Value and Limitations of Cannabis (marijuana) In Vascular Patients: What are the Drug’s Effect On Blood vessels

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THC VS CBD

- The cannabis plant contains over 100 different compounds (Cannabinoids)
- THC (Tetrahydrocannabinol) is psychotropic
- CBD (Cannabidiol) is non-psychotropic

CBD

- CBD is non-psychotropic
- CBD is derived from industrial hemp, which became legalized federally in 2014 (Section 7606 of the Farm Bill of 2013).

THERAPEUTIC TARGETS

Infantile epilepsy
Glioblastoma
Neonatal hypoxic encephalopathy
Spasticity in MS

VASORELAXATION

- Nitric oxide production
- Prostaglandin production
- Ion channel modulation
- Receptors
  - CB1 - endothelial cannabinoid receptor
  - GPR55 - G-protein-coupled receptor
  - TRPV1 - transient receptor potential vanilloid 1
  - 1-adrenoceptor
  - 5-HT1A receptor
CVS - CBD

- Reduces endothelial dysfunction in diabetic cardiomyopathy
- Reduces vascular inflammation in endotoxic shock
- Cardio-protective in coronary ligation
- Reduces infract size in stroke (5-HT₁ receptor mediated)

No know LD₅₀ for CBD

POTENTIAL FUTURE INDICATIONS

- Ischemia protection (stroke)
- Atherosclerosis
- Phantom limb (amputation)
- Vascular pain (Limb ischemia)