

# Do Zinc Supplements Reduce Mortality in Patients with COVID-19? A Systematic Review and Meta-Analysis

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**Introduction:** Zinc is a trace element that has major role in human immune system. This study aims to assess the clinical benefits of zinc supplements on all-cause mortality in patients with COVID-19.

**Method:** PubMed/MEDLINE, EMBASE, and Cochrane databases were searched for studies that evaluated the clinical efficacy of zinc supplements in patients diagnosed with COVID-19. The outcome was all-cause mortality rate. Pooled relative risk (RR) and corresponding 95% confidence intervals (ICs) were calculated and combined using a random-effects model.

**Results:** A total of 6 studies (3 randomized clinical trials and 3 retrospective observational studies) that included 1,670 patients with COVID-19 (855 received zinc supplements vs. 812 received standard of care without zinc) were included in our systematic review. Our meta-analysis showed that there is statistically significant difference in all-cause mortality rate between the two groups favoring zinc supplements (RR 0.66; 95%CI 0.54 - 0.81; P <0.0001)

**Conclusion:** Our study demonstrated that zinc supplements in addition to standard of care can reduce all-cause mortality in patients with COVID-19.