

我們有七成以上的時間留在家中、辦公室或處身其他室內環境。如室內環境受到污染，可能會令你感到不適，例如頭痛、眼睛痕癢、呼吸困難、皮膚過敏、疲勞或嘔吐等。小孩、老人家、患有呼吸系統或心臟毛病的人，會較易受到室內空氣污染的影響。

#### 什麼是常見的室內空氣污染物？

我們處身的室內環境，可能存有多類空氣污染物。比較常見的幾類空氣污染物是：

- 從人類、寵物和植物排出的二氧化碳及生物污染物；
- 從建築物釋出的氡氣；
- 從日用品（如化粧品、殺蟲劑、清潔劑等）所釋出的揮發性有機化合物；
- 從壓製木製成品如傢俬所釋出的甲醛；及
- 二手煙。

#### 二氧化碳

所有生物均會呼出二氧化碳；如室內含有高濃度的二氧化碳，即表示沒有足夠的新鮮空氣。這情況通常由下列因素引致：

- 樓宇間隔不適當及過度擠迫；
- 窗戶不常打開；或
- 通風系統並無妥善維修或使用不當。

上述情況會使你感到睏倦，並作為一個警號，提醒你室內可能有其他的空氣污染物存在。

#### 生物污染物

生物污染物包括細菌和真菌；這類污染物可能會因下列因素而加快增長：

- 通風不足；
- 濕度高；或
- 冷氣或通風系統的隔塵網和管道系統積塵。

它們可能引致打噴嚏、眼睛不適、咳嗽、氣喘、眩暈和精神不振；有些更可能會觸發過敏反應或哮喘。

#### 氡氣

氡氣是一種無色無味的放射性氣體，是由含花崗石的混凝土建築物釋放出來的。如居所的通風系統不佳，氡氣可以積聚至一個很高的濃度；接觸高濃度的氡氣及其衰變物，可能會增加患肺癌的機會。



#### 揮發性有機化合物

揮發性有機化合物（或簡稱 VOCs）包含各種可於室溫下揮發的有機化合物。在一般的室內環境中，有著 100 種以上的 VOCs，其中包括甲醛。這些 VOCs 可由多種不同源頭釋放出來，如建造物料、傢俬、化粧品、清潔劑、殺蟲劑及二手煙等。乾洗後的衣服亦可能殘存 VOCs。

VOCs 可能會對健康造成急性或慢性的不良影響。高濃度的 VOCs 可引致眼睛、鼻子和喉嚨不適，甚至頭痛、暈眩、視力失常及其他多種傷害。有多種可於室內測量到的 VOCs，已被公認為人類或動物的致癌物質。

#### 甲醛

室內所排放的甲醛，主要來自一些用脞甲醛樹脂黏合或作外層物料的木製傢俬；其他來源則包括用氣體燃料煮食、燒香、鋪地氈等活動。高濃度的甲醛會引致眼睛、鼻子和喉嚨不適。

#### 二手煙

二手煙包括從燃點著的香煙、煙斗或雪茄飄散出來的煙霧及吸煙者抽煙時呼出之氣體。它是一種含有超過 4,000 種化學物的複雜混合物。二手煙是一種令人產生強烈反應及公認的致癌物質。它可引致眼睛、鼻子或喉嚨不適，亦可能大幅增加患肺癌和其他呼吸疾病的機會。

#### 如何改善室內空氣質素？

下列是一些有助改善室內空氣質素的提示：

- 保持家居清潔及乾爽；
- 窗戶要常常打開，使室內空氣流通；當使用冷氣機時，應保持室內空氣流通，以確保有足夠新鮮空氣；
- 定期清洗通風系統，包括隔塵網和管道系統，及保持操作正常；
- 避免不必要的家居間隔；
- 避免使用含揮發性有機化合物的日用品；
- 待新傢俬在戶外吹一會，直至無異味散發後才搬進室內；
- 在家不要吸煙，而在辦公室及公眾場所則要切實執行「非吸煙」政策；
- 為可散發污染物的活動如加熱或煮食、裝修工程、影印、吸煙等裝設獨立抽風設施；及
- 在假期或非辦公時間，才讓合格的承包商進行大廈防治蟲害的措施。

如你懷疑身體出現與上述居所、辦公室或其他室內環境污染有關的病癥，應與你的醫生談談。



如想得到更多資料，請聯絡：

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# 室內空氣質素與你 Indoor Air Quality and You





**We spend more than 70% of our time at homes, in offices and other indoor environment. If the indoor environment gets polluted, it may give you headache, itchy eyes, respiratory difficulties, skin irritation, nausea and fatigue. Children, elderly and those with existing respiratory or heart disease are more susceptible to the effects of indoor air pollution.**

### **What are the common indoor air pollutants in Hong Kong?**

Our indoor environment may contain a lot of air pollutants. Some common air pollutants in Hong Kong are:

- carbon dioxide and biological contaminants from people, pets, and plants;
- radon from building materials;
- volatile organic compounds from consumer products such as cosmetics, pesticide, cleaning agent, etc.;
- formaldehyde from pressed wood products such as furniture; and
- environmental tobacco smoke from smoking.

### **Carbon dioxide**

Living things breathe out carbon dioxide. A high level of carbon dioxide in the indoor means there is an inadequate supply of fresh air. This is usually caused by:

- improper partitioning and overcrowding;
- infrequent window opening; or
- improper maintenance or operation of the ventilation system.

It will make you feel sleepy, and provide a warning for possible build-up of other indoor air pollutants.

### **Biological contaminants**

Biological contaminants include bacteria and fungi. Their growth may be accelerated by:

- inadequate ventilation;
- high humidity; or
- dirty air filter and ducting of air conditioners or ventilation systems.



They may cause sneezing, watery eyes, coughing, shortness of breath, dizziness and lethargy. Some of them may trigger allergic or asthmatic reactions.

### **Radon**

Radon is a colourless and odourless radioactive gas that comes out from concrete building materials containing granite. It can accumulate to a high concentration if the premises are poorly ventilated. Exposure to elevated radon and its decay products may increase the incidence of lung cancer.

### **Volatile organic compounds**

VOCs are a diverse group of organic compounds that evaporate at room temperature. In a typical indoor environment, there are more than 100 compounds, including formaldehyde, that can be classified as VOCs emitting from many sources such as construction materials, furnishings, cosmetics, cleaning agents, pesticides, and tobacco smoke. Clothes which have been dry-cleaned may also contain residual VOCs. Exposure to VOCs may result in both acute and chronic health effects. In sufficient quantities, VOCs can cause eye, nose and throat irritations, headaches, dizziness, visual disorder, and many impairments. Many of the VOCs which have been measured indoors are known human or animal carcinogens.



### **Formaldehyde**

Formaldehyde emissions in the indoor mainly come from furniture made of wood products with urea-formaldehyde as adhesive or coating materials. Other sources include gas cooking, incense burning, carpeting, etc. A high level of formaldehyde will irritate your eyes, nose and throat.

### **Environmental tobacco smoke**

Environmental tobacco smoke (ETS) is a mixture of the smoke given off by the burning end of a cigarette, pipe, or cigar, and the smoke exhaled by the smoker. It is a complex mixture of over 4,000 chemical compounds. ETS is a strong irritant and a known cancer-causing agent. It causes eye, nose, and throat irritation and may significantly increase the risk of lung cancer and other respiratory illnesses.

### **What are the tips to improve indoor air quality?**

The following are some useful tips to improve indoor air quality:

- keep your premises clean and dry;
- often open the windows to increase ventilation; if air-conditioners are used, maintain good ventilation with sufficient fresh air supply;
- clean regularly the ventilation system including air filter and ducting and maintain the system in good working condition at all times;
- avoid unnecessary partitioning of the premises;
- avoid using consumer products with volatile organic compounds;
- move in new furniture only when it has been "air out" adequately;
- quit smoking at home and implement strictly a "non-smoking" policy in offices and public places;
- provide local exhaust to polluting activities such as heating and cooking, redecoration activities, photocopying, and smoking as far as possible; and
- carry out pest control activities for unoccupied times by competent contractors.

If you think you have symptoms that may be related to your home, office or other indoor environment, consult your doctor.

**For more information, please contact:**

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