Toolbox talk

Carbon monoxide awareness

You can't see it, smell it or taste it

10 minutes

For: Everyone on site, especially anyone using fuel-powered plant, heaters or gas appliances

Why it matters

Carbon monoxide (CO) is a poisonous gas with no colour, smell or taste. On site it can build up fast when petrol tools, generators or gas heaters are used indoors or in enclosed spaces. HSE warns that CO levels can quickly kill without warning.

Key points

1. CO comes from fuel that doesn't burn fully: petrol, gas, oil, wood or coal.
2. Petrol generators, cut-off saws and LPG heaters are common sources on site.
3. Use petrol generators outside, away from openings. Any exceptional enclosed use needs expert assessment and suitable mechanical extraction.
4. Refurb work can block or disturb gas flues and push CO into rooms.
5. Early symptoms feel like flu or tiredness: headache, dizziness, sickness, breathlessness.
6. Feeling better when you go outside is a warning sign.
7. Use CO detectors where your risk assessment says they are needed, and act on alarms.
8. Soot or unexpected yellow flames can warn of CO. Fuel-effect flames may be yellow.

Sources: HSE: Construction hazardous substances - Carbon monoxide; HSE: Carbon monoxide awareness FAQs; NHS: Carbon monoxide poisoning; nidirect: Energy, power supply and utilities (NI gas emergency number).

This talk supports, but does not replace, your site-specific risk assessment, method statement, training and supervision. Free to copy and use. **tradefoxapp.com/toolbox-talks/carbon-monoxide**

Carbon monoxide awareness

Do

- Use electric tools instead of petrol where you can.
- Keep generators and petrol plant outside in a well-ventilated spot.
- Make sure LPG heaters and welfare units have ventilation at high and low level.
- Report blocked burners, damaged flues or a beeping CO alarm straight away.
- Leave gas and LPG installation work to a competent, registered person.

Don't

- Don't run a generator or petrol saw in a basement, cabin, tank or closed room.
- Don't block vents in cabins or rooms with heaters; keep them ventilated.
- Don't ignore a CO alarm or switch it off without finding out why.
- Don't go back into the area until it has been made safe.
- Don't drive yourself to hospital if you feel unwell from CO.

Ask the group

- What on this site burns fuel, and where is it being used?
- Which areas here could count as an enclosed space?
- Where are the CO detectors or alarms, and who checks them?
- What would you do if a mate got a bad headache working near a generator?

If it goes wrong: If you suspect CO, switch off the appliance if it is safe, get everyone out into fresh air and tell your supervisor. Call 999 if someone is struggling to breathe, confused or unconscious; for gas leaks call 0800 111 999 in Great Britain or 0800 002 001 in Northern Ireland.

On this site

Nearest first aider _____ Emergency assembly point _____

Site-specific hazards and controls _____

_____

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Go further: Read the Tradefox guide to where carbon monoxide alarms should go

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Attendance register

Carbon monoxide awareness

Site / project _____ Date and time _____

Presented by _____ Company _____

	Name (print)	Company	Signature
1			
2			
3			
4			
5			
6			
7			
8			
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10			
11			
12			
13			
14			

By signing, attendees confirm they took part in this toolbox talk and understood the key points. Keep this record with your site safety file.

Presenter signature _____ Follow-up actions _____

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Go further: Read the Tradefox guide to where carbon monoxide alarms should go

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Quick check

Carbon monoxide awareness

Tick one answer for each question. Your presenter has the answers.

Name _____ Date _____

1. How can you tell if carbon monoxide is present?

- [ ] By its smell
- [ ] You can't without a detector
- [ ] It makes a blue haze

2. Which of these is a common source of CO on site?

- [ ] A petrol generator used indoors
- [ ] A battery drill
- [ ] A spirit level

3. Which symptom could be CO poisoning?

- [ ] Itchy skin
- [ ] Sore knees
- [ ] Headache and dizziness

4. In Great Britain, which number do you call if you smell gas or suspect CO from a gas appliance?

- [ ] 0800 111 999
- [ ] 101
- [ ] 0345 605 1956

5. A gas heater has a yellow, lazy flame. What does that suggest?

- [ ] It is working well
- [ ] Fuel isn't burning fully and may be making CO
- [ ] It needs more gas

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For the presenter

Answers and sources

Quick check answers

1. You can't without a detector

CO has no colour, smell or taste, so you need a detector or alarm.

2. A petrol generator used indoors

HSE lists petrol generators and cut-off saws used indoors as a source of CO.

3. Headache and dizziness

Headaches, dizziness, sickness and breathlessness are early signs of CO poisoning.

4. 0800 111 999

0800 111 999 is the free 24-hour National Gas Emergency Service in Great Britain.

5. Fuel isn't burning fully and may be making CO

HSE says yellow or orange flames are a sign of incomplete burning, which makes CO.

Sources

- HSE: Construction hazardous substances - Carbon monoxide
  https://www.hse.gov.uk/construction/healthrisks/hazardous-substances/carbon-monoxide.htm
- HSE: Carbon monoxide awareness FAQs
  https://www.hse.gov.uk/gas/domestic/co.htm
- NHS: Carbon monoxide poisoning
  https://www.nhs.uk/conditions/carbon-monoxide-poisoning/
- nidirect: Energy, power supply and utilities (NI gas emergency number)
  https://www.nidirect.gov.uk/articles/energy-power-supply-and-utilities

> **Presenting tips:** keep it to about 10 minutes, use real examples from your site, ask the group questions rather than reading everything out, and record attendance on the register.

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Silent killer. Keep fumes outside.

1. **No petrol plant in enclosed spaces**
2. **Never ignore a CO alarm**
3. **Feel ill? Get out, get air**

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Sources and qualifications

Carbon monoxide awareness

Scope: Great Britain safety legislation unless a nation is identified. Northern Ireland has separate legislation. Site rules can be stricter than minimum legal duties; use the site assessment, instructions and competent supervision.

A4 applicability: no installation-design requirement is asserted in this talk. Its claims are referenced to the subject-specific sources below.

S1. HSE: Carbon monoxide in construction

Sources, rapid danger, expert ventilation assessment, extraction, generator siting, flues, detectors and symptom/combustion warnings; key points and quiz.

https://www.hse.gov.uk/construction/healthrisks/hazardous-substances/carbon-monoxide.htm

S2. NHS: Carbon monoxide poisoning

Symptoms, leaving the affected area and emergency action; emergency box and Do/Don't.

https://www.nhs.uk/conditions/carbon-monoxide-poisoning/

S3. nidirect: Energy and utilities

Northern Ireland gas emergency contact.

https://www.nidirect.gov.uk/articles/energy-power-supply-and-utilities