



Carbon Monoxide: A Preventable Cause of Catastrophic Neurological Damage and Death

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I first met someone with carbon monoxide poisoning when doing specialist training in neurology. He had not died, as many do, but the action of carbon monoxide in blocking oxygen reaching the brain had caused irreparable damage to his control of movement and his ability to think clearly and communicate.

Carbon Monoxide (CO) is a very effective poison. It is odourless, colourless and binds irreversibly to haemoglobin. Haemoglobin is the component of our blood that should be carrying oxygen from the lungs to the body and brain, but when carbon monoxide is bound to it, it simply can't perform this task. Neurological symptoms (confusion, headaches, dizziness) are very common in the initial stages of poisoning. The brain is very sensitive to lack of oxygen, and so with continued exposure irreversible brain damage or death often result.

This is a preventable catastrophe. Carbon Monoxide poisoning typically results from faulty gas appliances but can be emitted by any heating or cooking appliance powered by any carbon-based fuel (wood, coal, oil etc.). Indeed, CO and other products of combustion can be emitted from cars, barbecues, tent gas lights and even a blanket wrongly placed over an old fashioned oil-filled electric radiator for days which then starts smouldering. However, there is little public awareness of the dangers of carbon monoxide and what symptoms might be caused by it. There is, surprisingly, no requirement for the gas emergency service to test for gas appliances for carbon monoxide. This is a particular problem for those who are tenants, where getting an appliance tested for Carbon Monoxide safety is sometimes almost impossible. This is because although the Gas Safe Register will, without charge, inspect a gas appliance that has had work done on it by a Registered Gas Engineer within the previous six months, the inspector from the GSR will only test that appliance for CO if the landlord gives permission. In CO-Gas Safety's experience most tenants are too worried about being evicted to ask permission.

Indeed, there is an urgent need for action to prevent more deaths and disability because, according to research conducted on behalf of the Health and Safety Executive by University College London (UCL), of 270 homes assessed, 23% had a faulty gas appliance, 18% had CO levels which exceeded WHO guidelines, with 8% having dangerous levels of CO according to WHO guidelines.

CO-Gas Safety do what they can with very little funding to try to raise awareness amongst the public and to lobby politicians for change. A public education campaign and a change in the law to require testing of gas appliances for CO by the gas emergency service would be a good start. With these and other measures we could prevent more people from suffering unnecessary harm and loss of life.