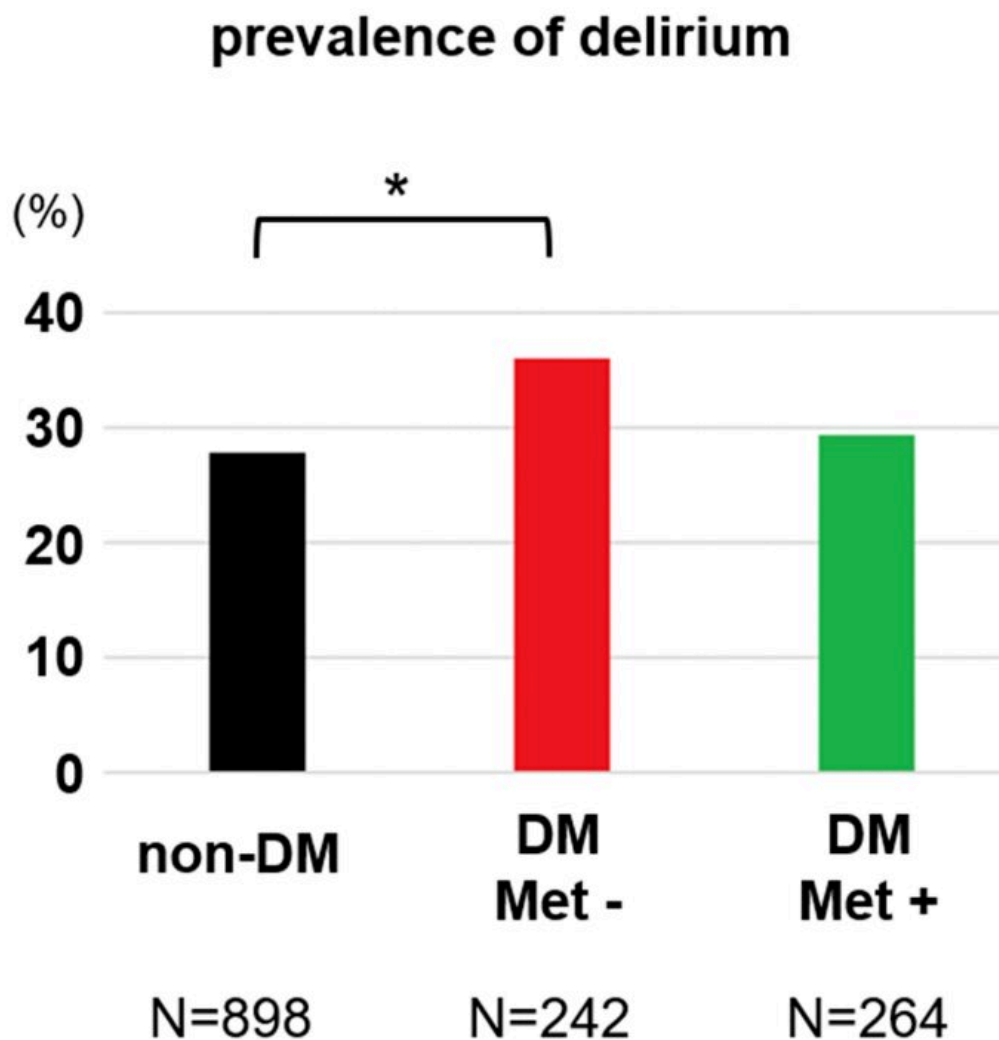


The potential benefit of metformin to reduce delirium risk and mortality

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Prevalence of delirium by comparing three patient groups based on their DM status and history of metformin use. Credit: *Ageing* (2022). DOI:

10.18632/aging.204393

A new research paper titled "The potential benefit of metformin to reduce delirium risk and mortality: a retrospective cohort study" has been published in *Aging*.

Metformin has been reported to improve age-related disorders, including dementia, and to lower mortality. This study was conducted to investigate whether metformin use lowers [delirium](#) risk, as well as long-term mortality.

In the current retrospective cohort study, researchers from Stanford University School of Medicine, University of Iowa Carver College of Medicine, University of Iowa College of Public Health, and Tottori University Faculty of Medicine analyzed 1,404 previously recruited subjects. The relationship between metformin use and delirium, and the relationship between metformin use and 3-year mortality were investigated.

The researchers state, "Thus, in this report we aimed to investigate the relationship between DM [[diabetes mellitus](#)] and delirium risk with a focus on the influence from metformin. We hypothesized that history of metformin use is associated with lower risk for delirium. We were also interested in testing if history of metformin use can alter one of the most important patient outcomes, mortality."

In total, 242 subjects were categorized into a type 2 diabetes mellitus (DM)-without-metformin group, and 264 subjects were categorized into a DM-with-metformin group. Prevalence of delirium was 36.0% in the DM-without-metformin group, and 29.2% in the DM-with-metformin group. A history of metformin use reduced the risk of delirium in

patients with DM (OR, 0.50 [95% CI, 0.32 to 0.79]) after controlling for confounding factors.

The 3-year mortality in the DM-without-metformin group (survival rate, 0.595 [95% CI, 0.512 to 0.669]) was higher than in the DM-with-metformin group (survival rate, 0.695 [95% CI, 0.604 to 0.770]) ($p=0.035$). A history of metformin use decreased the risk of 3-year mortality after adjustment for confounding factors (HR, 0.69 [95% CI, 0.48 to 0.98]). The researchers concluded that metformin use may lower the risk of delirium and mortality in DM patients.

"In this report, we showed the potential benefit of [metformin](#) in decreasing the risk of delirium and mortality in DM subjects," the researchers conclude.

More information: Takehiko Yamanashi et al, The potential benefit of metformin to reduce delirium risk and mortality: a retrospective cohort study, *Aging* (2022). [DOI: 10.18632/aging.204393](https://doi.org/10.18632/aging.204393)

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