Indoor air: can it harm me?

What is indoor air?

Indoor air is the air inside your house, your school, your workplace and even inside your car. 90% of the air you breathe is indoor air, because most of our time is spent indoors.

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Should I be worried about indoor air – do I need more oxygen or something else?

Indoor air always has enough oxygen for you to be able to live, unless your house happens to be located at the top of the Mount Everest!
Concern about poor indoor air quality is not about what is not in the air, but about what is additionally present, and more specifically some things that are best avoided. These additional things are called gases, chemicals and small particles, which present at too high a level or even because they are there at all, can be a cause for concern.

Can I get sick from bad indoor air?

Yes, you can get sick from bad indoor air.
You can even die from bad indoor air e.g. carbon monoxide poisoning.
Your risk of developing a range of diseases can be increased such as lung cancer from exposure to tobacco smoke and radon (a gas released from certain types of rock in the ground), as well as cardio-vascular diseases, arteriosclerosis and respiratory problems such as asthma and bronchitis. Less severe effects may occur, for example the gases, chemicals and particles could cause irritation e.g. of the eyes and throat or produce headache or a feeling of stuffiness.

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Where do these gases, chemicals and particles come from?

The gases, chemicals and particles present in the indoor air can be produced in many ways including:

- Unwanted growing moulds
- Reservoirs of aquatic systems (including shower heads) that can be a source of airborne agents (i.e. Legionella)
- Heating and cooking appliances that burn fuel such as open fires, gas cookers, heaters and boilers
- Burning of candles and incense
- Air fresheners
- Cleaning products
- Cosmetics
- Furniture, including products made of particleboard (formaldehyde)
- Flooring and other furnishings
- Plastic materials containing additives such as plasticisers and flame retardants, e.g. TV and computer housing etc.
- Recent Painting and decorating
- Smoking
- Diesel and other traffic exhaust fumes (combustion particles and gases) from outdoors.

What can I do to protect myself?

You could consider walking around all day with a facial mask or similar device to protect yourself, but that is of course not practical!

There are many practical things you can do to reduce exposure to harmful chemicals and particles.

Reduce your use of high emitting products and materials

- Buy products that are low emitting i.e. non-smelling products, low odour and low 'VOC' content paints when available.

- Where possible use water based rather than solvent based products such as paints and adhesives.

- Printers and copy machines: if possible locate them in a well-ventilated area.

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Reduce sources of combustion

- Quit smoking: this will not only improve your life expectancy but also benefit the people that are most close to you.

- Do not use unvented combustion systems such as an unvented gas heater. They can produce carbon monoxide, which is a gas that does not smell but is very dangerous.

- If you notice discolouration of the walls, this might be caused by soot from burning sources (e.g. candles) or cigarette tar. Consider reducing the use of candles/incense and/or your smoking habit. Review whether the ventilation needs to be improved.

Maintain adequate ventilation

- Maintain adequate background ventilation in your home; don't live in a sealed box.
- Ventilate well during painting and decorating and ensure odours have dissipated before using the room for normal living.
- Ensure good ventilation when cooking: with effective ventilation the unwanted particles, gases and water vapour are removed before they come into the room air that is breathed by occupants. Use a cooker hood.
- If ventilation devices are available e.g. trickle vents in the façade, please leave them open!
- Do not cover ventilation openings. If you experience unacceptable draughts please seek expert advice.

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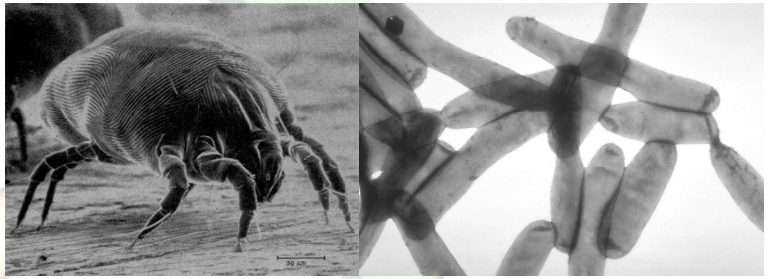
Reduce production of water vapour in the air

- Use a timer for taking a shower: this is not only limiting the amount of water in the air and on the surfaces, but also helps to save energy.
- Do not dry your laundry in an unheated space. If possible dry outdoors and otherwise use a dryer that does not release the humid air into your home.
- Keep a constant temperature in all indoor spaces, preferably not lower then 15 degrees Celsius.

Maintain and clean properly

- Clean on time and with the "right" products: non-smelling, low emissions.
- Turn over your mattresses at least once per year to discourage mites.



- Prevent legionnaires infection: when away for some days, run the hot or the cold water tap until the water is really hot or cold. If you haven't used your Jacuzzi for some time, first fill the bathtub with water of at least 60 degrees Celsius and empty it after 10 minutes.
- If you have a mechanical ventilation system please maintain and use it according to the manufacturer's instructions. Maintain and clean natural ventilation devices such as trickle vents regularly as well.

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Tips

- If you live near a busy road keep the windows closed during hours of peak traffic (particularly on the road side of the property).
- If you must smoke then smoke outdoors with the doors and windows closed.
- When cooking always use a cooker hood that expels air to the outside.
- Install at least one carbon monoxide detector.
- Check for mould growth on surfaces and remove by cleaning if present.
- Prevent persistent condensation: increase heating and ventilation if present and seek advice if the problem continues.
- Don't keep pets if a member of your household is allergic to them.

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What can I do if I am worried that I or a member of my household may be experiencing health effects due to poor air quality?

Seek expert advice (doctor/heating engineer, environmental health officer) if you have concerns, perhaps because you or another member of your household are experiencing problems indoors such as:

- Allergy and asthmatic symptoms
- Frequent airborne respiratory infections
- Mouldy odours
- Irritation of the eyes and skin
- Headaches and tiredness.

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Executive Agency for Health and Consumers