

**Does quitting smoking improve mental Health?****Clinical Question**

Is tobacco-smoking cessation associated with a change in mental health?

**Bottom Line**

Across six separate outcomes, there was no evidence to suggest that quitting smoking resulted in worsening mental health relative to continuing to smoke. In addition, there was evidence to suggest that negative mental-health symptoms (depression, anxiety, mixed depression and anxiety, and stress) decreased, while positive symptoms (psychological quality of life and quality of social interaction) increased in people who stopped relative to those continuing to smoke.

The authors found that the pooled effect sizes for anxiety, depression, and mixed anxiety and depression outcomes were similar at around 0.3. Although this could be deemed to be a small-to-moderate effect, it is similar in size to that observed in a meta-analysis of antidepressants for anxiety disorder (NCCMH 2011), which is generally considered to be clinically significant.

**Caveat**

All of the included studies were observational and there is therefore potential for bias. One bias may be thought to arise because people with current or past psychological disorders are less likely to achieve abstinence, and therefore are likely to be over-represented in the group who continue smoking compared with those who stop. However, the authors primarily compared change in mental health over time between people who stopped and people who did not. If worsened mental health predicted failure to stop smoking at baseline it is likely that by follow-up it would have improved through regression to the mean, creating a bias that should favour the continuing-smoking group. This bias therefore could not explain the apparent benefit of abstinence on improving mental health.

**Context**

Some people who smoke and healthcare providers believe that smoking can reduce stress and other symptoms related to mental illness, or that quitting smoking can exacerbate mental illness, and these beliefs maintain a culture of smoking. However, there are biologically plausible reasons why smoking may worsen mental health through neuroadaptations arising from chronic smoking, which may lead to anxiety, depression and irritability, in which case smoking cessation may help to improve rather than worsen mental health.

**Cochrane Systematic Review**

Taylor GMJ, Lindson N, Farley A, Leinberger-Jabari A, Sawyer K, te Water Naudé R, Theodoulou A, King N, Burke C, Aveyard P. Smoking cessation for improving mental health. Cochrane Database of Systematic Reviews 2021, Issue 3. Art. No.: CD013522. DOI: 10.1002/14651858.CD013522.pub2. This review contains 102 trials with a total of 169,500 participants.

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Systematic review link:

<https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD013522.pub2/full>