

Health fears over CO2 storage are unfounded, study shows

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Capturing CO2 from power stations and storing it deep underground carries no significant threat to human health, despite recently voiced fears that it might, a study has shown.

Researchers found that the risk of death from poisoning as a result of exposure to CO2 leaks from underground rocks is about one in 100 million – far less than the chances of winning the lottery jackpot.

Scientists from the University of Edinburgh studied historical data on deaths from CO2 poisoning in Italy and Sicily, where the [gas](#) seeps naturally from the ground because of volcanic activity.

They found that the number of recorded deaths was very low and say that engineered gas storage underground could be even safer, as it will be planned and monitored.

The study is published in the *Proceedings of the National Academy of Sciences*.

Recent CCS projects in northern Europe and Canada have been criticised by residents over health concerns arising from potential leakage.

Carbon capture and storage enables collection of CO2 before it can escape into the atmosphere. The technology involves the collection of CO2 at a power station or industrial site. The gas is liquefied and piped

to the storage site, where it is injected deep below ground. The gas is stored in microscopic [rock](#) pores and eventually dissolves in underground water. Storage sites will have several barriers between the store and the surface.

Storing CO₂ gas underground prevents it from contributing to global warming. Such technologies will play an important role over the next 50 years, as a bridge to the development of clean energy.

Jennifer Roberts from the University of Edinburgh's School of GeoSciences, who undertook the work, said: "These Italian CO₂ seeps are natural, are often neither sign-posted nor fenced off, and yet there have been remarkably few accidents."

Professor Stuart Haszeldine of the University of Edinburgh's School of GeoSciences, who led the study, said: "Our findings show that storing [CO₂](#) underground is safe and should allay any concerns that the technology poses a significant threat to health."

Provided by University of Edinburgh

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