



Medical Marijuana Program



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Petition to Add a Medical Condition, Medical Treatment or Disease to the List of Debilitating Conditions

INSTRUCTIONS: Please complete each section of this Petition and attach all supportive documents. All attachments must include a title referencing the Section letter to which it responds. Any Petition that is not fully or properly completed will not be submitted to the Board of Physicians.

Please Note: Any individually identifiable health information contained in a Petition shall be confidential and shall not be subject to disclosure under the Freedom of Information Act, as defined in section 1-200, Connecticut General Statutes.

Section A: Petitioner’s Information

[Redacted area for Section A: Petitioner’s Information]

Section B: Medical Condition, Medical Treatment or Disease

Please specify the medical condition, medical treatment or disease that you are seeking to add to the list of debilitating medical conditions under the Act. Be as precise as possible in identifying the condition, treatment or disease.

[Redacted area for Section B: Medical Condition, Medical Treatment or Disease]

Section C: Background

Provide information evidencing the extent to which the condition, treatment or disease is generally accepted by the medical community and other experts as a valid, existing medical condition, medical treatment or disease.

- Attach a comprehensive definition from a recognized medical source.
- Attach additional pages as needed.

[Redacted area for Section C: Background]

Section D: Negative Effects of Current Treatment

If you claim a treatment, that has been prescribed for your condition causes you to suffer (i.e. severe or chronic pain, spasticity, etc.), provide information regarding the extent to which such treatment is generally accepted by the medical community and other experts as a valid treatment for your debilitating condition.

- Attach additional pages as necessary.
- If not applicable, please indicate N/A.

[Redacted area for Section D: Negative Effects of Current Treatment]



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Section E: Negative Effects of Condition or Treatment

Provide information regarding the extent to which the condition or the treatments thereof cause severe or chronic pain, severe nausea, spasticity or otherwise substantially limits one or more major life activities.

- Attach additional pages as necessary.

Section F: Conventional Therapies

Provide information regarding the availability of conventional medical therapies, other than those that cause suffering, to alleviate suffering caused by the condition or the treatment thereof.

- Attach additional pages as necessary.

Section G: General Evidence of Support for Medical Marijuana Treatment

Provide evidence, generally accepted among the medical community and other experts, that supports a finding that the use of marijuana alleviates suffering caused by the condition or the treatment thereof.

- Attach additional pages as necessary.

Section H: Scientific Evidence of Support for Medical Marijuana Treatment

Provide any information or studies regarding any beneficial or adverse effects from the use of marijuana in patients with the condition, treatment or disease that is the subject of the petition.

- Supporting evidence needs to be from professionally recognized sources such as peer reviewed articles or professional journals.
- Attach complete copies of any article or reference, not abstracts.

Section I: Professional Recommendations for Medical Marijuana Treatment

Attach letters in support of your petition from physicians or other licensed health care professionals knowledgeable about the condition, treatment or disease at issue.



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Section J: Submission of Petition

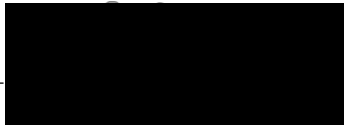
In the event you are unable to answer or provide the required documentation to any of the Sections above (excluding Section D); provide a detailed explanation indicating what you believe is “good cause” for not doing so.

- Attach additional pages as necessary.

I hereby certify that the above information is correct and complete.

My signature below attests that the information provided in this petition is true and that the attached documents are authentic. I formally request that the commissioner present my petition and all supporting evidence to the Board of Physicians for consideration.

Signature:



Date Signed:

Section B: Medical Condition, Medical Treatment or Disease

Autism spectrum disorder (ASD)

Section C: Background

Autism spectrum disorder (ASD) is a neurodevelopmental condition marked by enduring challenges in social communication and interaction, coupled with the manifestation of limited and repetitive behavioral patterns, interests, or activities (Silva, et al., 2022)

According to the Centers for Disease Control and Prevention (CDC), as of their latest data in 2023, approximately 1 in 36 children in the United States are diagnosed with ASD. On average, 1 in 45 adults in the U.S have autism, affecting all racial and ethnic groups. This prevalence has shown an increasing trend over the years.

The symptoms of ASD vary widely but commonly include challenges in social communication, difficulty forming relationships, repetitive behaviors, and intense focus on specific interests. Individuals with ASD may also display sensory sensitivities, communication difficulties, and difficulty adapting to changes in routines (Karhson et al., 2018).

The potential efficacy of cannabis in treating Autism Spectrum Disorder (ASD) lies in its interaction with the endocannabinoid system (ECS). The ECS is a complex network of lipid-signaling pathways in the human brain that regulates various functions. Research from Stanford University reveals that children with ASD have lower plasma levels of anandamide, an endocannabinoid that mimics THC in the body. Anandamide is involved in learning, memory, social functioning, and anxiety relief (Melis, Greco, & Tonini, 2014).

The deficit of anandamide in individuals with ASD, as documented by the research, suggests a dysregulation in the ECS system. The ECS is known to play a crucial role in maintaining balance and homeostasis in the body. Given this understanding, it becomes plausible that cannabinoid-rich botanical extracts from cannabis could be beneficial in targeting the pathology of ASD and alleviating associated symptoms (Karhson et al., 2018).

The potential of cannabis in ASD treatment is rooted in its ability to modulate the ECS, thereby addressing dysregulated pathways. While further research is needed to establish the specific mechanisms and optimal dosages, the existing evidence points towards the therapeutic potential of cannabis in mitigating the complexities of ASD and improving the quality of life for individuals affected by the disorder. (Rice, et al., 2023).

Furthermore, a total of 17 states and territories, including Colorado, Delaware, Georgia, Iowa, Louisiana, Michigan, Missouri, Maine, Minnesota, Nevada, New Mexico, North Dakota, Pennsylvania, Rhode Island, Utah, Texas, Illinois, and the territory of

Puerto Rico, have officially designated autism as a qualifying condition for their medical cannabis programs. This includes pediatric patients. Additionally, seven other states and territories—California, Florida, Oklahoma, Oregon, Maryland, Massachusetts, and Washington D.C.—have acknowledged autism as a debilitating condition, permitting doctors to recommend medical cannabis. It seems only logical that Connecticut would follow suit in approving ASD as a qualifying medical condition.

Section E: Negative Effects of Condition or Treatment

The impact of Autism Spectrum Disorder (ASD) and its associated cofactors on individuals' developmental trajectories can have enduring effects from childhood into adulthood. During childhood, the social challenges, communication difficulties, and sensory sensitivities that often accompany ASD can impede the formation of relationships, hinder language development, and contribute to heightened stress levels. The psychological trauma associated with the societal stigma of autism, coupled with co-occurring conditions like anxiety and depression, can result in feelings of isolation, inadequacy, and an increased risk of suicidality (Stolar et al., 2022)

As individuals with ASD transition into adulthood, the challenges persist, influencing various aspects of their lives. Continued difficulties in social interactions may impact career opportunities and friendships, leading to potential employment challenges. The long-term effects of dealing with ASD-related challenges and co-occurring conditions can contribute to persistent mental health issues, affecting overall well-being (Van Heijst, & Geurts, 2015). However, access to early interventions, therapeutic support, and a supportive community and family environment can play a crucial role in mitigating the impact of psychological trauma. Medical cannabis has a proven safety profile and effectiveness in many conditions that are co-morbidities of ASD, therefore medical cannabis should be an available therapy for ASD patients.

Section F: Conventional Therapies

In the current landscape of Autism Spectrum Disorder (ASD) treatment, a diverse array of conventional therapies is employed, with a board of physicians often overseeing their implementation. Behavioral interventions, such as Applied Behavior Analysis (ABA), are widely utilized to address social and communication challenges. Speech therapy plays a pivotal role in enhancing communication skills, while occupational therapy focuses on improving adaptive behaviors. These conventional approaches aim to target specific deficits associated with ASD and are often tailored to individual needs.

Alternative therapies, including music therapy, art therapy, and sensory integration therapy, are increasingly recognized for their potential benefits in addressing sensory sensitivities and promoting overall well-being. On the pharmacological front,

medications like antipsychotics, selective serotonin reuptake inhibitors (SSRIs), and stimulants may be prescribed to manage specific symptoms such as anxiety, depression, or hyperactivity.

The core symptoms and co-morbidities associated with autism spectrum disorders (ASD) affect daily living and quality of life. Existing pharmacological interventions are only able to attenuate some related symptoms but are unable to address the underlying etiologies associated with ASD (Agarwal, Burke, & Maddux, 2019). Please see below for a summary of the most referenced pharmaceuticals being used in the management of ASD and co-morbidities as well as the list of profound negative side effects that is associated with each pharmaceutical medication (Aishworiya, Valica, Hagerman, & Restrepo, 2022).

Selective Serotonin Reuptake Inhibitors (SSRIs):

Goals: SSRIs, such as fluoxetine and sertraline, are often prescribed to address symptoms of anxiety, obsessive-compulsive behaviors, and depression commonly observed in individuals with ASD.

Methodologies: These medications work by increasing the levels of serotonin in the brain, which may help regulate mood and alleviate symptoms associated with co-occurring mood disorders.

Suicidality Risk: SSRIs may be associated with an increased risk of suicidal thoughts, particularly in children and adolescents. Close monitoring is essential during the initial phases of treatment.

Side Effects: Common side effects include gastrointestinal issues, sleep disturbances, and potential weight changes.

Atypical Antipsychotics:

Goals: Atypical antipsychotics like risperidone and aripiprazole are prescribed to manage irritability, aggression, and repetitive behaviors in individuals with ASD.

Methodologies: These medications act on dopamine receptors in the brain, helping to stabilize mood and reduce disruptive behaviors. However, they may be associated with side effects such as weight gain and metabolic changes.

Metabolic Risk: Atypical antipsychotics may lead to weight gain, dyslipidemia, and increased risk of metabolic syndrome. Regular monitoring of weight and metabolic parameters is crucial.

Side Effects: These medications can cause Extrapyramidal Symptoms or movement disorders including tremors, and rigidity.

Stimulant Medications:

Goals: Stimulant medications like methylphenidate or amphetamine derivatives are sometimes prescribed to manage hyperactivity and attention-related issues in individuals with ASD.

Methodologies: Stimulants work by increasing the levels of certain neurotransmitters, such as dopamine, in the brain. Their use in ASD is often associated with comorbid attention deficit hyperactivity disorder (ADHD).

Cardiovascular Risk: Stimulants can increase heart rate and blood pressure. Individuals with pre-existing cardiovascular conditions may be at risk.

Side Effects: Stimulants can disrupt sleep patterns, leading to insomnia.

Anticonvulsants:

Goals: Anticonvulsant medications like valproic acid or lamotrigine may be prescribed to address seizures, which are more prevalent in individuals with ASD compared to the general population.

Methodologies: By stabilizing electrical activity in the brain, anticonvulsants aim to reduce the frequency and severity of seizures, which can be a significant concern in some individuals with ASD.

Hepatotoxicity Risk: Some anticonvulsants may pose a risk of liver toxicity, necessitating regular liver function tests.

Side Effects: Serious skin reactions, although rare, are associated with certain anticonvulsant medications.

While there is empirical support for the use of certain medications in managing specific symptoms associated with ASD, it's crucial to acknowledge that the evidence base is not as robust as for some other medical conditions. Additionally, the effectiveness of pharmacological interventions in ASD can vary widely among individuals (Persico, et al., 2021).

For instance, a systematic review and meta-analysis published in the "Journal of the American Academy of Child & Adolescent Psychiatry" (Ching et al., 2015) explored the efficacy of various medications in treating symptoms of ASD. The findings highlighted modest evidence supporting the use of risperidone and aripiprazole for reducing irritability, aggression, and repetitive behaviors.

The current pharmacological therapies widely accepted for managing Autism Spectrum Disorder (ASD) are associated with significant side effects, prompting a critical evaluation of alternative approaches (Persico, et al., 2021). While research on the use of medical marijuana in ASD is limited due to its Schedule 1 status, recent attempts to reclassify it to Schedule 3 have shown promise. This potential reclassification could facilitate more extensive research and provide more insight into how medical cannabis can improve the overall quality of life for individuals with ASD.

However, today countless children and adults are suffering from a complex neurodevelopmental disorder that create life-long physical and psychosocial stress on the individuals diagnosed and their families (Simonoff, et al., 2008).

Section G: General Evidence of Support for Medical Marijuana Treatment

Scientific exploration into the potential benefits of medical marijuana for treating symptoms associated with Autism Spectrum Disorder (ASD) is an evolving field. While dedicated research on ASD-specific studies is still developing, existing evidence from approved qualifying conditions, such as PTSD, IBS, chronic pain, epilepsy, and migraines, demonstrates the efficacy and safety of medical marijuana. These conditions often share similar attributes or act as defined cofactors associated with ASD.

Numerous well-documented studies have highlighted the positive impact of medical marijuana in alleviating symptoms and improving the quality of life for individuals with conditions like PTSD, chronic pain, and epilepsy. The established safety and efficacy in these areas provide a foundation for a lateral move, suggesting that the benefits observed in these conditions could extend to ASD (El-Sukkari, et al., 2023).

By addressing common morbidities and cofactors associated with ASD, such as anxiety, depression, and insomnia, medical marijuana has the potential to contribute to a decrease in associated challenges. As individuals gain access to a treatment that has demonstrated effectiveness in improving mental well-being and overall functioning, there is an optimistic outlook for enhanced social integration and socioeconomic growth. Notably, the potential for a safer side effect profile compared to many existing pharmacological therapies adds to the appeal of medical marijuana as a viable option for individuals with ASD (Chesney, et al., 2020). As the research base expands and more individuals benefit from this treatment, the trajectory suggests a positive impact on the quality of life, not only for those with ASD but also for their families and caregivers (Larsen & Shahinas, 2020).

Scientific evidence supporting the safety and efficacy of cannabis, for conditions like anxiety, depression, and post-traumatic stress disorder (PTSD) is growing. For instance, a study published in the "Journal of Clinical Psychology" (Shannon et al., 2019) investigated the use of CBD for anxiety and sleep in a clinical population. The findings suggested that CBD exhibited anxiolytic properties and improved sleep quality without adverse effects.

Cannabis, known for its relatively safe side effect profile, emerges as a promising alternative. Unlike traditional pharmacological therapies for ASD, cannabis may address not only core symptoms but also the psychological components associated with psychosocial stressors such as bullying, segregation, and isolation. A study in the

"Journal of Autism and Developmental Disorders" (Mazurek et al., 2013) emphasized the detrimental impact of bullying on the mental health of individuals with ASD.

Moreover, the potential of medical marijuana to enhance psychological well-being opens avenues for individuals with ASD to pursue education and careers, contributing positively to society. Research suggests that medical marijuana, when administered under the guidance of a physician, offers relief from symptoms and improves the psychosocial functioning of individuals with ASD (Hacohen, et al., 2022).

The existing pharmacological and behavioral interventions face limitations in effectively treating a significant number of children exhibiting ASD-related symptoms. This is attributed to either a lack of efficacy or the presence of adverse side effects that impede daily functioning (Blaxill, Rogers, & Nevison, 2022). Consequently, there is a pressing demand for focused efforts in clinical research to formulate therapies that are both effective and safer for addressing the comorbid symptoms associated with ASD. Although controlled studies providing evidence on the role of medicinal *Cannabis sativa* in managing ASD in children are scarce, a substantial body of evidence from preclinical studies highlights the positive impact of cannabinoids on various biological responses, particularly neurodevelopmental processes (El-Sukkari, et al., 2023).

Additionally, recent observational studies offer emerging evidence suggesting that the synergistic and entourage pharmacological effects of *Cannabis sativa* derivatives may contribute to the improvement of ASD-related symptoms and comorbidities in children (Barchel, et al., 2019).

In conclusion, the evolving landscape of medical marijuana research, combined with the existing evidence on its safety and efficacy for related conditions, makes a compelling case for considering it as a qualifying medical diagnosis for ASD treatment. By addressing core symptoms and psychological stressors, medical marijuana may offer a safer and effective alternative to conventional pharmacological therapies, promoting the overall well-being and functional capacity of individuals with ASD. The potential reclassification to Schedule 3 could pave the way for more extensive research, shedding light on the full spectrum of benefits that medical marijuana will bring to those affected by ASD.

Section H: Scientific Evidence of Support for Medical Marijuana Treatment

Scientific research exploring the potential benefits of medical marijuana in treating symptoms associated with Autism Spectrum Disorder (ASD) has gained attention in recent years. While the field is still evolving, several studies suggest promising outcomes, particularly in addressing specific challenges faced by individuals with ASD.

One avenue of investigation involves the role of cannabinoids, the active compounds in marijuana, in managing behavioral challenges associated with ASD. A study published in the journal "Frontiers in Neurology" (Aran et al., 2019) conducted a randomized, double-blind, placebo-controlled trial on the use of cannabidiol (CBD), a non-psychoactive compound in marijuana. The trial involved children with ASD, and the results indicated a significant improvement in behavioral outbreaks, anxiety levels, and communication difficulties in the group receiving CBD compared to the placebo group (Hacohen, et al., 2022).

Additionally, research has explored the potential of medical marijuana in alleviating comorbid conditions often associated with ASD, such as anxiety and sleep disturbances. A study published in "Journal of Autism and Developmental Disorders" (Wei et al., 2019) investigated the impact of medical cannabis on anxiety and sleep patterns in individuals with ASD. The findings suggested a reduction in anxiety levels and improvements in sleep duration and quality among participants.

In the study conducted by Stolar et al. (2022) and published in Frontiers in Pharmacology, a novel approach to treating comorbid symptoms of Autism Spectrum Disorder (ASD) was explored. The researchers utilized a combination of Cannabidiol (CBD) and Tetrahydrocannabinol (THC) and conducted an interim analysis focusing on biochemical safety. The study reveals favorable results, positioning the CBD-THC combination as a safe and effective option for addressing comorbid symptoms associated with ASD in children. This innovative approach opens new avenues for alternative interventions, emphasizing the potential benefits and safety considerations of medical cannabis in the management of ASD.

Some studies showed that cannabis products reduced the number and/or intensity of different symptoms, including hyperactivity, attacks of self-mutilation and anger, sleep problems, anxiety, restlessness, psychomotor agitation, irritability, aggressiveness perseverance, and depression. Moreover, they found an improvement in cognition, sensory sensitivity, attention, social interaction, and language. The most common adverse effects were sleep disorders, restlessness, nervousness and change in appetite (Silva, et al., 2022).

Section I: Professional Recommendations for Medical Marijuana Treatment

I am writing to bring to your attention the profound impact that recognizing Autism Spectrum Disorder (ASD) as a qualifying medical condition for cannabis use can have, drawing from both my personal experience and my role as an educator in the medical cannabis field.

My name is Chyenne Giarnese and I have been practicing as a RN since 2015 and an APRN since 2019, with experience in mental health, addiction, chronic & acute care

management, hormonal, functional & holistic medical practice. The purpose of this petition is to advocate for the inclusion of ASD as a qualifying medical condition for cannabis use in Connecticut.

Having been diagnosed with ASD in my early 20s, my journey with medical cannabis has been transformative. As a cardholder for MALS/PTSD, cannabis played a pivotal role in facilitating neuroplasticity, enabling the application of therapeutic skills such as Dialectical Behavior Therapy (DBT) and Cognitive Behavioral Therapy (CBT). The profound impact on my life, including overcoming communication and sensory processing difficulties, has been instrumental in my healing journey.

In my capacity as an educator and as a Nurse Practitioner, I strive to raise awareness about the endocannabinoid system. Exploring the scientific underpinnings, I have found that individuals with ASD often exhibit significantly lower levels of serum endocannabinoids. This knowledge has motivated my commitment to educating patients and healthcare providers about the endocannabinoid system's role as the body's telecommunications center, harmonizing cellular vibrations and patterns for optimal functioning.

Seventeen states have already recognized ASD as a qualifying medical condition. Drawing inspiration from these pioneers, I urge Connecticut to follow suit. This recognition would provide better access to individuals grappling with the symptoms associated with ASD, fostering a positive impact on their well-being.

I respectfully request the board's consideration in recognizing ASD as a qualifying medical condition for cannabis use in Connecticut. By taking this step, we can contribute to the evolving landscape of medical cannabis and its potential to enhance the lives of individuals dealing with ASD-related challenges.

In conclusion, I appreciate your time and consideration of this petition. The inclusion of ASD as a qualifying medical condition aligns with the progressive stance taken by other states, positioning Connecticut as a leader in advocating for the well-being of individuals with ASD.

References

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