

Indoor air pollution as a determining factor in COVID-19 mortality.

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During 2020, when no vaccines were available, Iceland, Norway, Denmark and Finland had low COVID-19 mortality rates and negative excess mortalities (or under-mortality)¹, compared to other European countries, which all had higher mortality rates and an excess mortality of up to 15%.

Year 2020	BEL Belgium	UK United Kingdom	POL Poland	NED Netherlands	GER Germany	DEN Denmark	FIN Finland	NOR Norway	ICE Iceland
COVID-19 deaths/100.000 inhabitants*	167	110	75	64	40	22	11	9	8
Excess mortality**	+12.2%	+10.5% Eng/Wales	+14.4%	+ 7.2%	+ 3.3%	- 4.3%	- 3.1%	- 3.6%	- 4.1%
Under- mortality**		+7.5% Scotland							

*WHO: COVID-19 dashboard

** Excess mortality across countries in 2020; Centre for Evidence Based Medicine, University of Oxford (2021).

Breathing air that is polluted with combustion gases, increases the risk of severe COVID-19. (Dr. Tedros Adhanom Ghebreyesus; WHO Director-general; September 22, 2021).

Observation: European countries where district heating and electric cooking are usual (Iceland, Norway, Denmark, Finland) have a much lower COVID-19 mortality than countries where fossil fuels are used indoors for heating and cooking.

Conclusion: Lock downs are only effective if homes are free from combustion gases. In that case lock downs also prevent infections and accidents outside the home (traffic, work, school, sports), which lowers the overall mortality rate.

Advice : If fossil fuels are used indoors, homes must be well ventilated and protected against combustion gases. Ventilation can be checked with a CO2 monitor. Flue gasses must be detected with low-level carbon monoxide (CO) alarms.

Main conclusion: Eliminating toxic combustion gases from houses and homes will significantly reduce morbidity and mortality of COVID-19.

¹ Sweden is excluded, because the COVID-19 policy was different from other countries. In 2020 Sweden had 1.5% excess mortality and the COVID-19 mortality rate was 94 (per 100.000 inhabitants).