

# CANNABIS SMOKING: IMMUNE SYSTEM AND RESPIRATORY SYSTEM EFFECTS

## CANNABIS

Cannabis is an annual, dioecious, flowering herb with staminate (male) and pistillate (female) flowers occurring on separate plants. Cannabis plants' glandular trichomes contain cannabinoids, terpenoids, and other compounds which have medical benefits. The term "hemp" is used to name the durable soft fiber from the Cannabis plant stem (stalk).



### IMMUNE SYSTEM

- Immune cells express CB2 receptors and probably CB1 receptors
- Endocannabinoids proposed as native modulators of immune functions through cannabinoid receptors
- Cannabinoids may affect immune responses and host resistance via perturbing balance of T helper Th1 pro-inflammatory vs Th2 anti-inflammatory cytokines

**Non-human evidence base for:**

Liver Injury, Rheumatoid Arthritis, Colitis, Multiple Sclerosis, Cancers, Other Inflammatory Disorders

**References:**

- Klein et al., 2003, Journal of Leukocyte Biology
- Cabral & Staab, 2005, Handbook of Experimental Pharmacology



### RESPIRATORY SYSTEM

- Substantial evidence of a statistical association between cannabis smoking and worse respiratory systems and more frequent episodes of chronic bronchitis
- No or insufficient evidence of an association between cannabis smoking and hospital admissions for COPD or asthma development or exacerbation
- Increased forced vital capacity (ie. how much air the lungs can hold)

**References:**

- National Academies of Science, 2017, The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research
- <https://www.health.harvard.edu/staying-healthy/pot-smokers-can-maybe-breathe-a-little-easier>



### MINIMIZE RISK

- Avoid childhood cannabis use since frequent and intensive use affects the developing brain
- High THC-content products are generally associated with higher risks of various mental and behavioral problem outcomes
- Given the evidence of CBD's attenuating effects on some THC-related outcomes, it is advisable to use cannabis containing high CBD:THC ratios

**References:**

- American Journal of Public Health, 2017, Lower-Risk Cannabis Use Guidelines: A Comprehensive Update of Evidence and Recommendations

**Sources:**

[en.wikipedia.org/wiki/Cannabis](https://en.wikipedia.org/wiki/Cannabis)  
[www.nap.edu/read/24625/chapter/1](http://www.nap.edu/read/24625/chapter/1)  
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