Carbon Monoxide Poisoning Recognition

NICE CG161 (2010) | NHS England CO Guidance (2022)

ACTION: Call 999 Immediately

- ☐ Patient drowsy, confused, collapsed, unconscious, or has had a seizure
- ☐ Chest pain or significant breathlessness
- ☐ Multiple people from same household, workplace, or vehicle with similar symptoms
- ☐ Carbon monoxide alarm activated with suspected exposure or symptoms
- ☐ Pregnant patient with any suspected exposure

Advise patient to leave building immediately and do not re-enter. Gas appliances: call National Gas Emergency Service 0800 111 999.

ACTION: Emergency Department Assessment

- ☐ Conscious patient: unexplained headache, nausea, or dizziness without viral features
- ☐ Others in household similarly affected at the same time
- ☐ Symptoms improve when away from home or workplace
- ☐ Significant neurological symptoms (unsteadiness, visual disturbance, personality change) without collapse
- ☐ Pregnant patient with any suspicion of CO exposure

Emergency department strongly preferred: diagnosis requires blood gas testing and carboxyhaemoglobin measurement. Normal pulse oximetry does NOT exclude CO poisoning.

CARBON: Quick Assessment Framework

C	**CO alarm activated?**	Any alarm triggered with symptoms or suspected exposure is a red flag.
A	**Anyone else affected?**	Multiple people with similar symptoms at the same time in the same building.
R	**Relief away from building?**	Symptoms improving when away from home or workplace is the key distinguishing feature.
B	**Burning appliance present?**	Boiler, open fire, wood burner, portable heater, generator, or garage equipment.
O	**Others or pets unwell?**	Pets are highly sensitive to CO. Any animal collapsed or lethargic is a significant warning sign.
N	**Neurological symptoms?**	Confusion, unsteadiness, visual disturbance, or personality change: emergency assessment required.

ACTION: Self-Care (Only If CO Excluded)

- ☐ Straightforward cold or flu-like illness with no concerning features: provide OTC advice
- ☐ Advise all patients with fuel-burning appliances to fit a CO alarm (British Standard EN 50291)

Key reminders: CO is odourless and colourless: patients will not know they are being poisoned. The cherry-red skin sign is rarely seen in living patients and should not be relied upon. Normal pulse oximetry does NOT exclude CO poisoning. Children, pregnant patients, older adults, and those with cardiovascular disease may be particularly vulnerable.