

# Cannabis and Cannabinoid Use in Patients with Systemic Lupus Erythematosus

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**Purpose:**

The use of cannabis and cannabinoids in systemic lupus erythematosus (SLE) is not well described. We performed a literature review and an environmental scan to better understand the prevalence and the effects of their use in SLE patients.

**Methods:**

We searched 6 databases (CINAHL, Cochrane, EMBASE, MEDLINE, Scopus, Web of Science), ClinicalTrials.gov, and American College of Rheumatology meeting abstracts, using the keywords cannabi\*/marijuana and rheumat\*/lupus/SLE, and all corresponding subject headings.

**Results:**

We identified 6 studies pertaining to cannabis and/or cannabinoid use in SLE patients: 3 case reports, 1 prospective cohort study, 1 cross-sectional study, and 1 ongoing clinical trial of JBT-101, a synthetic endocannabinoid receptor type-2 agonist.

Prevalence of cannabis use in SLE ranged from 7.8% to 30.4%. Users were more likely to report younger age, unemployment or disability, tobacco use, opioid use, non-adherence to medical therapy, and neuropsychiatric SLE.

None of the studies detailed reasons for use or measures of efficacy, however, reported preliminary results of the JBT-101 trial suggested efficacy in reducing pain.

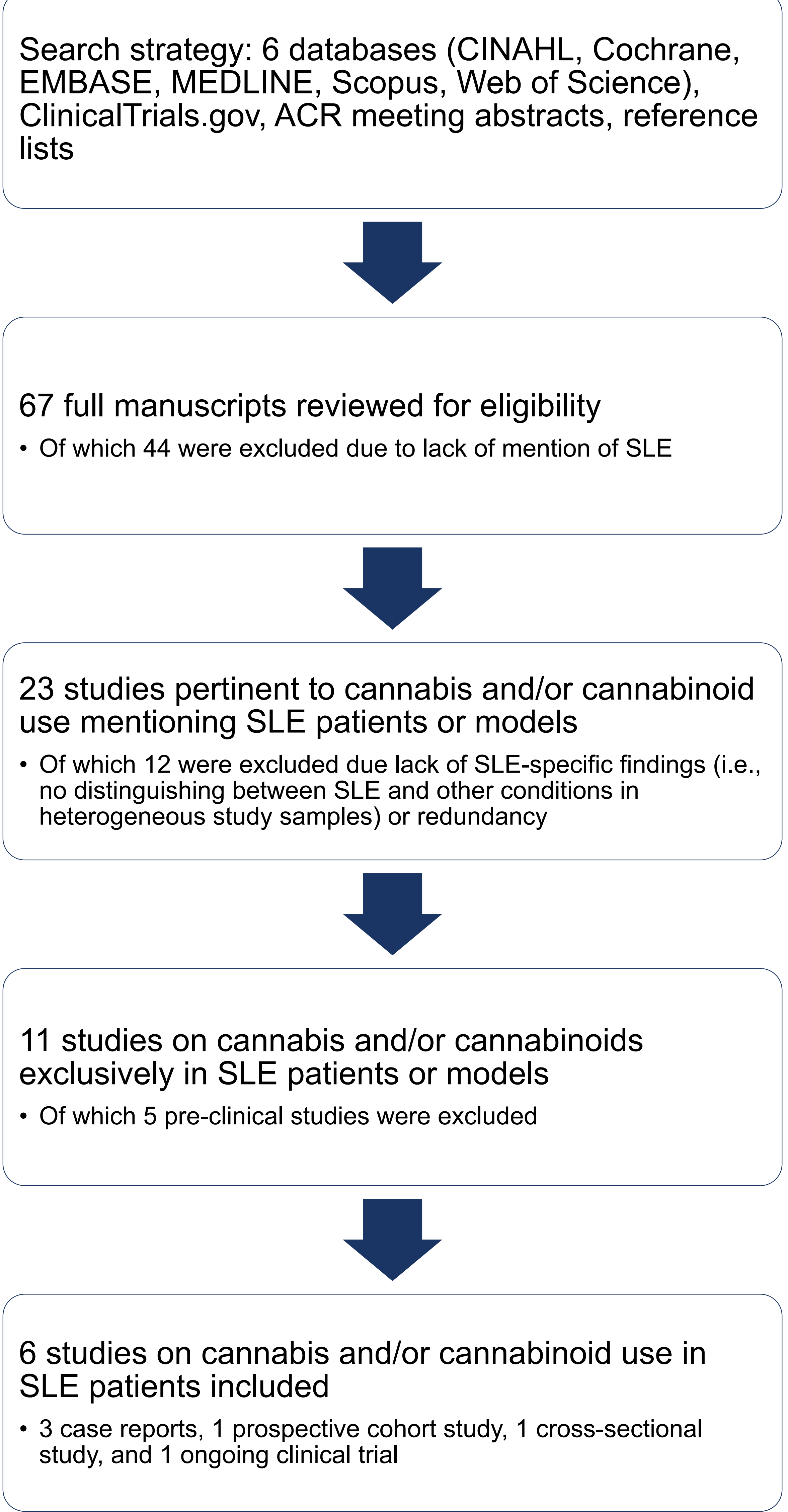
Three case reports described adverse events in cannabis users known for SLE: neuroretinal dysfunction; giant bullous emphysema; and rapid deterioration of neuropsychiatric SLE. A cohort study of 276 SLE patients also observed a significant increase in end-stage renal disease over a 5-year period in cannabis users.

There are few studies on the efficacy and safety of cannabis and cannabinoids in patients with SLE.

However, the proportion of SLE patients who use cannabis may be significant, and there are findings suggestive of harm.

Title, First Author, Year, Country	Study design, N	Pertinent Findings
Transient Retinal Dysfunctions After Acute Cannabis Use. Schwitzer, T., 2016, Vandoeuvre-les-Nancy, France	Case report	A 47-year-old SLE patient on chloroquine experienced transient retinal dysfunction after acute cannabis smoking.
Unexpected Etiology of Dyspnea: Vanishing Lung Syndrome. Conroy, M., 2019, USA	Case report	A 44-year-old patient with discoid SLE presented with giant bullous emphysema following years of daily cigar and marijuana smoking. Non-adherence to medications including hydroxychloroquine and budesonide-formoterol was also reported.
Systemic Lupus Erythematosus With Isolated Psychiatric Symptoms and Antinuclear Antibody Detection in the Cerebrospinal Fluid. Lungen, E. M., 2019, Germany	Case report	A 19-year-old patient presented with an exacerbation of neuropsychiatric SLE following 5 instances of cannabis consumption. Resolution of psychiatric symptoms and SLE-compatible CSF and laboratory findings was achieved with corticosteroid therapy.
Medical Nonadherence, Cannabis Use, and Renal Outcome in Systemic Lupus Erythematosus. Jalil, J. A., 2018, New Mexico, USA	Prospective cohort, 276 female SLE patients	Regular cannabis use was reported by 84 (30.4%) participants, with use defined by >2 smoked cannabis units per week. Cannabis use was associated with: neuropsychiatric SLE; analgesic opioid use; cigarette smoking; non-adherence to medical therapy; and after 5 years, a 53% increase in mortality and a 127% increase in end-stage renal disease.
Utilization of Complementary and Integrative Medicine Among Lupus Patients [Conference Abstract]. Warner, L., 2018, Florida, USA	Cross-sectional, 77 SLE patients	Marijuana use was reported by 6 (7.8%) survey participants.
A Phase 2, Double-blind, Randomized, Placebo-controlled Multicenter Study to Evaluate Efficacy, Safety, and Tolerability of JBT-101 in Systemic Lupus Erythematosus (ALE09). Corbus Pharmaceuticals Inc., December 2017 – December 2020, USA	Phase II clinical trial, 100 SLE patients	In progress. Reduction in inflammatory pain as a preliminary finding was reported in the corresponding article: "Ajulemic acid: potential treatment for chronic inflammation", authored by a co-founder of Corbus Pharmaceuticals (Burstein, 2018).

Flow diagram.



**References:**

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