

# Rate of retinal vein occlusions up after COVID-19 infection

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The risk for retinal vein occlusion (RVO) may be increased in the six

months following COVID-19 infection, according to a study published online April 14 in *JAMA Ophthalmology*.

Bobek S. Modjtahedi, M.D., from the Southern California Permanente Medical Group in Pasadena, and colleagues conducted a [cohort study](#) involving 432,515 patients without a history of retinal vascular occlusion who were diagnosed with COVID-19 between Jan. 20, 2020, and May 31, 2021. The change in average biweekly incidence of new retinal artery occlusions (RAOs) and RVOs after COVID-19 was examined.

The researchers found that 16 patients had an RAO and 65 had an RVO (crude incidence rates, 3.00 and 12.20 per 1,000,000 patients, respectively). After adjustment for age; sex; self-reported race and ethnicity; [body mass index](#); history of diabetes, hypertension, or hyperlipidemia; and hospitalization, there was a higher incidence of new RVOs in the six months after COVID-19 infection compared with the six months before infection (adjusted incidence rate ratio, 1.54; 95 percent confidence interval, 1.05 to 2.26;  $P = 0.03$ ). A smaller, nonsignificant, increase in the incidence of RAOs was seen after COVID-19 diagnosis (adjusted incidence rate ratio, 1.35; 95 percent confidence interval, 0.64 to 2.85;  $P = 0.44$ ). At 10 to 12 weeks and six to eight weeks after COVID-19 diagnosis, the peak incidence of RAOs and RVOs occurred, respectively.

"The findings provide further evidence of the prothrombotic state induced by COVID-19 and indicate that the postinfection impacts may last several weeks," the authors write. "Large epidemiologic studies are warranted to better define the association between retinal thromboembolic events and COVID-19 infection."

Two authors disclosed financial ties to the biopharmaceutical industry.

**More information:** Bobek S. Modjtahedi et al, Changes in the

Incidence of Retinal Vascular Occlusions After COVID-19 Diagnosis, *JAMA Ophthalmology* (2022). [DOI: 10.1001/jamaophthalmol.2022.0632](https://doi.org/10.1001/jamaophthalmol.2022.0632)

K. Thiran Jayasundera et al, COVID-19 Diagnosis and Incidence of Retinal Thromboembolism, *JAMA Ophthalmology* (2022). [DOI: 10.1001/jamaophthalmol.2022.0666](https://doi.org/10.1001/jamaophthalmol.2022.0666)

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