



MEDI HEMP

EXTRA VIRGIN

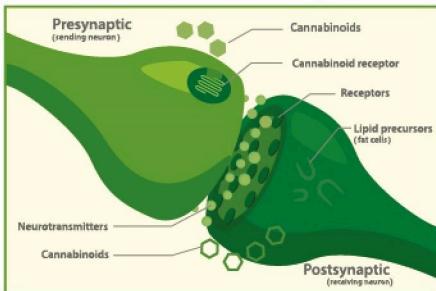


CBD oil

- 햄프(대마) 씨앗에서 추출한 Phyto-cannabinoid(식물성 칸나비노이드)
- 환각작용이 있는 THC를 제외한 칸나비디올(CBD) 성분의 오일로 불안, 우울, 항염증, 통증경감의 목적으로 많이 사용
- 필수지방산(omega3, omega6, γ-linolenic acid 등) 함유

* 뇌전증 치료제 '에피디올렉스'(칸나비디올 성분) FDA 승인 및 국내도입 안전성과 유효성이 입증된 '의료용 대마'로 알려짐

The Endocannabinoid system



작용기전

ECS(Endocannabinoid system)에 작용하여 동물의 항상성(homeostasis) 유지와 중추신경계 조절, 항염증 및 면역조절에 중요한 역할을 함

- CB1 receptor : 주로 Central nervous system에 분포
- CB2 receptor : Peripheral organ 및 immune system에 전반적 분포

이 외에 여러 수용체에 작용하여 Glutamate-GABA system 및 Nociceptive response 조절하여 신경계 흥분 및 통증경로에 작용함

Clinical study

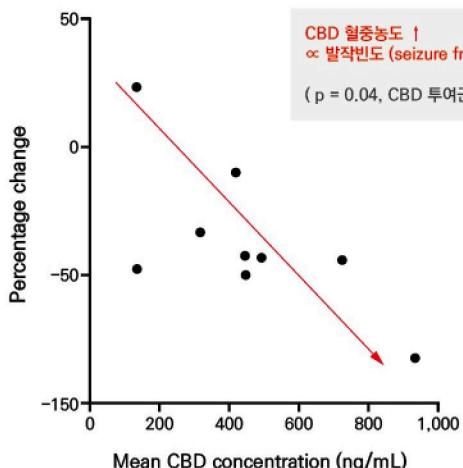
Randomized blinded controlled clinical trial to assess the effect of oral cannabidiol administration in addition to conventional antiepileptic treatment on seizure frequency in dogs with intractable idiopathic epilepsy

J Am Vet Med Assoc 2019;254:1301-1308

개 특발성 간질에서 칸나비디올 항경련효과에 대한 임상시험

PROCEDURES

Dogs were randomly assigned to a CBD ($n = 12$) or placebo (14) group. The CBD group received CBD-infused oil (2.5 mg/kg [1.1 mg/lb], PO) twice daily for 12 weeks in addition to existing antiepileptic treatments, and the placebo group received noninfused oil under the same conditions. Seizure activity, adverse effects, and plasma CBD concentrations were compared between groups.



Research Paper

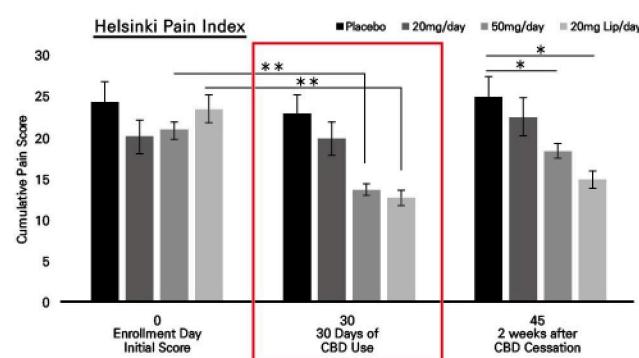
PAIN

A randomized, double-blind, placebo-controlled study of daily cannabidiol for the treatment of canine osteoarthritis pain

Pain. 2020 September 01; 161(9): 2191-2202.

개 골관절염(OA) 통증 치료에 대한 칸나비디올 임상시험

Pain score(Helsinki Pain index) 결과 30일에서 유의미한 Pain score 감소 (50mg/day 군, 20mg Lip/day 군)



* CBD 중단 후 2주 뒤에도 통증경감 지속



- 동물병원 전용 (수의사 처방)
- Virgin organic 제조시설 생산 (USDA certified) | 100% Organic
- Non-GMO 순수 대마종 (미국 원산지)
- 고함량 CBD, THC free
- Broad spectrum | Cold pressed extraction | Extra Virgin



Broad spectrum



Cold pressed



Extra virgin

급여방법 및 주의사항

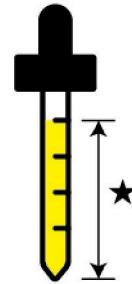
- 스포이드로 직접 경구투여 및 혀밑투여
- 물이나 사료에 첨가 (간접급여)
- 스푼에 소분하여 먹이거나 직접 잇몸에 도포

- 용량은 환축의 나이, 질환, 중증도에 따라 조절 가능하며 노령, 중증일수록 고용량으로 권장드립니다.
- 권장량으로 시작 후 효과 모니터링하며 증량하십시오.
- 즐음, 무기력, 설사 등이 있을 수 있습니다.
- 스포이드에 침이 묻을 시 닦아주세요.

급여 권장량

Weight	Size	30ml	10ml
~2kg	2 drops	2 drops	
2~6kg	4~6 drops	½ 스포이드	
6~15kg	¾ 스포이드	1 스포이드	
15kg~	1~2 스포이드	2~3 스포이드	

* 1일 2회 (BID) 권장



★ 1 스포이드

Safety

12주간 CBD(2mg/kg, PO BID) 투여 후 혈액검사(Serum Chemistry) monitoring 시 significant difference 없음

*CBD predominant oil의 경우 개에서 용량 증량(dose-escalation)에 대해 안전함

animals



Article

Single-Dose Pharmacokinetics and Preliminary Safety Assessment with Use of CBD-Rich Hemp Nutraceutical in Healthy Dogs and Cats

the two species. Fortunately, there were no changes in physical examination and few changes in the CBC and serum chemistry parameters suggesting the relative safety of oral supplementation over 12 weeks. One of the eight cats displayed a persistent rise in the serum alanine amino transferase (ALT) enzyme outside of the reference range and cats commonly displayed excessive licking and head shaking with administration of the oil. Based on these and other recent data, CBD-rich hemp nutraceuticals appear to be safe in healthy adult dogs, while more work in cats is needed to fully understand utility and absorption.

Table 4. Dog ($n = 8$) mean and SEM of serum chemistry parameters immediately prior to (week 0), 4 weeks, 8 weeks and 12 weeks of an oral 2 mg/kg CBD dose twice daily using a CBD-rich hemp product.

Serum Chemistry (Ref Range)**	Week 0	Week 4	Week 8	Week 12	p-Value
TP (5.0–7.4 g/dL)	6.1 ± 0.1	5.9 ± 0.2	6.3 ± 0.2	6.0 ± 0.2	0.65
A1c (7.7–9.4 mg/dL)	9.5 ± 0.1	9.5 ± 0.1	9.5 ± 0.1	9.4 ± 0.1	0.22
Globulin (1.6 ± 0.6 g/dL)	2.6 ± 0.1	2.5 ± 0.1	2.9 ± 0.1	2.6 ± 0.2	0.18
AST (15–66 U/L)	27 ± 2	25 ± 2	23 ± 2	25 ± 1	0.45
ALT (0.2–118 U/L)	34 ± 3	27 ± 4	35 ± 10	38 ± 5	0.51
ALP (3–121 U/L)	29 ± 6	46 ± 7	56 ± 10	61 ± 13	0.09
GGT (1–14 U/L)	4 ± 3	3 ± 0	4 ± 0	4 ± 0	0.74
BUN (6–31 mg/dL)	11 ± 1	10 ± 1	11 ± 1	11 ± 0	0.82
Creatinine (0.5–1.6 mg/dL)	0.5 ± 0.0	0.5 ± 0.0	0.5 ± 0.0	0.5 ± 0.0	0.36
Phosphorus (2.5–6.0 mg/dL)	4.8 ± 0.2	4.7 ± 0.2	4.2 ± 0.3	4.0 ± 0.2	0.11
Glucose (70–128 mg/dL)	97 ± 3	92 ± 2	102 ± 3	99 ± 2	0.16
Calcium (8.5–11.4 mg/dL)	10.4 ± 0.1	10.0 ± 0.1	10.2 ± 0.1	10.1 ± 0.1	0.16
Magnesium (1.5–2.5 mg/dL)	1.6 ± 0.0	1.6 ± 0.0	1.6 ± 0.0	1.6 ± 0.0	0.11
Sodium (139–145 mEq/L)	148 ± 0	148 ± 0	148 ± 1	148 ± 0	0.58
Potassium (3.6–5.5 mEq/L)	4.3 ± 0.1	4.4 ± 0.1	4.3 ± 0.1	4.7 ± 0.0	0.25
Chloride (102–120 mEq/L)	113 ± 0	113 ± 1	111 ± 1	113 ± 1	0.74
Cholesterol (99–324 mg/dL)	162 ± 15	207 ± 12	211 ± 12	212 ± 17	0.16
Triglycerides (25–291 mg/dL)	48 ± 4	44 ± 4	43 ± 5	46 ± 6	0.44
Creatine Kinase (59–895 U/L)	13 ± 16	142 ± 45	85 ± 7	97 ± 5	0.10

Preliminary Investigation of the Safety of Escalating Cannabinoid Doses in Healthy Dogs

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Canyon Animal Health, Canyon Growth Concoction, Toronto, ON, Canada

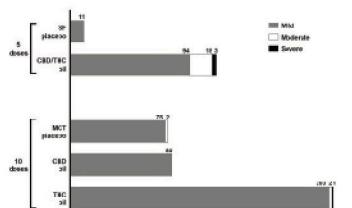


FIGURE 1 | Total number and severity (mild, moderate, severe) of AEs experienced across five escalating doses of SF oil placebo ($n = 4$) or CBD/TAC oil ($n = 3$ or 4) and 10 escalating doses of MCT oil placebo ($n = 4$), CBD oil ($n = 4$), and TAC oil ($n = 3$ or 4). There were no moderate or severe AEs experienced with CBD or TAC oil.

Conclusions and clinical significance: Overall, dogs tolerated dose escalation of the CBD oil well, experiencing only mild AEs. The favorable safety profile of 10 escalating doses of a CBD oil containing 18.3–640.5 mg CBD per dose (~ 2 –62 mg/kg) provides comparative evidence that, at our investigated doses, a CBD-predominant oil formulation was safer and more tolerated in dogs than oil formulations containing higher concentrations of THC.