我們有大部分的時間留在家中、辦公室或處身其他室內環境。如室內空氣質素差,可能會令你感到頭痛、眼睛痕癢、呼吸困難、皮膚過敏、嘔吐或疲勞等不適。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。

# 香港有什麼常見的室內空氣污染物?

我們處身的室內環境,可能存有多種空氣污染物,香港比較常見的空氣污染物有:

- 從人類、寵物和植物排出的二氧化碳
- 從建築物料釋出的氦氣
- 從日用品(如化妝品、殺蟲劑、 清潔劑等)所釋出的揮發性有 機化合物
- 從壓木製品所釋出的甲醛
- 生物污染物
- 二手煙
- 懸浮粒子



### 二氧化碳

所有生物均會呼出二氧化碳;如室內含<mark>有高濃</mark>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
- 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,並可令室內空氣污染物積聚。

### 氡氣

氢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料釋放出來。如居所的通風系統不佳,氢氣可以積聚至一個很高的濃度;接觸高濃度的氢氣及其衰變物,可能會增加患肺癌的機會。

# 揮發性有機化合物和甲醛

揮發性有機化合物 (或簡稱 VOCs) 包含各種可於室温下揮發的有機化合物,其中包括甲醛。這些 VOCs 可由多種不同源頭釋出,包括建造物料、家具、化妝品、清潔劑、殺蟲劑、二手煙等。 VOCs 對健康可造成急性或慢性的不良影響。足夠濃度的 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。

室內所測量到的甲醛,主要來自一些用脲甲醛樹脂黏合或作外層物料的木製家具;其他來源包括用氣體燃料煮食、燒香、鋪地氈等活動。

### 牛物污染物

生物污染物包括細菌、真菌(俗稱霉菌)、病毒和塵蟎。這類污染物可能會因下列因素而加快增長:

- 涌風不足
- 潮濕及多灰塵的環境
- 冷氣或誦風系統的骯髒隔塵網和風槽

接觸到生物污染物可能會引致打噴嚏、流眼水、咳嗽、氣喘、眩暈、精神不振、發燒和腸胃不適,甚至會有過敏及哮喘反應。

### 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。它是一種超過千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。

# 懸浮粒子

灰塵或其他物質產生的粒子可從室外環境引入處所內,亦可從室 內的活動(如煮食、儀器操作及吸煙)所產生。這些細小的懸浮 粒子會刺激眼睛、鼻子和呼吸系統。

### 如何改善室內空氣質素?

- 保持處所清潔及乾爽,包括定期吸塵、清理霉菌,和盡快處理 漏水或水浸問題。
- 經常打開窗戶,使室內空氣流通;如使用空調,則要有足夠新 鮮空氣供應,以確保空氣流通。定期清洗通風系統,包括隔塵 網和風槽,及確保系統操作正常。
- 辦免不必要阻礙空氣流通的間隔。
- · 選用不含或 VOCs 含量低的產品。
- 讓新家具在戶外充分透氣後才搬進室內。
- 戒煙。
- 為可產生污染物的活動(如煮食、裝修、影印和吸煙等)裝設獨立抽風設備。
- 在空置的時段才進行裝修或防蟲的工作。

如你身體出現可能與室內空氣污染有關的徵兆或症狀,應諮詢你的醫生。

# 如想得到更多資料,請聯絡:

室內空氣質素資訊中心

電話: 2788 6177 傳真: 2788 6181

電郵:enquiry@iaq.gov.hk 網址:http://www.iaq.gov.hk







# 室內空氣質素與你 Indoor Air Quality and You



We spend most of our time at homes, offices and other indoor environment. Poor indoor air quality (IAQ) may cause headache, itchy eyes, respiratory difficulties, skin irritation, nausea and fatigue. Children, elderly and people 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 many different air pollutants. Some common air pollutants in Hong Kong are:

- carbon dioxide from people, pets, and plants
- radon from building materials
- volatile organic compounds from consumer products such as cosmetics, pesticides, cleaning agents, etc.
- formaldehyde from pressedwood products
- biological contaminants
- environmental tobacco smoke from smoking
- airborne particles

## Carbon dioxide

Living things breathe out carbon dioxide. A high level of indoor carbon dioxide indicates inadequate supply of fresh air. This is usually caused by:

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

It will make you feel sleepy, and can possibly cause a buildup of other indoor air pollutants.

### 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 risk of lung cancer.

### Volatile organic compounds and formaldehyde

Volatile organic compounds (VOCs), including formaldehyde, are a diverse group of organic compounds that evaporate at room temperature. These VOCs are emitted from many sources such as building materials, furnishings, cosmetics, cleaning agents, pesticides, and tobacco smoke. Exposure to VOCs may result in both acute and chronic health effects. In sufficient quantities, VOCs can cause eye, nose and throat irritations, and even headaches, dizziness, visual disorder and many other impairments. Some of the VOCs, formaldehyde in particular, which have been measured indoors are known human or animal carcinogens.

Formaldehyde in the indoor mainly comes from furniture made of wood products with urea-formaldehyde as adhesive or coating materials. Other sources include gas cooking, incense burning, carpeting, etc.



# **Biological contaminants**

Biological contaminants include bacteria, fungi (commonly known as mould), viruses and dust mites. Their growth may be accelerated by:

- inadequate ventilation
- damp and wet condition
- dusty environment
- dirty air filter and ducting of air conditioners or ventilation systems

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

### Environmental tobacco smoke

Environmental tobacco smoke (ETS) is a mixture of 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 thousands of individual chemical compounds. ETS is a strong irritant and a known cancercausing agent. It causes eye, nose, and throat irritation, and may significantly increase the risk of lung cancer and other respiratory illnesses.

### Airborne particles

Particles of dust, dirt, or other substances may be drawn into the building from outside and can also be produced from indoor activities, like cooking, operating equipment and smoking. These light weight airborne particles may cause eye, nose and respiratory irritation.

## What are the tips to improve IAQ?

- Keep your premises clean and dry, including vacuuming regularly, cleaning up mould and fixing water leakage or flooding promptly.
- Open the windows often 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 that can impede air flow.
- Select products with no or low VOCs.
- Move in new furniture only when it has been aired-out adequately.
- Quit smoking.
- Provide local exhaust to polluting activities such as cooking, renovation, photocopying, and smoking as far as possible.
- Carry out renovation and pest control work during unoccupied times.

If you have signs or symptoms that may be related to indoor air pollution, consult your doctor.

### For more information, please contact:

**Indoor Air Quality Information Centre** 

Telephone: 2788 6177 Facsimile: 2788 6181

E-Mail: enquiry@iaq.gov.hk Website: http://www.iaq.gov.hk