

## Depression and risk of atrial fibrillation: a nationwide population-based study

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**Background:** Although treatments of atrial fibrillation (AF) based on the biological mechanisms for initiation and maintenance of AF improve cardiovascular outcomes, psychosocial factors have been also implicated in the etiology and progression of cardiovascular disease.

**Objective:** We aimed to evaluate the association between depression and incident AF using nationwide database from the National Health Insurance Service in South Korea.

**Methods:** A total of 9,075,224 participants with data of national health checkup in 2009 were included, and participants who were diagnosed with AF before the examination were excluded. Exposure to depression is determined by the precedence of depression diagnosed within 2 years.

**Results:** Depression was diagnosed in 1.37% (124,709) of participants at baseline. Compared to the non-depression group, depression group was likely to be female and had higher comorbidities. After adjusting covariates, depression group had a higher risk of incident AF compared with non-depression group (hazard ratio, 1.30; 95% confidence interval, 1.26–1.34). Repeated exposure to depression increased a risk of incident AF (Figure 1).

**Conclusion:** Depression was associated with an increased risk of new-onset AF. This association was stronger for patients who had more burden of depression. Future studies should investigate whether early treatment of depression can prevent incident AF.

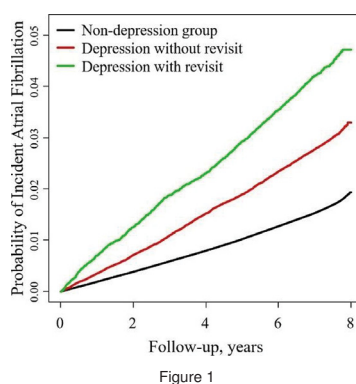


Figure 1