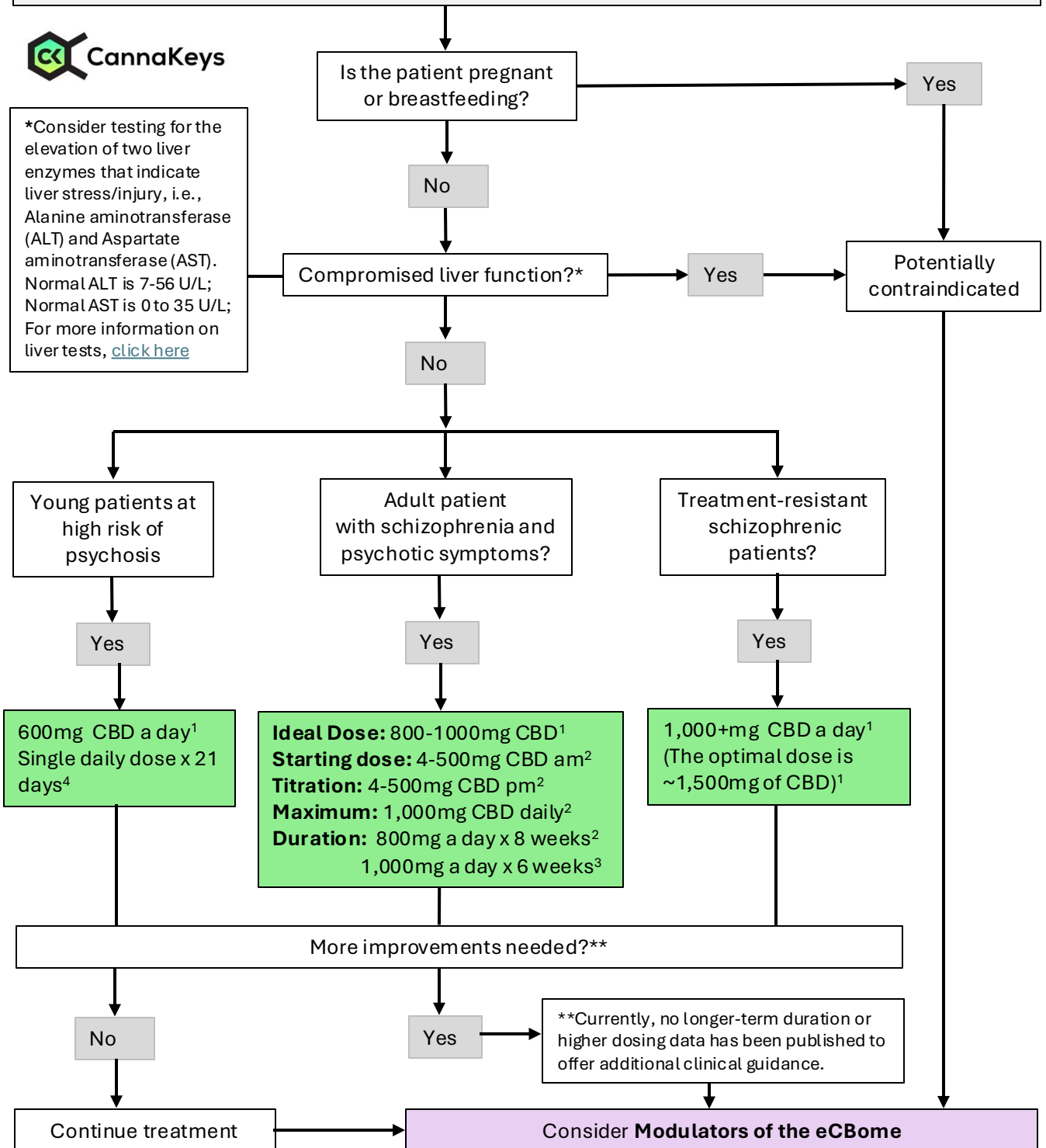


Schizophrenia Screening Process & Treatment Protocol



*Consider testing for the elevation of two liver enzymes that indicate liver stress/injury, i.e., Alanine aminotransferase (ALT) and Aspartate aminotransferase (AST). Normal ALT is 7-56 U/L; Normal AST is 0 to 35 U/L; For more information on liver tests, [click here](#)



References:

1. [J. Maj et al., 2024. Cannabidiol Therapy for Comorbid Schizophrenia and Addiction: A Guide for Clinical Practice](#)
2. [F. M. Leweke et al., 2012](#)
3. [P. McGuire et al., 2017](#)
4. [S. Bhattacharyya et al., 2024](#)

Schizophrenia



Ensemble Effect and Modulators of the eCBome for Schizophrenia

Other cannabinoids/acid forms

Δ^9 -Tetrahydrocannabivarin (THCV): The authors of a pre-clinical trial conducted on rodents concluded that THCV mitigates some of the negative, cognitive, and positive symptoms of schizophrenia via enhancing serotonin (5-HT_{1A}) receptor signaling ([M. G. Casio et al., 2015](#)). However, the reader is reminded that, unlike THC, THCV is considered an antagonist at CB1 ([J. McPartland et al., 2015](#)) and, as such, may induce dose-dependent dysphoria that may worsen psychiatric symptoms.

Terpenes

Pinene: A pre-clinical trial found that inhaling α -pinene has the potential to mitigate signs and symptoms of schizophrenia ([H. Ueno et al., 2019](#)).

Lipidome

Omega-3 supplementation reduced the occurrences of psychotic episodes and improved both positive and negative symptoms in adolescents at high risk for psychosis ([M. Hsu et al., 2020](#)). A double-blind placebo-controlled trial conducted on fifty inpatients diagnosed with violent schizophrenia utilizing fish oil containing 360 mg DHA and 540 mg EPA resulted in a decrease in violence when compared to the placebo group ([Y. Qiao et al., 2018](#)).

Nutraceuticals

Palmitoylethanolamide (PEA): Anandamide (AEA) levels are low in patients with schizophrenia. PEA is an analog of AEA, which may explain why 600 mg N-palmitoylethanolamide x 2 daily as an adjunct with risperidone significantly improved negative symptoms in this patient population ([A. Salehi et al., 2022](#)).

Vitamin D: Lack of vitamin D is prevalent in patients with schizophrenia. Supplement of vitamin D has a potentially therapeutic effect in psychotic disorders ([M. Nerhus et al., 2017](#)). The FDA's daily recommended vitamin D intake is 20mcg per day, i.e., 800IU (1mcg of vitamin D is equal to 40IU).

Dietary considerations

Keto Diet: A pilot study found that a ketogenic diet improved metabolic and psychiatric health in patients with schizophrenia ([S. Sethi et al., 2024](#)).

Gluten-Free Diet was well tolerated and produced improvements in schizophrenia symptoms ([J. Jackson et al., 2013](#)).

Mind-Body Medicine

Exercise: Ninety minutes of moderate-to-vigorous exercise per week resulted in a significant reduction of psychiatric symptoms as well as improved functioning, co-morbid disorders, and neurocognition ([J. Firth et al., 2015](#)).

Yoga: A systematic review of clinical trials found that yoga can be a useful regimen to reduce positive and negative symptoms of schizophrenia ([D. Vancampfort et al., 2012](#)).

Microbiome

Pre- and probiotics (from fermented foods, i.e., yogurt, sauerkraut, kimchi, miso): While the understanding of the microbiome in the treatment context of schizophrenia is in its infancy, early data suggest a complex interplay between autoimmunity, GI activity, and schizophrenia ([E. Severance et al., 2016](#)). A review of the relevant scientific literature suggests that dietary supplementation with probiotics or prebiotics may mitigate some symptoms of schizophrenia ([U. Ansari et al., 2024](#)). A four-week administration of *Bifidobacterium breve* A-1 resulted in fewer negative symptoms and a reduction in anxiety and depression ([R. Okubo et al., 2019](#)).