

# Cannabinoids associated with negative respiratory health effects in older adults with COPD

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Dr. Nicholas Vozoris, a respirologist at St. Michael's Hospital of Unity Health Toronto and an associate scientist at the hospital's Li Ka Shing Knowledge Institute. Credit: Unity Health Toronto

Cannabinoids, a class of prescription pills that contain synthetically-made chemicals found in marijuana, are associated with a 64 percent increase in death among older adults with chronic obstructive pulmonary disease (COPD), according to the first published data on the impact of cannabinoids on the respiratory health of individuals with the lung disease.

The findings, published Wednesday in *Thorax*, have significant clinical implications as more physicians prescribe cannabinoids to patients with COPD to treat chronic muscle pain, difficulty sleeping and breathlessness.

The study, led by St. Michael's Hospital of Unity Health Toronto, found that cannabinoids can contribute to negative respiratory health events in people with COPD, including hospitalization and death. COPD is a progressive lung disease that

causes difficulty breathing and chronic productive coughing, and can be associated with a variety of non-respiratory issues, like chronic muscle pain and insomnia.

"Cannabinoid drugs are being increasingly used by [older adults](#) with COPD, so it is important for patients and physicians to have a clear understanding of the side-effect profile of these drugs," says Dr. Nicholas Vozoris, lead author, a respirologist at St. Michael's and an associate scientist at the hospital's Li Ka Shing Knowledge Institute.

"Our study results do not mean that [cannabinoid drugs](#) should be never used among older adults with COPD. Rather, our findings should be incorporated by patients and physicians into prescribing decision-making. Our results also highlight the importance of favouring lower over higher cannabinoid doses, when these drugs actually do need to be used."

The study analyzed the health data of over 4,000 individuals in Ontario ages 66 years and older with COPD from 2006 to 2016. The data was equally split into two groups: older adults with COPD who were new cannabinoid users and older adults with COPD not using cannabinoids. Older adults in Ontario with COPD who were new cannabinoid users represented 1.1 percent of the data, which was made available by ICES.

Researchers observed particularly worse health outcomes among patients with COPD who were using higher doses of cannabinoids. Compared to non-users, new higher-dose cannabinoid users had a 178 percent relative increase in hospitalizations for COPD or pneumonia, and a 231 percent relative increase in all-cause death.

"Older adults with COPD represent a group that would likely be more susceptible to cannabinoid-related respiratory side-effects, since older adults less efficiently break down drugs and hence, [drug](#) effects can linger in the body for longer—and since individuals with COPD have pre-existing respiratory troubles and respiratory compromise," says Dr. Vozoris, who is also a scientist at ICES.

Researchers conducted a sub-analysis to explore what impact cannabinoid drugs versus opioid drugs had on respiratory outcomes among older adults with COPD, since [cannabinoid](#) drugs are often prescribed as an alternative to opioids to treat chronic pain. The research team did not find evidence to support that cannabinoids were a safer choice over opioids for older adults with COPD in so far as respiratory health outcomes.

**More information:** *Thorax* (2020). [DOI: 10.1136/thoraxjnl-2020-215346](#)

Provided by St. Michael's Hospital

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