused by exposure to allergenic or irritant substances found in the learning or work environment; or
- Aggravated in somebody who is already asthmatic by these irritant substances or physical factors (e.g., extreme ambient temperatures).

In both cases, the symptoms get worse when the person performs training or work-related tasks that carry a risk of exposure. They decrease or disappear outside the learning or work environment.

UNDERSTAND
THE RISK FACTORS
As a plastering student, you perform very similar tasks to those on a construction site. The commercial products and raw materials you use could cause or aggravate asthma.

These products and materials, present when you are sanding joint compound or preparing various mixtures, are the major source of dust and vapour that irritate or sensitize the respiratory tract. You could also be directly exposed to a chemical substance through skin contact.

The amount of products and the mixing techniques (scraper, cement mixer, drill mixer) used can lead to a health risk.

ABOUT RHINITIS
Rhinitis is a respiratory disease that causes inflammation of the mucous membranes in the nose, stuffy nose, runny nose and eyes, and sneezing.

READ THE SAFETY DATA-SHEETS FOR THE PRODUCTS YOU USE. MAKE SURE YOU UNDERSTAND WHAT’S IN THEM.
Informing and training students, apprentices and employees on the risks of exposure to substances in their learning or work environment, the sources of emission, the most hazardous tasks, methods of control (including work practices and methods) and personal protective equipment are key to controlling exposure.

### CHEMICAL HAZARD
- Inhalation of irritant or sensitizing dust
- Inhalation of irritant or sensitizing vapors
- Skin contact with irritant or sensitizing substances

### EXAMPLE OF PRODUCTS
- Portland cement
- Hydrated lime
- Slow-setting plaster
- Quick-setting plaster
- Joint compound (pre-mixed)
- Polyurethane resin

### EXAMPLE OF SUBSTANCES
- Calcium oxide
- Hydrated lime
- Calcium sulphate
- Crystalline silica (quartz)
- Calcium hydroxide
- Calcium carbonate
- Isocyanates (MDI)

### MEANS OF CONTROL
- Substitution
- Work method
- Capture at source
- General ventilation
- Respiratory protection
- Skin protection
## PROTECT YOURSELF RESPONSIBLY

### Protecting your respiratory tract

Use a respirator if you cannot control exposure any other way.

The N95 filtering half-facepiece respirator is recommended to protect against dust and fumes. You could also use other respirators depending on the intensity of exposure, the nature of the task and the degree of effort. For example, wearing an R95 model or a respirator with filter cartridges would be appropriate in the presence of oil mists.

All respirators have a protection factor (PF) that indicates how effective they are and that reflects the theoretical concentration of the contaminant in the environment compared to that inside the mask. So, a factor of 10 indicates that the concentration inside the respirator is 10 times less than that in the learning or work environment.

For a respirator to offer appropriate protection against a particular substance, you have to look at the permissible exposure value (PEV) for that substance, as stated in the Regulation on occupational health and safety (ROHS).

### Choosing a respirator to suit the intensity of dust or isocyanate you are exposed to*

<table>
<thead>
<tr>
<th>Stressor</th>
<th>Intensity</th>
<th>Types of respirators*</th>
<th>PF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust</td>
<td>Under 10 times the PEV</td>
<td>N95 filtering half-facepiece Half-facepiece with N95, P95 or P100 filter cartridges</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Over 10 times the PEV</td>
<td>Full-facepiece with N95, P95 or P100 filter cartridges</td>
<td>100</td>
</tr>
<tr>
<td>Isocyanates</td>
<td>Sporadic exposure, no spraying</td>
<td>Half-facepiece with organic vapour filter cartridges</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Continual exposure or exposure to spraying</td>
<td>Full-facepiece with supplied air</td>
<td>100</td>
</tr>
</tbody>
</table>

*These recommendations do not apply to all work situations. You must check the respirator’s efficiency with the manufacturer or with the person responsible for the respiratory health program.

### A surgical mask is not a respirator

Unlike the N95 filtering half-facepiece respirator, a surgical mask is not designed to filter dust. It is not effective or airtight enough to meet regulations.

### Protecting your skin

As you go about your training or professional work in plastering, irritant substances (such as calcium carbonate and calcium sulphate) may contact your skin. Wearing nitrile gloves will reduce this type of risk. However, they are only appropriate for some mixes. So, it is important to check how effective your choice of protection is with the manufacturer before adopting it.

The teaching institution must also set up a training program so that apprentices know how to use a respirator, its limitations and maintenance, and arrange for a personal fitting to adjust the respirator in accordance with the regulations in Quebec.¹

¹[www.insp.qc.ca/fr_publication/nat_062.html](http://www.insp.qc.ca/fr_publication/nat_062.html)
CONTROL
THE RISK TO YOUR HEALTH

Substitute products
First, consider replacing a potentially harmful product with one that reduces or eliminates the risk.

Some examples are:
- Use a joint compound that generates heavier dust that adheres to surfaces and hangs less in the air;
- Avoid using polyurethane resin in mould production.

Work practices
Good work practices and habits can prevent exposure or help to reduce the duration and intensity of exposure. Some examples are:
- Never use an air jet to clean surfaces;
- Stay away from the source of the contaminant and its trajectory.

Capture at source
This reduces exposure to dust, which is particularly high when sanding joint compound (IRSST report). To protect yourself and the people near your workstation, use a hand-sanding and pole-sanding vacuum control system to sand joint compound.

Ventilation
General, natural or mechanical ventilation reduces the ambient level of substances and so reduces direct and secondary exposure to allergenic substances associated with hazardous tasks.

On a construction site, workers are exposed to carbon monoxide (CO) from motorized equipment, lift trucks or propane heating systems. Refer to the CSST brochure “Il y a un danger dans l’air : contrôlez le CO !” (2006).
BE INFORMED—BE CAREFUL

Other health and safety risks related to the plastering profession*

<table>
<thead>
<tr>
<th>Category</th>
<th>Risk</th>
<th>Methods of control</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ergonomics</td>
<td>Back loading</td>
<td>Modify the task or workstation</td>
<td>CSST, IRSST</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warm up muscles before work</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Adopt physical conditioning adapted to the task</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Adopt a suitable work posture</td>
<td></td>
</tr>
<tr>
<td>Safety</td>
<td>Working at heights on a platform or scaffold</td>
<td>Install safety barrier. Wear a harness</td>
<td>ASP-Construction, CSST</td>
</tr>
<tr>
<td>Chemical</td>
<td>Asbestos</td>
<td>Adopt a method for working in the presence of asbestos. Wear respiratory protection</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Crystalline silica of quartz</td>
<td>Adopt a method for working in the presence of crystalline silica. Wear respiratory protection</td>
<td></td>
</tr>
</tbody>
</table>

* This list is not exhaustive and does not apply to all workplaces.

TO LEARN MORE

Guide d’utilisation d’une fiche signalétique, CSST
http://www.csst.qc.ca/portal/fr/publications/DC_200_338_5.htm

Asthme CSST
http://www.asthme.csst.qc.ca/

IRSST
http://www.irsst.qc.ca

REPTOX
http://www.reptox.csst.qc.ca/

ASP-Construction
www.inrs.fr/htm/tc87.pdf

Québec Lung Association
http://www.qc.lung.ca

Center for Asthma in the Workplace
http://asthma-workplace.com/en

REFERENCES


http://www.irsst.qc.ca/fr/_publicationirsst_862.html

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