

# Widely used sedatives/sleeping pills linked to increased fatal pneumonia risk

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Commonly prescribed sleeping pills/sedatives may increase the risk of contracting pneumonia by as much as 50% and increase the risk of dying from it, suggests research published online in the journal *Thorax*.

Benzodiazepines have a wide range of uses and are commonly prescribed for anxiety, epilepsy, [muscle spasm](#), and insomnia. They are also frequently used in palliative care, as a [sedative](#), and to help those with an alcohol problem to "dry out."

Around 2% of the population in the UK and the US have taken benzodiazepines for 12 months or more, and among the elderly this prevalence rises to one in 10.

The use of these drugs has been linked to a heightened risk of infections and death from [blood poisoning](#) ([sepsis](#)) in critically ill patients, and the authors wanted to know if these drugs had a similar impact on the risk of developing fatal pneumonia.

The authors analysed the [health records](#) of patients whose details had been entered into the [Health Improvement](#) Network (THIN) database. This contains the records of over 9 million patients registered with various primary care organisations across the UK.

They focused on just under 5000 patients (cases) with a first recorded diagnosis of pneumonia between 2001 and 2002 and compared each of them with 6 patients, matched for age and sex, and drawn from the same

practice, which added up to more than 29,500 in all (controls).

The cases were more likely to have had pneumonia before, to have had other serious illness, including a heart attack, depression, and [psychotic illness](#); underlying illnesses; and to be current smokers than those in the comparison group.

The use of benzodiazepines in both groups was assessed, and classified as "current," "recent," or "past." The use of zopiclone, which is not a benzodiazepine, but which acts on the same chemical pathways in the body, was also assessed.

The results showed that benzodiazepines as a class of drug were associated with a significantly higher (54%) risk of contracting pneumonia, after taking account of previous bouts of the infection, smoking status, and other serious and underlying illness. An effect of similar magnitude was found for the use of zopiclone.

Individually, prescriptions for diazepam, lorazepam and temazepam, but not chlordiazepoxide, were all associated with an increased risk of contracting pneumonia.

A second analysis showed that the risk of dying within 30 days of being diagnosed with [pneumonia](#) was 22% higher among those taking benzodiazepines. And it was 32% higher within three years of diagnosis.

Diazepam, chlordiazeopoxide, lorezapam and temazapam were all individually associated with the long term risk of death in these patients.

The authors caution that their findings do not definitively prove cause and effect, but they suggest that there may be grounds for further investigation, especially as their findings echo those of clinical trials of sedative doses of benzodiazepines.

"Benzodiazepines and zopiclone are commonly prescribed medications that have significant immune effects," they write. "Given the widespread use of benzodiazepine drugs, further studies are required to evaluate their safety in the context of infection" they conclude.

**More information:** The impact of benzodiazepines on occurrence of pneumonia and mortality from pneumonia: a nested case-control and survival analysis in a population cohort, Online First, [doi 10.1136/thoraxjnl-2012-202374](https://doi.org/10.1136/thoraxjnl-2012-202374)

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