

CURRENT STATUS OF CARBON MONOXIDE POISONING IN BELGIUM

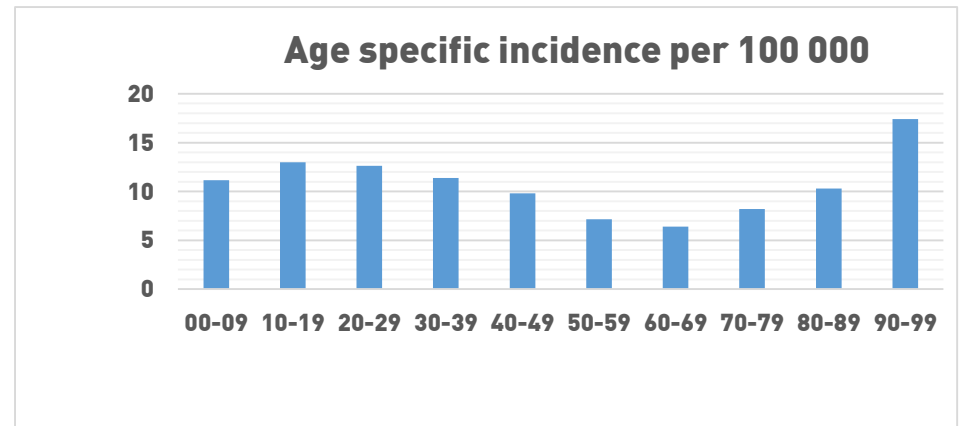
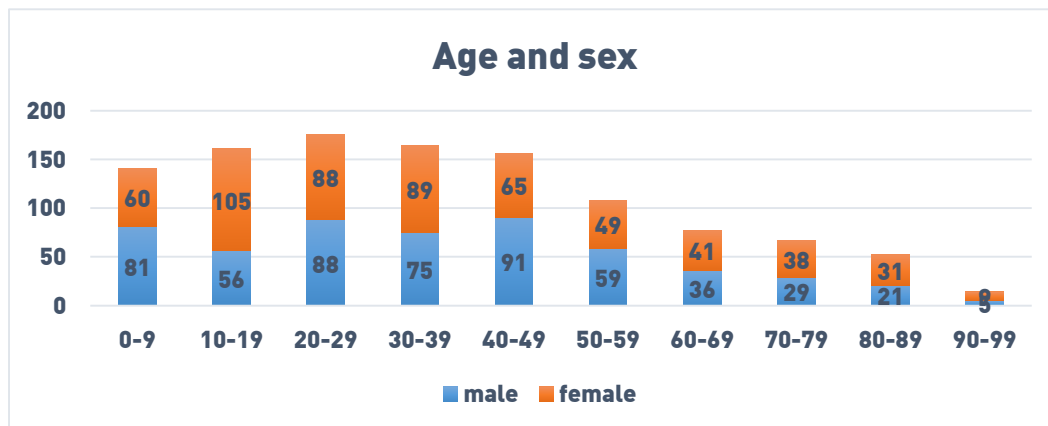
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Description of the number of incidents, victims and deaths caused by carbon monoxide (CO) intoxication in Belgium in 2013. Data on CO poisoning are collected from hospital emergency services, centers for hyperbaric medicine and coroner's offices. A press clipping service is used as a complementary source of data.

2013:

538 incidents
1251 victims : incidence 11.3 / 100,000 inhabitants
26 deaths (2,1 %): crude mortality rate 0.23/100,000 inhabitants

Carbon monoxide intoxication affects both men and women at all ages. The age specific incidence was highest in the oldest age group.



Occupational intoxications concern mostly men (34/48 or 71 %) and are most frequently caused by exposure to the exhaust fumes of petrol fueled engines in an enclosed area (diesel power generator, concrete polishing machine, cutting disc, truck, boat engine...). The second cause is fire at the workplace, the third cause is problems with the heating at work. Five occupational intoxications concerned emergency workers exposed to CO during an intervention.

Type of intoxication (analysis per victim)

Accidental	1161 (93 %)
Occupational	48 (4 %)
Suicide attempt	12 (1 %)
Unknown	30 (2 %)
Total	1251 (100 %)

The vast majority of carbon monoxide intoxications are accidental.

Suicide attempts

Cause	Number	%
Car exhaust fumes	6	50
Self ignited fire	4	33
Heating appliance	2	17
Total	12	100

There were 12 suicide attempts, 2 of the attempts with car exhaust fumes were fatal.

Causes of incidents (analysis per incident)

	Number	%
Domestic water heating or heating appliance	358	67 %
Fire	103	19 %
Exhaust fumes	26	5 %
Unknown	49	9 %
Other	2	
Total	538	100 %

Twenty six incidents were caused by exhaust fumes: truck or car (10); power generator (8); concrete polishing machine (2); cutting disc (2); boat engine (1); forklift (1); lifting ramp (1); unknown (1).

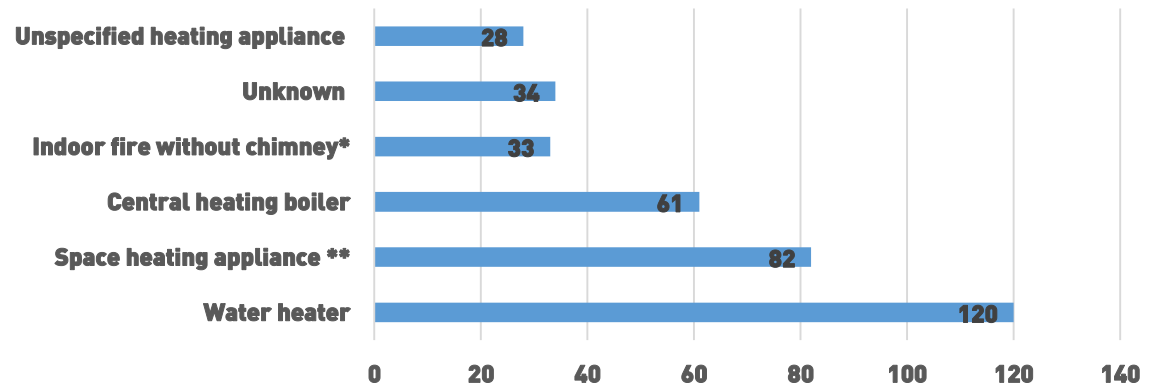
Fire was the cause of 103 incidents, making 208 victims.

The majority of incidents were caused by an appliance for the production of hot water or a heating appliance at home.

Mass intoxications

There were two mass intoxications, both happened in a hall for parties. In the first one the evacuation pipe of the central heating boiler had come off. There were 23 victims. The second made 17 victims at a children's party and was caused by a terrace heater on butane that had been placed inside.

Domestic combustion appliances causing CO-intoxication



* Indoor BBQ, open charcoal fire, oven or cooker, petrol or gas stove not connected to a chimney.

** Space heating appliance connected to a chimney.

Causes of the 25 fatal incidents causing 26 deaths

Water of space heater on gas in de bathroom	7
Fire	5
Space heater in the living room	5
Car exhaust fumes	3
Central heating boiler	2
Indoor open charcoal burner	2
Unknown	1
Total	25

Space heaters of water heaters on gas are responsible for almost half of the fatal incidents.

Conclusion

Carbon monoxide intoxication affects all ages and both sexes. The majority of incidents are accidental and caused by home water and space heating appliances. In order to lower the incidence, prevention should focus on the replacement of old water heaters without safety devices and on correct installation and maintenance of space heaters.