TBS 5.10.2017
CBD (Cannabidiol)

Dr. med. André Kuntz

CBD SHOP

CBD BLÜTEN

CBD HARZ

CBD PRODUKTE

CBD STECKLINGE

CBD HANFSAMEN

CBD ZUBEHÖR

Green Passion Lemon Haze

CBD: 16 %
THC: 0.7 %
Anbauart: Indoor

7.62g CHF 100.00

CHF 100.00

In den Warenkorb

inkl. MwSt., zzgl. Versandkosten

✔ **verfügbar** ◑ **3 - 5 Tage Lieferzeit[1]**

Erfahrungen & Bewertungen

Purple Haze Tinktur 5.25% CBD PG

Die Tinktur besteht aus einem aufgereinigten ethanolischen Extrakt, welches in Propylenglykol und Ethanol gelöst ist. Somit haben wir eine Tinktur welche nicht auf Öl basiert. Dies macht sie besonders lange haltbar und gut verträglich.

Der CBD Gehalt der Tinktur ist eingestellt auf 5.25%. Somit enthält jeder Tropfen 1.5 mg CBD. Der THC Gehalt liegt unter 0.2%.

10 ml CHF 47.90

CHF 47.90

In den Warenkorb

inkl. MwSt., zzgl. Versandkosten

✔ verfügbar **5 - 8 Tage Lieferzeit[1]**

Produits/Produkte

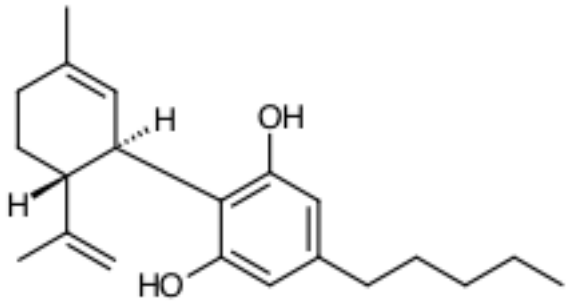
- Les produits sont vendus dans un nombre croissant de magasins / Produkte in steigender Anzahl von Geschäften /online-Läden erhältlich
- **Cannabis fumable** (souvent entre 5-20% CBD et 0,3-0,7% THC), Cannabis rauchbar (oft zw. 5-20% CBD und 0,3-0,7 % THC)
- Infusions, exraits, gouttes, teintures, baumes, huiles , capsules, liquieeds
- Tees, Tropfen, öle, Kapseln

Utilisation / Nutzung

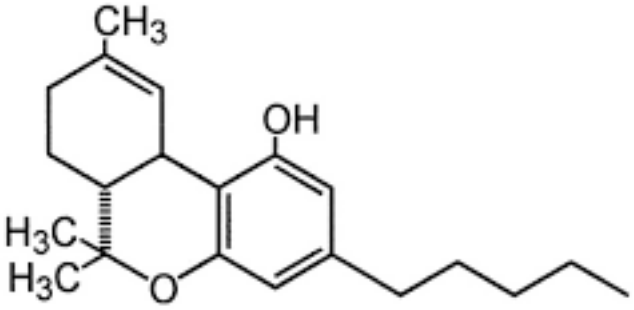
- Cosmétiques /Kosmetika
- Denrées alimentaires / Nahrungsmittelzusatz
- Fleurs de cannabis à faible teneur en THC proposées notamment comme succédané de tabac destiné aux fumeurs
- Tabakersatz


5o gr.
Ph.Helv.IV
HASCHISC

- CBD=Cannabidiol
- Un des> 80 cannabinoides dans le cannabis / eines von > 80 Cannabinoiden im Cannabis
- Principal cannabinoide après le THC (tetra hydrocannabinol)/nach THC das wichtigste Cannabinoid
- Mais contrairement au THC sans effet psychotrope/im Gegensatz zu THC weitgehend ohne psychotropen Effekt



Cannabidiol



Δ-9-tetrahydrocannabinol (THC)

Cannabinoid-Rezeptoren

- CB1-Rezeptoren
- CB2-Rezeptoren

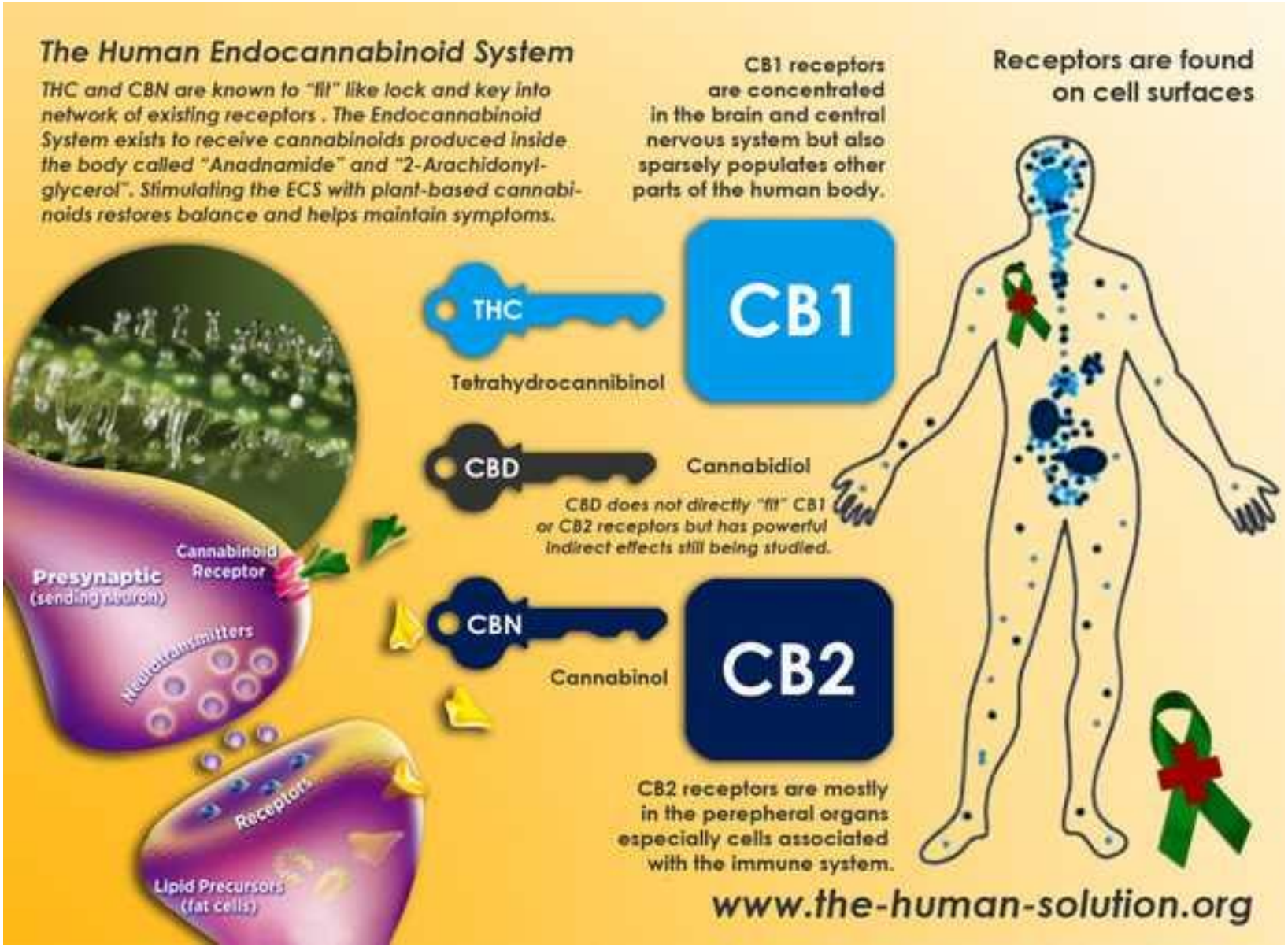
- PPAR-Gamma
  (Peroxisom-Profilerator-aktivierter Rezep.)
- Vanilloid-Rezeptoren

Endocannabinoide

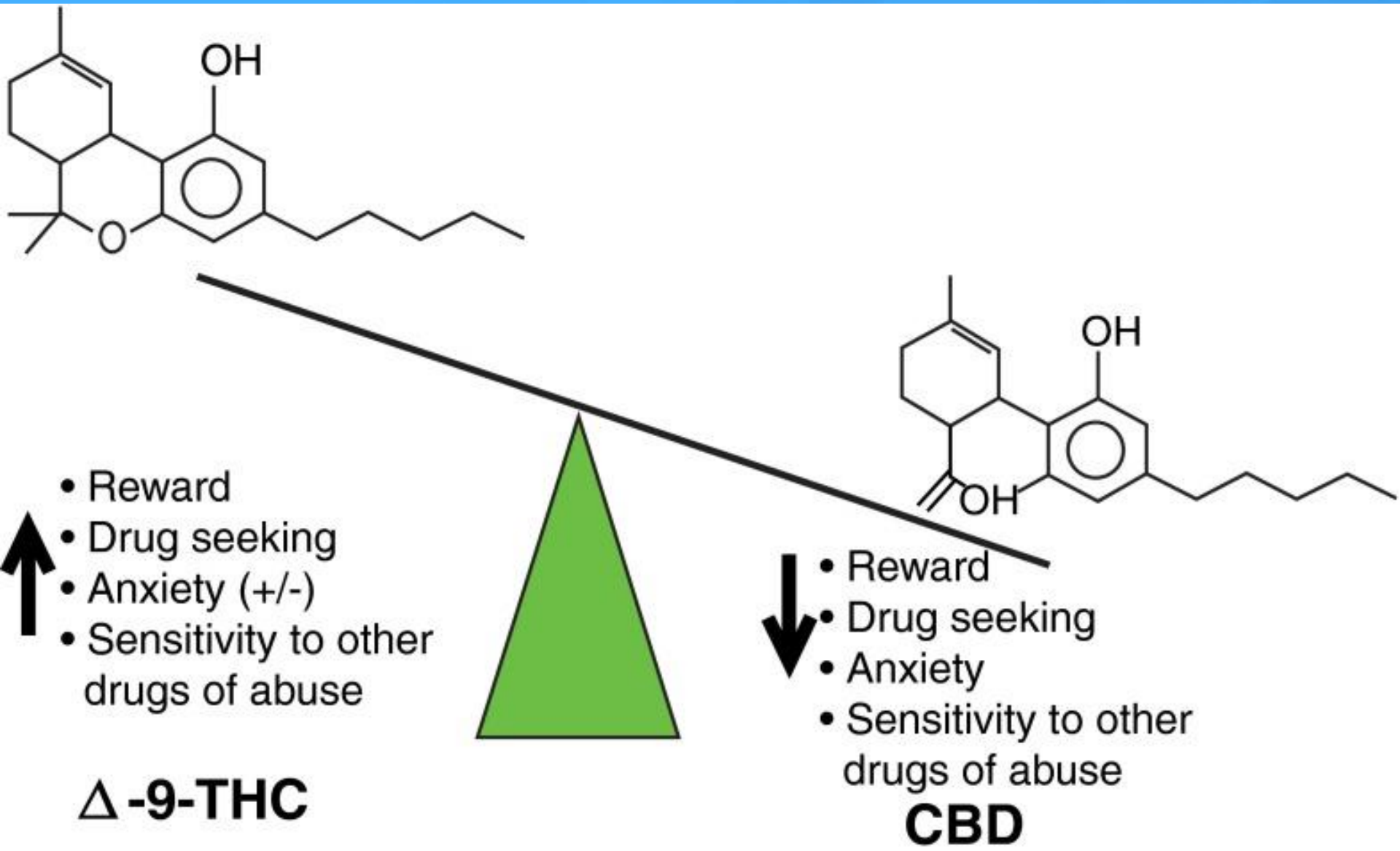
- Anandamid
  (Arachidonylethanolamid,AEA)
- 2-Arachidonyl-Glycerol
  (2-AG)

Cannabinoide

- THC
- CBD
- Cannabigerol (CBG)
- Cannabinol (CBN)
- Cannabichromen (CBC)
- etc.



http://theleafonline.com/c/science/2014/06/cannabinoid-profiles-meet-cb-receptors/



https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4604178/figure/Fig2/

Metabolisme/Metabolismus Interactions/Interaktionen

THC/CBD: métabolisme principal hépatique /Abbau vor allem in der Leber (v.a. CYP 2Cs 3s & CYP3A4)
Inhibiteurs de/Inhibitoren von: CYP1A1, 1A2, 1B1 (THC &CBD)
CBD: CYP2C19 (Pantoprozol…) & CYP3A4 (Makrolidantibiotika: Clarthromycnin, Erythromycin..)
http://www.thblack.com/links/RSD/8_drug_interactions_table.pdf

Arrelano et al., 2017. Neuropsychiatric and General Interactions of Natural and Synthetic Cannabinoids with Drugs of Abuse and Medicines.
CNS Neurol Disord Drug Targets. 2017;16(5):554-566.
doi:10.2174/1871527316666170413104516.

Effet/Wirkungen

- **Pas d'effet psychotrope / kein bzw. Wenig psychotroper Effekt**
- **Pas de sentiment d'ivresse / Kein Rauschgefühl**
- **Légère détente** (potentiellement du à la teneur résiduel de THC) / leichte Entspannung
- Effets antioxydants, antienflammatoire, antiépileptique, anti-vomitifs, anxiolytiques, antidépresseurs
  - Antioxydantien, anti-entzündlich, antiepiletisch, gegen Brechreiz, anxiolytisch, antidepressiv
- Relativement peu d'effets secondaires voir aucun
  - Relativ wenig BW bekannt

Risques/Risiken

- **Mal connus /wenig bekannt**
- **Déconseillé pendant la grossesse** (susceptible de réduire la fonction protectrice du placenta et de modifier ses propriétés) /bei Schwangerschaft nicht ratsam
- Lorsqu'on fume du cannabis à faible teneur en THC mélangé à du tabac, on s'expose à un risque de dépendance à la nicotine / Risiko der Nikotinabhängigkeit bei häufigem Gebrauch
- Même fumé pur, le cannabis à faible teneur en THC libère, lors de sa combustion, des substances nocives pour la santé
  - Selbst pur geraucht, werden beim Rauchen toxische Stoffe freigesetzt

Statut juridique / Rechtslage

- **Fleurs de chanvres** <1% THC, mais avec CBD élevée, pas soumises à la loi des stupéfiants / < 1% THC nicht dem Betäubungsmittelgesetz unterstellt
- **Considérée comme succédanée de tabac**
  - **Gehört zu den Tabakprodukten**
- **Pas possible de distinguer directeent de Cannabis légal du cannabis illégal**, la police saisi en général le cannabis à faible teneur en THC et le fait analyser en laboratoire- restitué lors que'il ne s'agit pas de Cannabis illégale
  - Nicht direkt unterscheidbar von THC-haltigem Cannabis- Laboranalyse notwendig. Bei Polizeikontrolle Laboruntersuchung
- Cigarettes électroniques non autorisées / elektronische Zigaretten mit CBD nicht erlaubt

Circulation routière/Strassenverkehr

- Effet probablement négligeable / wahrscheinlich kleiner Effekt
- Pourtant: les faibles teneurs de THC peuvent mener à un dépassement du taux sanguin de THC autorisé (1,5 microgramme de THC par litre de sang)
  - Aber: THC kann über die erlaubte Grenze ansteigen
- Par principe déconseillé de conduire un véhicule après avoir consommé du cannabis
  - Deshalb wird vom Führen eines Kraftfahrzeugs abgeraten

Prévention / Prävention

- Enfants et adolescents ne devraient pas consommer de produits contenant du CBD
  - Kinder und Jugendliche sollten kein CBD rauchen
- Incertain si le cannabis à faible teneur en THC est susceptible d'initier à la consommation classique de tabac ou de cannabis probablemet au risque, mais actuellement pas encore claire.
  - Unklar, ob Nikotin oder Cannabiskonsum daduch stimuliert wird
- On manque d'études sur les effets et risques à long terme
  - Wenig Studien über Langzeitrisiken

- Liens/links:
  - D: http://www.suchtschweiz.ch/fileadmin/user_upload/DocUpload/Factsheet_CBD_D.pdf
  - F: http://www.addictionsuisse.ch/fileadmin/user_upload/DocUpload/170425_Factsheet_CBD_F.pdf
  - BAG/OFSP/SWISSMEDIC
  - https://www.bag.admin.ch/bag/de/home/themen/mensch-gesundheit/sucht/cannabis/thc-armer-cannabis-cbd.html

Sativex

- THC & CBD (1 poussée/Sprühstoss= 2,7mg THC, 2,5 mg CBD)
- Indication/Indikation: Sclérose en Placques/MS
  - Spasticité, Spastizität
- Ordonnance à souche/ Betäubungsmittelverordnung

Das therapeutische Potenzial von Cannabis und Cannabinoiden

Franjo Grotenhermen, Kirsten Müller-Vahl

ZUSAMMENFASSUNG

Hintergrund: Seit der Entdeckung des endogenen Cannabinoid-Rezeptorsystems vor etwa 20 Jahren werden Medikamente auf Cannabisbasis intensiv erforscht. Im Jahr 2011 wurde in Deutschland erstmals ein Cannabisextrakt arzneimittelrechtlich zugelassen.

Methode: Selektive Literaturrecherche

Ergebnisse: Die klinischen Wirkungen von Cannabismedikamenten sind in der Mehrzahl auf eine Aktivierung von endogenen Cannabinoid-CB1- und CB2-Rezeptoren zurückzuführen. Seit 1975 wurden mehr als 100 kontrollierte klinische Studien mit Cannabinoiden oder Ganzpflanzenzubereitungen bei unterschiedlichen Indikationen durchgeführt. Die Ergebnisse dieser Studien führten in zahlreichen Ländern zur Zulassung von Medikamenten auf Cannabisbasis (Dronabinol, Nabilon und einem Cannabisextrakt [THC : CBD = 1 : 1]). In Deutschland ist dieser Cannabisextrakt seit 2011 für die Behandlung der mittelschweren oder schweren therapieresistenten Spastik bei multipler Sklerose zugelassen. Eine „off-label"-Behandlung erfolgt derzeit am häufigsten bei Appetitlosigkeit, Übelkeit und neuropathischen Schmerzen. Alternativ können Patienten bei der Bundesopiumstelle eine Ausnahmeerlaubnis zum Erwerb von Medizinal-Cannabisblüten im Rahmen einer ärztlich überwachten Selbsttherapie beantragen. Die häufigsten Nebenwirkungen von Cannabinoiden sind Müdigkeit und Schwindel (> 1/10), psychische Effekte und Mundtrockenheit. Gegenüber diesen Nebenwirkungen entwickelt sich fast immer innerhalb kurzer Zeit eine Toleranz. Entzugssymptome stellen im therapeutischen Kontext kaum jemals ein Problem dar.

Schlussfolgerungen: Es gilt heute als erwiesen, dass Cannabinode bei verschiedenen Erkrankungen einen therapeutischen Nutzen besitzen.

▶ Zitierweise
Grotenhermen F, Müller-Vahl K: The therapeutic potential of cannabis and cannabinoids. Dtsch Arztebl Int 2012; 109(29–30):495–501. DOI: 10.3238/arztebl.2012.0495

nova-Institut GmbH, Chemiepark Knapsack, Hürth: Dr. med. Grotenhermen

Klinik für Psychiatrie, Sozialpsychiatrie und Psychotherapie, Medizinische Hochschule Hannover: Prof. Dr. med. Müller-Vahl

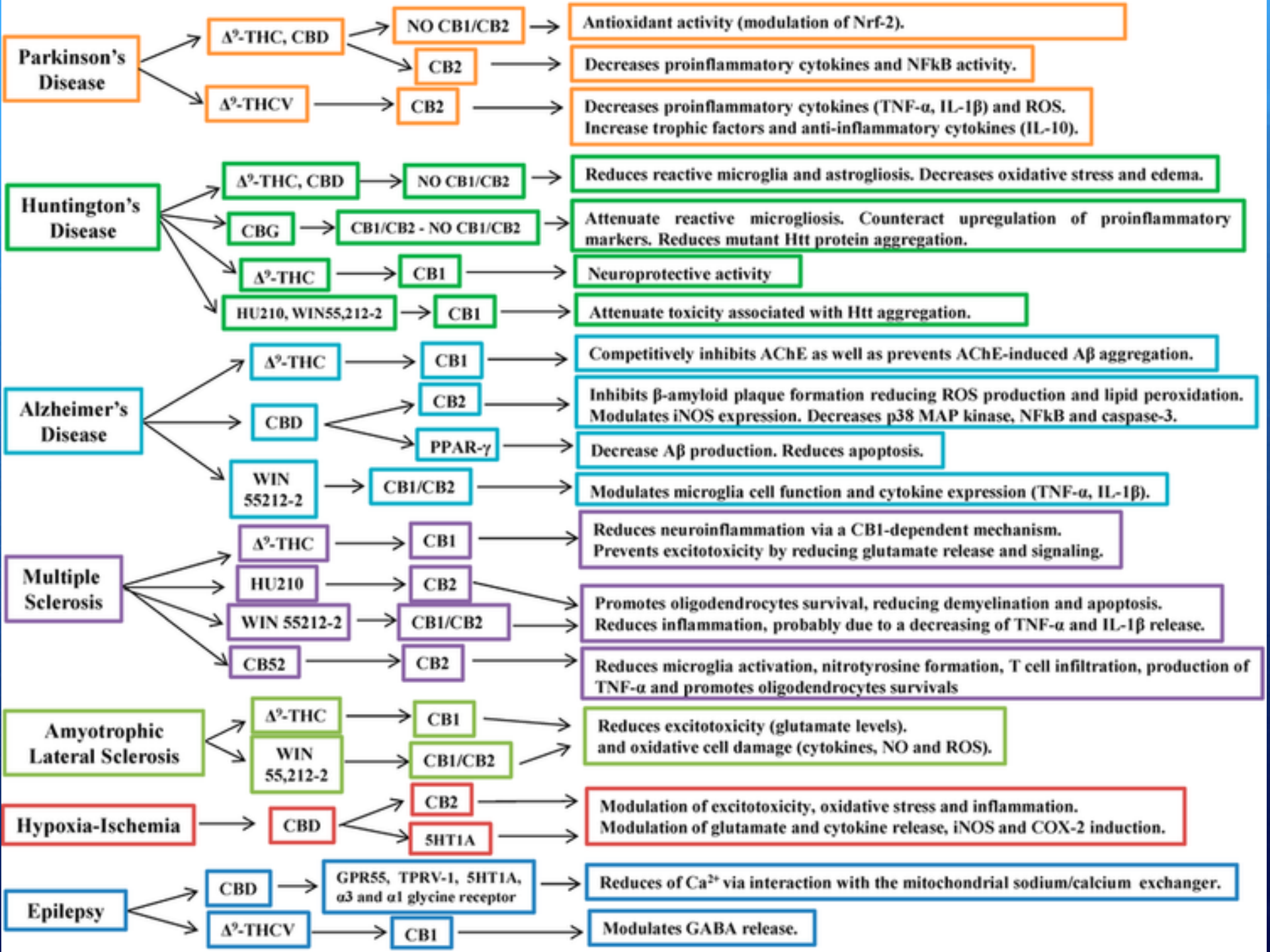
Die Erkenntnisse zum therapeutischen Potenzial von Cannabisprodukten wurden in den vergangenen Jahren durch eine große Zahl klinischer Studien erheblich verbessert (1–5). Bereits im Oktober 2008 erklärten daher die Bundesärztekammer, die Kassenärztliche Bundesvereinigung und die Arzneimittelkommission der deutschen Ärzteschaft anlässlich einer Anhörung im Gesundheitsausschuss des Deutschen Bundestags: „Der Nutzen einer Therapie mit Cannabinoiden ist für einige medizinische Indikationen durch kontrollierte Studien dargestellt worden, in denen überwiegend standardisierte und/oder synthetische Cannabinoidpräparate verwendet wurden. Der Einsatz dieser Präparate kann demnach bei Patienten, die unter einer konventionellen Behandlung keine ausreichende Linderung von Symptomen wie Spastik, Schmerzen, Übelkeit, Erbrechen oder Appetitmangel haben, sinnvoll sein" (6). Im Jahr 2011 wurde nun erstmalig in Deutschland ein Medikament auf Cannabisbasis arzneimittelrechtlich zugelassen. Nachfolgend wird der aktuelle Kenntnisstand zum therapeutischen Nutzen von Cannabismedikamenten dargestellt.

Methode

Diese Übersicht basiert auf einer Recherche in der medizinischen Datenbank PubMed (Januar 2000 bis Dezember 2011) mit den Stichworten „cannabi* or marijuana or THC or endocannabinoid". Zudem wurden Übersichten aus Standardwerken (1–5) sowie die Studiendatenbank der IACM (International Association for Cannabinoid Medicines) ausgewertet. Bei der Darstellung des therapeutischen Potenzials wurden ausschließlich Ergebnisse aus randomisierten kontrollierten Studien berücksichtigt.

Geschichte

Seit Jahrhunderten werden in vielen Kulturen Medikamente auf Cannabisbasis zu therapeutischen Zwecken eingesetzt (7). In Europa wurden sie Ende des 19. Jahrhunderts zur Behandlung von Schmerzen, Spasmen, Asthma, Schlafstörungen, Depression und Appetitlosigkeit verwendet. In der ersten Hälfte des 20. Jahrhunderts verloren diese Medikamente nahezu vollständig an Bedeutung, auch weil es lange Zeit nicht gelang, die chemische Struktur der Inhaltsstoffe der Cannabispflanze *(Cannabis sativa L.)* zu ermitteln. Erst 1964 konnte (-)-trans-Delta-9-Tetrahydro-


Parkinson's Disease
Δ9-THC, CBD
NO CB1/CB2
Antioxidant activity (modulation of Nrf-2).
CB2
Decreases proinflammatory cytokines and NFkB activity.
Δ9-THCV
CB2
Decreases proinflammatory cytokines (TNF-α, IL-1β) and ROS.
Increase trophic factors and anti-inflammatory cytokines (IL-10).
Huntington's Disease
Δ9-THC, CBD
NO CB1/CB2
Reduces reactive microglia and astrogliosis. Decreases oxidative stress and edema.
CBG
CB1/CB2 - NO CB1/CB2
Attenuate reactive microgliosis. Counteract upregulation of proinflammatory markers. Reduces mutant Htt protein aggregation.
Δ9-THC
CB1
Neuroprotective activity
HU210, WIN55,212-2
CB1
Attenuate toxicity associated with Htt aggregation.
Alzheimer's Disease
Δ9-THC
CB1
Competitively inhibits AChE as well as prevents AChE-induced Aβ aggregation.
CBD
CB2
Inhibits β-amyloid plaque formation reducing ROS production and lipid peroxidation.
Modulates iNOS expression. Decreases p38 MAP kinase, NFkB and caspase-3.
PPAR-γ
Decrease Aβ production. Reduces apoptosis.
WIN 55212-2
CB1/CB2
Modulates microglia cell function and cytokine expression (TNF-α, IL-1β).
Multiple Sclerosis
Δ9-THC
CB1
Reduces neuroinflammation via a CB1-dependent mechanism.
Prevents excitotoxicity by reducing glutamate release and signaling.
HU210
CB2
WIN 55212-2
CB1/CB2
Promotes oligodendrocytes survival, reducing demyelination and apoptosis.
Reduces inflammation, probably due to a decreasing of TNF-α and IL-1β release.
CB52
CB2
Reduces microglia activation, nitrotyrosine formation, T cell infiltration, production of TNF-α and promotes oligodendrocytes survivals
Amyotrophic Lateral Sclerosis
Δ9-THC
CB1
Reduces excitotoxicity (glutamate levels).
and oxidative cell damage (cytokines, NO and ROS).
WIN 55,212-2
CB1/CB2
Hypoxia-Ischemia
CBD
CB2
Modulation of excitotoxicity, oxidative stress and inflammation.
Modulation of glutamate and cytokine release, iNOS and COX-2 induction.
5HT1A
Epilepsy
CBD
GPR55, TPRV-1, 5HT1A, α3 and α1 glycine receptor
Reduces of Ca2+ via interaction with the mitochondrial sodium/calcium exchanger.
Δ9-THCV
CB1
Modulates GABA release.

Expert Rev Neurother. 2017 Sep 4:1-11. doi: 10.1080/14737175.2017.1373019. [Epub ahead of print]

The potential role of cannabinoids in epilepsy treatment.

De Caro C[1], Leo A[1], Citraro R[1], De Sarro C[1], Russo R[2], Calignano A[2], Russo E[1].

⊕ Author information

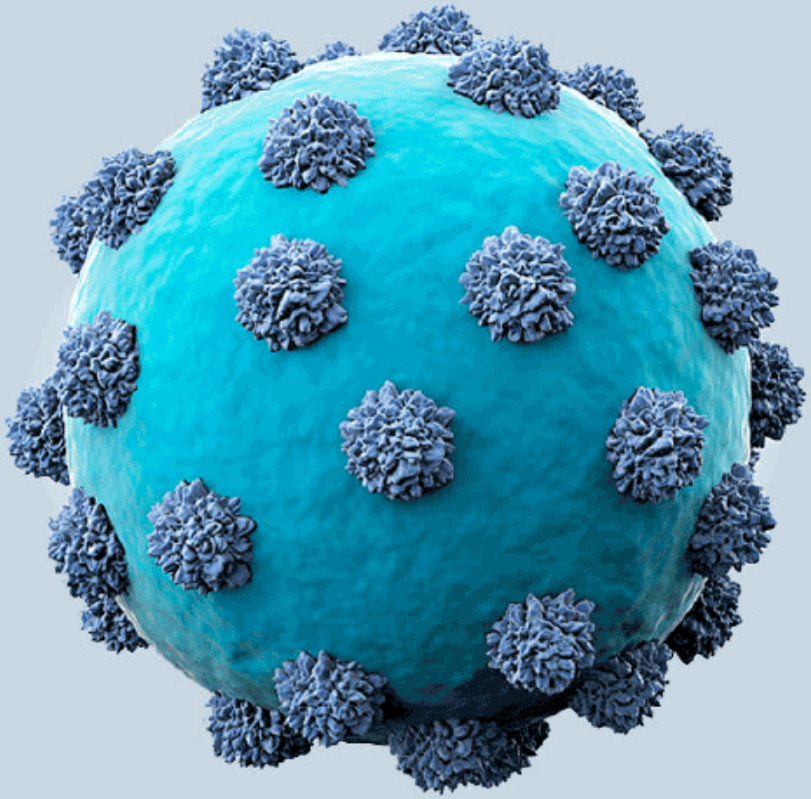
Abstract

INTRODUCTION: Epilepsy is one of the world's oldest recognized and prevalent neurological diseases. It has a great negative impact on patients' quality of life (QOL) as a consequence of treatment resistant seizures in about 30% of patients together with drugs' side effects and comorbidities. Therefore, new drugs are needed and cannabinoids, above all cannabidiol, have recently gathered attention. Areas covered: This review summarizes the scientific data from human and animal studies on the major cannabinoids which have been of interest in the treatment of epilepsy, including drugs acting on the endocannabinoid system. Expert commentary: Despite the fact that cannabis has been used for many purposes over 4 millennia, the development of drugs based on cannabinoids has been very slow. Only recently, research has focused on their potential effects and CBD is the first treatment of this group with clinical evidence of efficacy in children with Dravet syndrome; moreover, other studies are currently ongoing to confirm its effectiveness in patients with epilepsy. On the other hand, it will be of interest to understand whether drugs acting on the endocannabinoid system will be able to reach the market and prove their known preclinical efficacy also in patients with epilepsy.

KEYWORDS: Cannabidiol; Dravet syndrome; FAAH; THC; cannabidivarin; childhood refractory epilepsy; endocannabinoids system

CBDmj
CBD Medical Journal

CBD inhibits Hepatitis virus



New Research:

CBD extract *from marijuana*

An **Effective**

Antiviral

Cannabis Cannabinoid Res. 2017 Jun 1;2(1):139-154. doi: 10.1089/can.2016.0034. eCollection 2017.

An Update on Safety and Side Effects of Cannabidiol: A Review of Clinical Data and Relevant Animal Studies.

Iffland K[1], Grotenhermen F[1].

Author information

Abstract

Introduction: This literature survey aims to extend the comprehensive survey performed by Bergamaschi et al. in 2011 on cannabidiol (CBD) safety and side effects. Apart from updating the literature, this article focuses on clinical studies and CBD potential interactions with other drugs. **Results:** In general, the often described favorable safety profile of CBD in humans was confirmed and extended by the reviewed research. The majority of studies were performed for treatment of epilepsy and psychotic disorders. Here, the most commonly reported side effects were tiredness, diarrhea, and changes of appetite/weight. In comparison with other drugs, used for the treatment of these medical conditions, CBD has a better side effect profile. This could improve patients' compliance and adherence to treatment. CBD is often used as adjunct therapy. Therefore, more clinical research is warranted on CBD action on hepatic enzymes, drug transporters, and interactions with other drugs and to see if this mainly leads to positive or negative effects, for example, reducing the needed clobazam doses in epilepsy and therefore clobazam's side effects. **Conclusion:** This review also illustrates that some important toxicological parameters are yet to be studied, for example, if CBD has an effect on hormones. Additionally, more clinical trials with a greater number of participants and longer chronic CBD administration are still lacking.

Vertex. 2016 Nov;XXVII(130):469-473.

[The treatment of cannabis dependence: Clinical work, psychotherapy and evidence].

[Article in Spanish]

Capece J[1], Pavlovsky F.

Author information

Abstract

Identifying compulsive consumption of marijuana in association with another mental disorder (attentional defcit disorder, bipolar disorder, depression or psychosis) presents the challenge of clarifying validated therapeutic strategies, especially within the teen population, in which it shows the highest prevalence. The ever-increasing prevalence and the need for regional treatments, demand that we approach this health matter as a public health issue. The ideological con?icts related to the necessary decriminalization of consumption and the current debate on the medical use of marijuana often confuse the urgent need to establish effective therapeutic strategies for the population affected by this mental disorder. Family therapy and community reinforcement are one of the most effcient interventions, other than the traditional individual and group therapies. Contingent, motivational and cognitive-behavioral tailored interventions appear to be most effcient and recommendable. Aerobic exercise and the use of mobile technology also show effectiveness. The administration of medications such as gabepentin, the aminoacid n-acetyl cysteine (NAC) and the cannabinoid cannabidiol (CBD) appear to be very promising. Usual medications, such as valproic acid, quetiapine and bupropion, increase craving, therefore intensifying the need for consumption and thus yielding overall negative results.

PMID: 28898308

Sci Rep. 2017 Sep 21;7(1):12064. doi: 10.1038/s41598-017-10924-8.

Cannabidiol attenuates alcohol-induced liver steatosis, metabolic dysregulation, inflammation and neutrophil-mediated injury.

Wang Y[1,2], Mukhopadhyay P[1], Cao Z[1], Wang H[3], Feng D[3], Haskó G[4], Mechoulam R[5], Gao B[3], Pacher P[6].

Author information

Abstract

Cannabidiol (CBD) is a non-psychoactive component of marijuana, which has anti-inflammatory effects. It has also been approved by FDA for various orphan diseases for exploratory trials. Herein, we investigated the effects of CBD on liver injury induced by chronic plus binge alcohol feeding in mice. CBD or vehicle was administered daily throughout the alcohol feeding study. At the conclusion of the feeding protocol, serums samples, livers or isolated neutrophils were utilized for molecular biology, biochemistry and pathology analysis. CBD significantly attenuated the alcohol feeding-induced serum transaminase elevations, hepatic inflammation (mRNA expressions of TNFα, MCP1, IL1β, MIP2 and E-Selectin, and neutrophil accumulation), oxidative/nitrative stress (lipid peroxidation, 3-nitrotyrosine formation, and expression of reactive oxygen species generating enzyme NOX2). CBD treatment also attenuated the respiratory burst of neutrophils isolated from chronic plus binge alcohol fed mice or from human blood, and decreased the alcohol-induced increased liver triglyceride and fat droplet accumulation. Furthermore, CBD improved alcohol-induced hepatic metabolic dysregulation and steatosis by restoring changes in hepatic mRNA or protein expression of ACC-1, FASN, PPARα, MCAD, ADIPOR-1, and mCPT-1. Thus, CBD may have therapeutic potential in the treatment of alcoholic liver diseases associated with inflammation, oxidative stress and steatosis, which deserves exploration in human trials.

PMID: 28935932 DOI: 10.1038/s41598-017-10924-8

Arch Dis Child Educ Pract Ed. 2017 Sep 22. pii: edpract-2017-313700. doi: 10.1136/archdischild-2017-313700. [Epub ahead of print]

Cannabidiol reduced frequency of convulsive seizures in drug resistant Dravet syndrome.

Moore Y[1], Robinson R[2].

⊕ Author information

CNS Drugs. 2017 Sep 25. doi: 10.1007/s40263-017-0466-4. [Epub ahead of print]

Efficacy and Tolerability of Phytomedicines in Multiple Sclerosis Patients: A Review.

Farzaei MH[1,2], Shahpiri Z[3,4], Bahramsoltani R[3,4], Nia MM[2,5], Najafi F[6], Rahimi R[7,8].

⊕ Author information

Abstract

Multiple sclerosis (MS) is a chronic inflammatory and demyelinating disorder of the central nervous system (CNS) that can cause cognition, mobility, and sensory impairments. It is considered one of the most common non-traumatic causes of disability in the world. The aim of the present article was to review the clinical evidence related to medicinal plants in the management of MS symptoms. Electronic databases, including the Cochrane Library, Pubmed, and Scopus, were searched for entries from 1966 to February 2017. Only clinical studies were included in this review. Different medicinal plants have positive effects on MS, including Andrographis paniculata, Boswellia papyrifera, Ruta graveolens, Vaccinium spp., Camellia sinensis, Panax ginseng, Aloysia citrodora, Ginkgo biloba, Oenothera biennis, and Cannabis sativa. C. sativa had the highest level of clinical evidence, supporting its efficacy in MS symptoms. Proanthocyanidins, ginkgo flavone glycosides, ginsenosides, epigallocatechin-3-gallate, cannabinoids (including delta-9-tetrahydrocannabinol and cannabidiol), boswellic acid, and andrographolide were presented as the main bioactive components of medicinal plants with therapeutic benefits in MS. The main complications of MS in which natural drugs were effective include spasticity, fatigue, scotoma, incontinence, urinary urgency, nocturia, memory performance, functional performance, and tremor. Herbal medicines were mostly well tolerated, and the adverse effects were limited to mild to moderate. Further well-designed human studies with a large sample size and longer follow-up period are recommended to confirm the role of medicinal plants and their metabolites in the management of MS.

Clin Sci (Lond). 2017 Sep 27. pii: CS20171288. doi: 10.1042/CS20171288. [Epub ahead of print]

Cannabidiol and Palmitoylethanolamide are anti-inflammatory in the acutely inflamed human colon.

Couch DG[1], Tasker C[2], Theophilidou E[2], Lund JN[3], O'Sullivan SE[2].

⊕ Author information

Abstract

Objective: We sought to quantify the anti-inflammatory effects of two cannabinoid drugs: cannabidiol (CBD) and palmitoylethanolamide (PEA), in cultured cell lines and compared this effect with experimentally inflamed explant human colonic tissue. These effects were explored in acutely and chronically inflamed colon, using inflammatory bowel disease and appendicitis explants. ***Design:*** Caco-2 cells and human colonic explants collected from elective bowel cancer, inflammatory bowel disease (IBD) or acute appendicitis resections, and were treated with the following drug treatments: vehicle, an inflammatory protocol of IFNγ and TNFα (10 ng/ml), inflammation and PEA (10μM), inflammation and CBD (10μM), & PEA or CBD alone. PEA, CBD or vehicle were added simultaneously with IFNγ. Nine intracellular signalling phosphoproteins were determined by multiplex. Inflammatory cytokine secretion was determined using ELISA. Receptor mechanisms were investigated using antagonists for CB_1, CB_2, PPARα, PPARγ, TRPV1 and GPR55. ***Results:*** IFNγ and TNFα treatment increased phosphoprotein and cytokine levels in Caco-2 cultures and colonic explants. Phosphoprotein levels were significantly reduced by PEA or CBD in Caco-2 cultures and colonic explants. CBD and PEA prevented increases in cytokine production in explant colon, but not in Caco-2 cells. CBD effects were blocked by the CB_2antagonist AM630 and TRPV1 antagonist SB366791. PEA effects were blocked by the PPARα antagonist GW6471. PEA and CBD were anti-inflammatory in IBD and appendicitis explants. ***Conclusion:*** PEA and CBD are anti-inflammatory in the human colon. This effect is not seen in cultured epithelial cells. Appropriately sized clinical trials should assess their efficacy.

Clin Sci (Lond). 2017 Sep 27. pii: CS20171288. doi: 10.1042/CS20171288. [Epub ahead of print]

Cannabidiol and Palmitoylethanolamide are anti-inflammatory in the acutely inflamed human colon.

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⊕ Author information

Abstract

Objective: We sought to quantify the anti-inflammatory effects of two cannabinoid drugs: cannabidiol (CBD) and palmitoylethanolamide (PEA), in cultured cell lines and compared this effect with experimentally inflamed explant human colonic tissue. These effects were explored in acutely and chronically inflamed colon, using inflammatory bowel disease and appendicitis explants. ***Design:*** Caco-2 cells and human colonic explants collected from elective bowel cancer, inflammatory bowel disease (IBD) or acute appendicitis resections, and were treated with the following drug treatments: vehicle, an inflammatory protocol of IFNγ and TNFα (10 ng/ml), inflammation and PEA (10μM), inflammation and CBD (10μM), & PEA or CBD alone. PEA, CBD or vehicle were added simultaneously with IFNγ. Nine intracellular signalling phosphoproteins were determined by multiplex. Inflammatory cytokine secretion was determined using ELISA. Receptor mechanisms were investigated using antagonists for CB_1, CB_2, PPARα, PPARγ, TRPV1 and GPR55. ***Results:*** IFNγ and TNFα treatment increased phosphoprotein and cytokine levels in Caco-2 cultures and colonic explants. Phosphoprotein levels were significantly reduced by PEA or CBD in Caco-2 cultures and colonic explants. CBD and PEA prevented increases in cytokine production in explant colon, but not in Caco-2 cells. CBD effects were blocked by the CB_2antagonist AM630 and TRPV1 antagonist SB366791. PEA effects were blocked by the PPARα antagonist GW6471. PEA and CBD were anti-inflammatory in IBD and appendicitis explants. ***Conclusion:*** PEA and CBD are anti-inflammatory in the human colon. This effect is not seen in cultured epithelial cells. Appropriately sized clinical trials should assess their efficacy.

Cannabidiol as an Intervention for Addictive Behaviors: A Systematic Review of the Evidence

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ABSTRACT: Drug addiction is a chronically relapsing disorder characterized by the compulsive desire to use drugs and a loss of control over consumption. Cannabidiol (CBD), the second most abundant component of cannabis, is thought to modulate various neuronal circuits involved in drug addiction. The goal of this systematic review is to summarize the available preclinical and clinical data on the impact of CBD on addictive behaviors. MEDLINE and PubMed were searched for English and French language articles published before 2015. In all, 14 studies were found, 9 of which were conducted on animals and the remaining 5 on humans. A limited number of preclinical studies suggest that CBD may have therapeutic properties on opioid, cocaine, and psychostimulant addiction, and some preliminary data suggest that it may be beneficial in cannabis and tobacco addiction in humans. Further studies are clearly necessary to fully evaluate the potential of CBD as an intervention for addictive disorders.

KEYWORDS: review, cannabidiol, drug addiction, addictive behaviors, treatment

Overall, CBD was found to have an impact on the intoxication and relapse phase of opioid addiction. Data on its effect during the withdrawal phase remain conflicting and vary based on co-administration of other cannabinoids such as THC.

Other substances. No animal study was found on hallucinogen-, sedative-, tobacco-, or alcohol-addictive behaviors.

Thus, CBD does not appear to have an impact on stimulants' rewarding effect, but one study suggests that it may influence addictive behaviors during the relapse phase.

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Cannabidiol Attenuates the Appetitive Effects of Δ_9-Tetrahydrocannabinol in Humans Smoking Their Chosen Cannabis

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Worldwide cannabis dependence is increasing, as is the concentration of Δ_9-tetrahydrocannabinol (THC) in street cannabis. At the same time, the concentration of the second most abundant cannabinoid in street cannabis, cannabidiol (CBD), is decreasing. These two cannabinoids have opposing effects both pharmacologically and behaviorally when administered in the laboratory. No research has yet examined how the ratio of these constituents impacts on the appetitive/reinforcing effects of cannabis in humans. A total of 94 cannabis users were tested 7 days apart, once while non-intoxicated and once while acutely under the influence of their own chosen smoked cannabis on dependence-related measures. Using an unprecedented methodology, a sample of cannabis (as well as saliva) was collected from each user and analyzed for levels of cannabinoids. On the basis of CBD : THC ratios in the cannabis, individuals from the top and bottom tertiles were directly compared on indices of the reinforcing effects of drugs, explicit liking, and implicit attentional bias to drug stimuli. When intoxicated, smokers of high CBD : THC strains showed reduced attentional bias to drug and food stimuli compared with smokers of low CBD : THC. Those smoking higher CBD : THC strains also showed lower self-rated liking of cannabis stimuli on both test days. Our findings suggest that CBD has potential as a treatment for cannabis dependence. The acute modulation of the incentive salience of drug cues by CBD may possibly generalize to a treatment for other addictive disorders.

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Keywords: cannabis; THC; cannabidiol; attention bias; addiction; dependence