

# Carbon Monoxide Poisoning by Indoor Barbecue Reported to Different German Speaking Poison Information Centers and the BfR Berlin

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## Objective

Objective: From 2008 up to now the Poison Information Center (PIC) Erfurt has registered 4 incidents involving: 3, 4, 2 and 3 (1 fatality) persons with signs of carbon monoxide (CO) poisoning from indoor barbecues (COBIB). To explore if COBIB is a new phenomenon in Germany, although one which was already described in other countries (1), we asked 10 German-speaking PICs and the BfR Berlin to send us all their COBIBs from the last ten years (2).

## Method

A retrospective study of all COBIBs reported to the German-speaking PICs and the BfR Berlin from 2000 to the end of 2009 was performed.

## Results

Results: 60 COBIBs (accidental: 90.0 %, suicidal: 8.3 %, unknown reason: 1.7%) with 146 persons involved were reported by 6 of 11 German-speaking PICs and the BfR Berlin. The other 5 PICs either did not register any COBIBs or could not separate them in their database from other CO poisonings. The number of COBIBs and involved persons increased from one incident with 2 persons in 2000 to 18 incidents with 33 persons in 2009, respectively (Fig. 1).

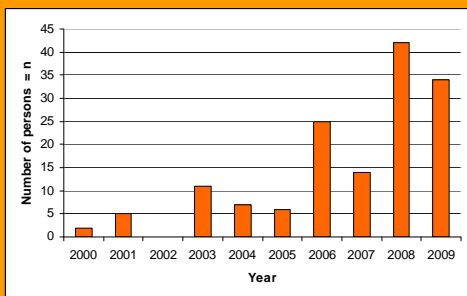


Figure 1: Number of persons involved in COBIBs from 2000 - 2009

The 146 persons with COBIB (female 26.7 %, male 27.4.9 %, unknown gender 45.9 %) were distributed over 15 of 16 federal states of Germany and Switzerland with centers in Bavaria (23), Brandenburg (18), and Baden-Wuerttemberg (18) (Fig. 2).

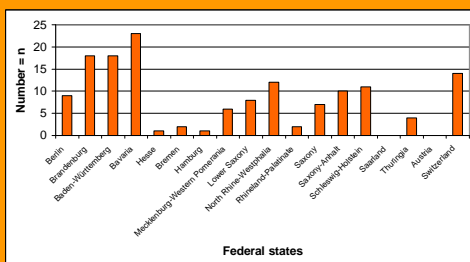


Figure 2: Number of persons involved in COBIBs in different federal states of Germany, Austria, and Switzerland

## References:

- Gasman JD, Varon J, Gardner JP. Revenge of the barbecue grill. Carbon monoxide poisoning. West J Med. 1990; 153:656-657
- Hahn A, Begemann K, Burger R, Friedemann M, Hillebrand J, Meyer H, Kolbusa R, Gessner M. Cases of Poisoning Reported by Physicians 2008. [http://www.bfr.bund.de/cm/255/cases\\_of\\_poisoning\\_reported\\_by\\_physicians\\_2008.pdf](http://www.bfr.bund.de/cm/255/cases_of_poisoning_reported_by_physicians_2008.pdf)



Collage by T. Jonczyk-Weber and R. Szibor of a picture painted by Arnold Böcklin (1827-1901)

The age distribution was: adults (58.2 %), children (24.7 %), and unknown (17.1 %). The severity of initial symptoms estimated according to the Poisoning Severity Score was: none to mild (60.3 %), moderate (13.7 %), severe (11.6 %), fatal (6.9 %), and unratable (7.5 %) (Fig. 3).

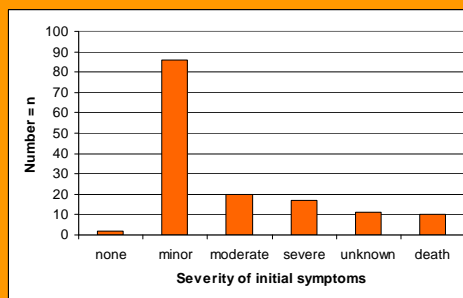


Figure 2: Severity of initial symptoms according to PSS

The carboxyhemoglobin (COHb) concentrations, with poor correlation to symptoms, were less than 10 % in 7.5%, between 10 and 30 % in 26.7 %, between 30 and 40 % in 1.4 %, higher than 40 % in 0.7 %, and unknown in 63.7 % of all persons with COBIB.

## Conclusion

The number of COBIBs increased in Germany and Switzerland from 2000 to the end of 2009. In most COBIBs two or even more persons were involved. Better information about the risk of indoor barbecues should be provided.