

Smoke inhalation

People exposed to smoke from a fire can breathe in enough smoke to cause medical problems. This usually happens with fires in enclosed spaces, e.g. inside buildings, but can also happen with prolonged exposure (hours) to smoke from bushfires. Smoke usually causes no more than mild irritation, and little or no treatment is required, but occasionally it causes more serious problems. In addition, people with other medical problems, especially respiratory or heart disease, or pregnant women, often require more investigations, observation, or treatment. People who have inhaled smoke are often sent to an emergency department to be assessed, unless their symptoms are obviously mild.

What medical problems can smoke cause?

Airway burns

Hot smoke can burn the airway (throat and trachea). This is usually obvious, with throat pain, hoarse voice, and noisy breathing. People with airway burns almost always have burns to the face or head, or severe burns elsewhere on the body. It is more common for smoke to cause mild throat irritation, which is usually not a sign of a significant burn to the airway.

Poisoning

Smoke contains poisons which can affect people. This usually happens only to people who have spent a long time (5 minutes or more) in an enclosed space full of smoke, especially if they been close enough to a fire to be burnt.

Carbon monoxide poisoning

Carbon monoxide is a colourless, odourless gas produced by incomplete burning, especially in enclosed spaces. If enough of it is inhaled, it quickly produces neurological (nervous system) symptoms ranging from headache to mild confusion, nausea and vomiting, to collapse, coma and rarely death. More commonly, not enough carbon monoxide is inhaled to cause problems. In pregnant women, the unborn baby can be more affected than the mother as the baby's blood retains more carbon monoxide than the mother's. A blood test may be taken to see if there has been exposure to carbon monoxide, but this is not always needed if symptoms are mild.

The treatment for carbon monoxide inhalation is a period of time breathing high concentrations of oxygen through a mask. This hastens the removal of the carbon monoxide compound (carboxyhaemoglobin) from the blood. In severe cases of poisoning, treatment is with high pressure oxygen in a hyperbaric (high pressure) chamber, but this situation is rare.

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Lung irritation

Many different chemicals and particles in smoke can irritate the lungs. In severe cases, this makes fluid enter the lungs, causing severe shortness of breath and cough, sometime with pink frothy sputum. People with asthma, emphysema or other lung diseases can have an “attack” of their existing disease triggered by smoke. A chest x-ray and blood tests may be required to investigate.

More commonly, people exposed to smoke may develop a mild cough, which does not indicate lung damage. Occasionally, however, people exposed to smoke can take up to 24—36 hours to develop signs of serious lung irritation. If you develop increasing cough and shortness of breath after leaving hospital, come back to hospital. If you develop severe shortness of breath, call an ambulance (000).

Things to remember

- Most cases of smoke inhalation are mild and don't cause problems. However, most people with smoke inhalation should be assessed in an emergency department. This applies particularly to pregnant women and people with existing health problems.
- Most people make a full recovery without any long term adverse effects.
- Less commonly, smoke can cause serious medical problems. Blood tests or a chest x-ray may be taken to investigate whether this is happening.
- If you develop increasing shortness of breath after leaving hospital, come back to hospital, if necessary by ambulance (call 000).

Seeking help:



In a medical emergency go to your nearest emergency department or call 000.

Instructions:

