Reefer Madness: Cannabis vs CBD oil: Facts & Misconceptions

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1hr basic technical

Course Description: Cannabis and CBD oil are upon us. Sort through the facts & misunderstandings of this coming tidal wave. How is Optometry involved? What else do we know about a multitude of health conditions & how these new(old) supplements may affect our profession & our own lives.

1) Facts and Misconceptions
   Hemp(cannabis) vs Marijuana vs CBD oil
   Hemp cultivated for over 28,000 yrs
   2 broad general classes --- Sativa & Indica
   Cannabis botanical name, hemp common plant name (6000+ hybrids 2018)
   Marijuana street name
      SMALL subset of cannabis
      BRED with high THC/low CBD
   Over 400 chemical entities in cannabis
   Over 100 cannabinoids with various effects
   CBD oil a cannabinoid of hemp, it’s NOT marijuana
   Michigan does have medical marijuana, but CBD is legal & OTC

2) Facts and Misconceptions
   1899 -- CBN - 1st Cannabinol identified
   1940 -- CBD oil – Cannabidiol - opposes THC
   1941 -- Hemp is federally outlawed
   1964 -- THC – “the high chemical”
   1988 -- Cannabinoid receptors researchers found, looking for “THC” site
   1992 -- Endocannabinoid System “declared”
      - Found throughout the human body
      - All vertebrates & some invertebrates have system

3) Medical marijuana
   Personally not for/against
   Will be legal in US within 2 years
   Research flawed
   70% of use if for high, not medical reasons
   Possible benefits
      Pain & nausea relief
      Cancer
      Sleep
Addiction withdrawal
MLS/MS/Parkinsons
Glaucoma
Negative effects
Damages brain
  Cognition
  Memory
Negative effects
Heart attacks
Smoking – cancer risk
Genetics
Marijuana & the eyes
Glaucoma vs std meds
Effects on vision motion perception, object localization, speed
detection, spacial perception, reactions
Effects scotopic & photopic functions
Visual field defects central, up/left, OU temporal
Decreases AWARENESS of deficits

4) Endocannabinoid System
THC vs CBD
THC = “the high chemical”
  Makes you “feel WOW”, but heart attack, lungs, alters vision
  perception, destroys brain tissue & function
  The “only” psychotropic cannabinoid
  36 states legal for cannabis (medical) 16 recreational
CBD = “feel OK”
  50 states legal for CBD (OTC)
  Makes you “just feel OK”, many ways
  Where majority medical benefits come from
Anandamide: the BLISS chemical
  Body produces & binds to CB1 sites
  Affects mood, pain, appetite, memory, creative thinking, motivation,
  fertility, stops cancer proliferation
  External sources – dark chocolate, truffles, “in the zone”- what YOU
  love, exercise
CBD oil – nature’s way to enter our diet
  Doesn’t work on any conditions
  Doesn’t Diagnosis, treat, or cure anything.
  We live in a constant state of “dis-ease”
  Doesn’t care what “dis-ease” you have, it’s just trying to assist your
  body to get back to normal balance(homeostasis).
How the system works
  Sympathetic/parasympathetic systems
  Our body defense mechanisms
  ‘Fight or flight’ when “challenged”
Constant unresolved stress
Inflammation meant to protect
Endo-cannabinoid system is bridge

2 receptors
  CB1  brain, central organs (core)
  CB2  throughout body, lymph, detox organs, peripheral
Reduce inflammation everywhere
Primary purpose – Homeostasis, supports & modulates immune response

5) CBD oil – All about the Eyes
What are the eyes…really?
Eyes are specialized receptor of brain, not “separate organ”
We are energy (electrical, chemical) beings
Vision connects us to the world (80%+),
  Then keeps us alive to play the game of life
  All life is a challenge, the goal it so BE YOU
ODs see many neurologic & systemic conditions through the eyes,
Eyes/brain DO have cannabinoid receptors(CB1 & CB2)

Cataracts
UV ionizing damage (the act of vision, destroys vision)
sun exposure, smoking, poor diet triggers inflammation response
Damage X yrs = cataracts
Preventable ? sunglasses/diet / *** CBD oil
Reversible ?! surgery, eyedrops
*** CBD can’t claim to diagnose, treat, or cure ANY medical condition, but it’s not our fault if it does

Glaucoma
Debris from normal metabolism clogs drainage system triggering antibody defenses = Inflammation X yrs = Nerve destruction
Controllable – yes
  Eyedrops/surgery/Marijuana – dosing/CBD oil ???
Reversible - NO

Macular Degeneration
Sun HEV radiation triggers cellular toxic waste
Defense system attacks and creates drusen in tissue
Damage from inflammation X yrs = MD
Controllable - eye protection/diet/eye supplements/CBD oil
Reversible - “kind-a”

Dry Eyes & Allergies
BOTH now confirmed to be problems of auto-immune responses resulting in inflammation out of control
Not blinding disease, but DAILY irritation & constant complaints
10x “google” of BIG 3
Controllable - “well…”
  Dry eye – OTC drops, Steroids, Rx Drops($)
Allergies – OTC drops, Steroids, Rx drops($)

Iritis & Uveitis
Undefined autoimmune reaction causing rampant inflammation &
triggers eye self-destruction
Secondary to: TB/Sarcoid, Cellulitis, Retinitis, RA, Fibromyalgia,
Lupus, AIDS, Syphilis
Controllable - yes

6) CBD & the rest of the body - Anxiety, Auto-immune, & Alzheimers Oh, My!
_We created problems with our diet, lifestyle, and technology_

Psychiatric disorders
- Depression
- Panic attacks
- ADD/ADHD
- PTSD

Auto-immune disorders
- RA
- MS
- Fibromyalgia
- Non-specific chronic pain

Dementia/Alzheimers
ODs can see this through the eyes - NOW
Body transforms inflammation into Amyloid plaque – same process
as Mac Degeneration.

CBD reduces inflammation and breaks down Amyloid, plus has
many benefits including blood flow, neuroprotection, &
other metabolic balances.

We can’t claim “to cure or reverse” any specific disease or
condition, but lacking any other good options, CBD oil is relatively
inexpensive, OTC, doesn’t have severe side effects, nor overdose.

7) Docs & drug tests?
Doc’s don’t know about CBD, nor approve.
NO peer reviewed outcome studies
Schedule 1 means NO research unless NIH approved
“studies” either retrospective, or using NIH 3% THC vs.
current % on street.
Limited number of subjects in published studies
NOT studying CBD at all.
Only studies showing cannabis “successes” aren’t taking into
account CBDs presence/benefits

8) Pay attention to the 3 “Cs”
1 Quality - Certificate of Analysis(COA) is it even CBD oil in the
first place?
2 Concentration, carrier, course – there is NO correct “dose”
Typical starting point is 5mg – 10mg, but…
Read the label for how much
How many doses/bottle
What all is in the mix besides CBD (carrier)
How it gets into your system counts also.

3 Cost
Good CBD isn’t cheap, bad CBD isn’t cheap either.
Nobody realizes about quality (COA), concentration & carriers
Lower quality won’t have effectiveness, gives CBD bad rap.

9) Conclusions
Marijuana & CBD oil are here
Marijuana has issues, BUT has THE HIGH
CBD oil has many health benefits
More research is underway
Quality of product is critical
Dosage isn’t established
Side effects appear minimal even with higher doses
Everyone is a possible “candidate”
The market is going to explode