

Medical Cannabis Parkinson's Disease

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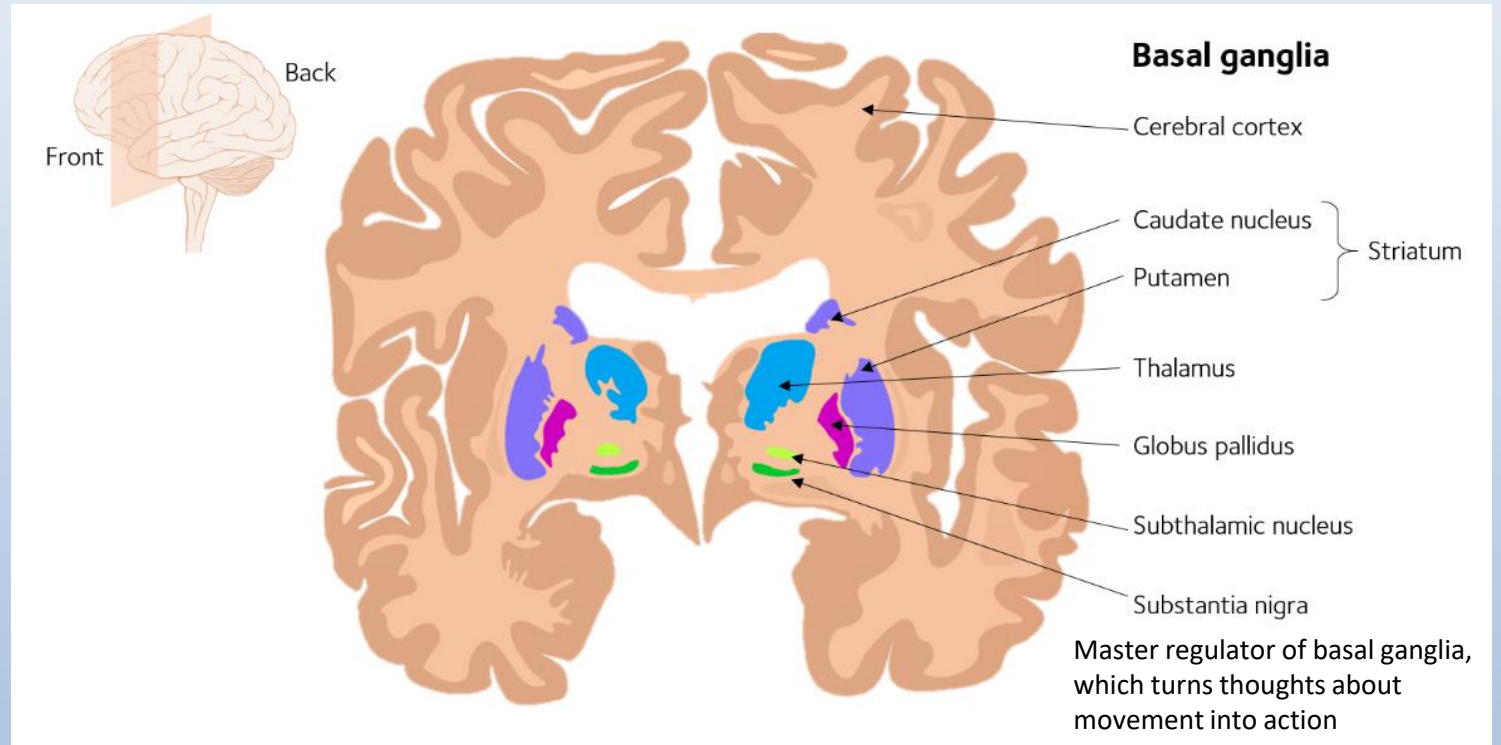
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Overview

- Parkinson's disease overview
- Cannabis overview
- Frequently asked question

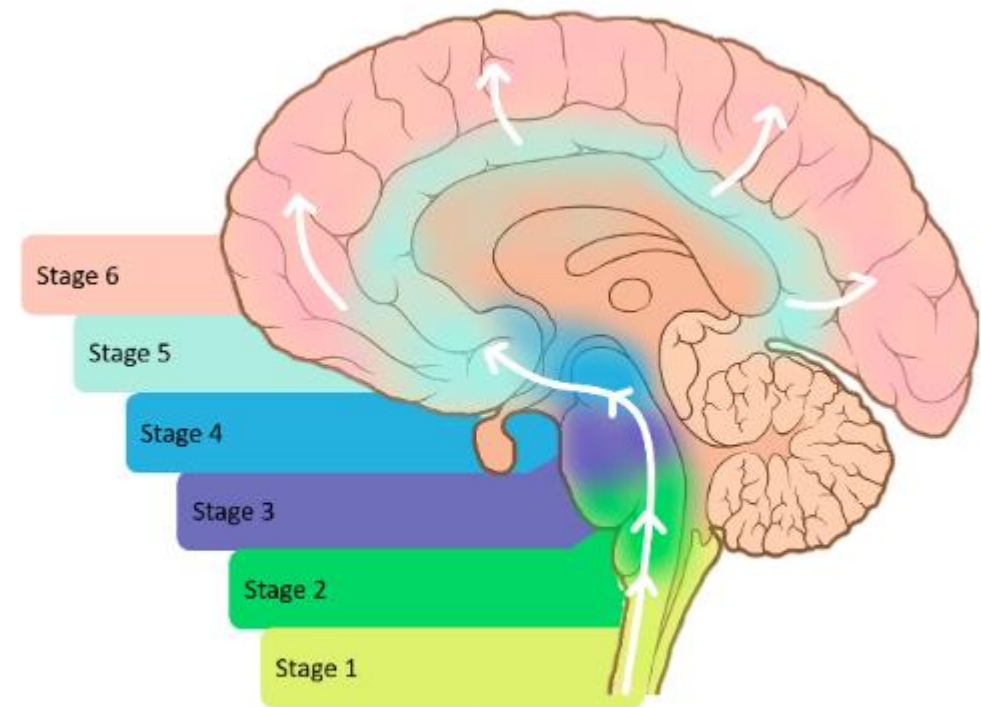
Parkinson's Disease

- Causes
 - Genetic
 - Environmental (trauma, toxins)
 - CO, pesticide (CS2), copper, etc
 - Gut-brain
- Risk Factors
 - Age
 - Family history
 - Male gender
 - Environmental
- What happens
 - Brain nerve cells break down or die
 - Mostly Dopamine releasing cells



Progression of Parkinson's Disease

- **Stage 1:** Lower brainstem/Olfactory (e.g. constipation, loss smell)
- **Stage 2:** Up brainstem just below substantia nigra (pain, sleep, mood)
- **Stage 3:** Substantia nigra (slow movement, rigidity, freezing, tremor)
- **Stage 4:** More dopamine cells lost, move up toward limbic (movement, emotions, motivation, long term memory, progression loss smell)
- **Stage 5:** Spread higher to brain, start to lose higher functions (perception, cognition, language)
- **Stage 6:** Late stage spread to cerebral cortex affecting memory, motor and sensory functions



Adapted from work by Patrick J. Lynch's, based on 'The prion hypothesis in Parkinson's disease: Braak to the future', CC BY 2.5

PD Symptoms

CLASSIC “CARDINAL” FEATURES

1. Tremor – pill rolling
2. Bradykinesia – slowness of movement
3. Rigidity – increased resistance to movement
4. Postural instability – imbalance, tendency to fall with significant injury risk

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Nonmotor symptoms of Parkinson disease

Cognitive dysfunction
Psychosis
Mood disorders (depression, anxiety, apathy/abulia)
Sleep disturbances
Fatigue
Autonomic dysfunction (urinary urgency/frequency, constipation, orthostasis, erectile dysfunction)
Olfactory dysfunction
Pain and sensory disturbances
Dermatologic findings (seborrhea)

Motor features of Parkinson disease

Cardinal manifestations
Tremor
Bradykinesia
Rigidity
Postural instability
Other motor features
Craniofacial
Hypomimia (masked facial expression)
Decreased eye blinking
Speech disturbances (hypokinetic dysarthria, hypophonia)
Dysphagia
Sialorrhea
Visual
Blurred vision
Impaired contrast sensitivity
Hypometric saccades
Impaired vestibuloocular reflex
Impaired upward gaze and convergence
Lid apraxia
Musculoskeletal
Micrographia
Dystonia
Myoclonus
Stooped posture
Camptocormia (severe anterior flexion of the thoracolumbar spine)
Pisa syndrome (subacute axial dystonia with lateral flexion of the trunk, head, and neck)
Kyphosis
Scoliosis
Difficulty turning in bed
Gait
Shuffling, short-stepped gait
Freezing
Festination

Cannabis Overview

Cannabis – The Plant

- *sativa, indica*

Cannabinoid – *unique molecules found in Cannabis plant*

- CBD
- THC

Terpenes - *Terpenes are fragrant essential oils that give cannabis and other plants their aromatic diversity (ie not Cannabis specific)*

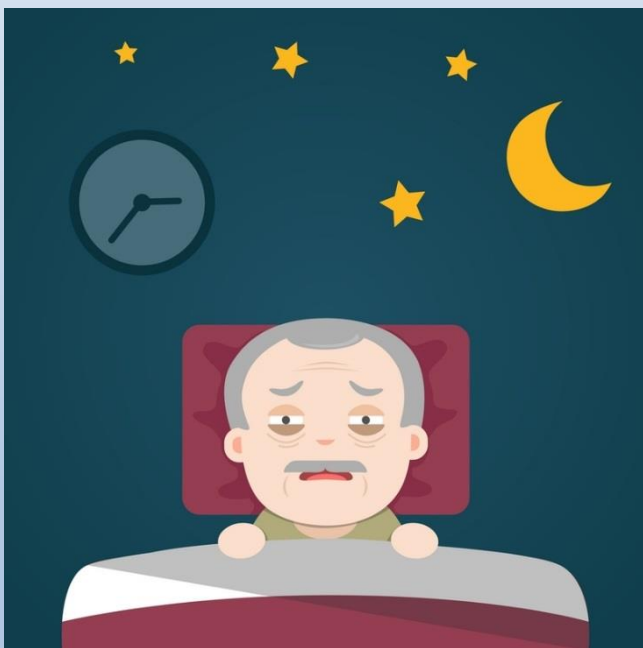


Methods of Consumption

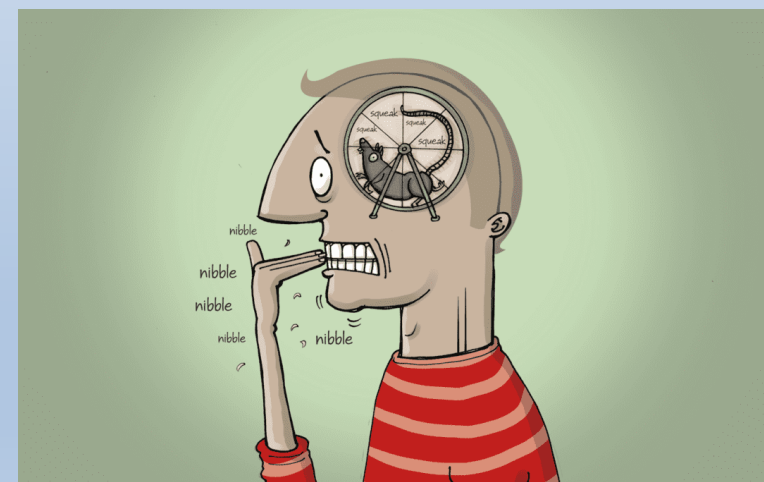
- Sublingual/buccal:
 - Hold oil 45-60 sec
 - Onset 30min, peak 2h, dissipate 8-12h
 - Wait >2h between doses
- Edible:
 - 30min-2h onset, variable peak
 - Wait >3h before re-dose (usu 1-2x/d)
- Topical
 - Variable onset and duration (carrier dependent)
 - Less system side effects
 - Local effects only
- Smoke (least favoured)
 - Tar, CO, carcinogens
 - Possibly higher “high”
 - Best use water bong
- Vaporize:
 - Heat dried product/oil in vaporizer to user-assigned temp
 - Inhale, hold 3-5 sec
 - Wait 5 min between doses

How can cannabis help?

Sleep



Pain



Anxiety/Mood
Disorder

THE TRUTH ABOUT MEDICAL CANNABIS

Is cannabis a miracle drug that cures everything?

NO

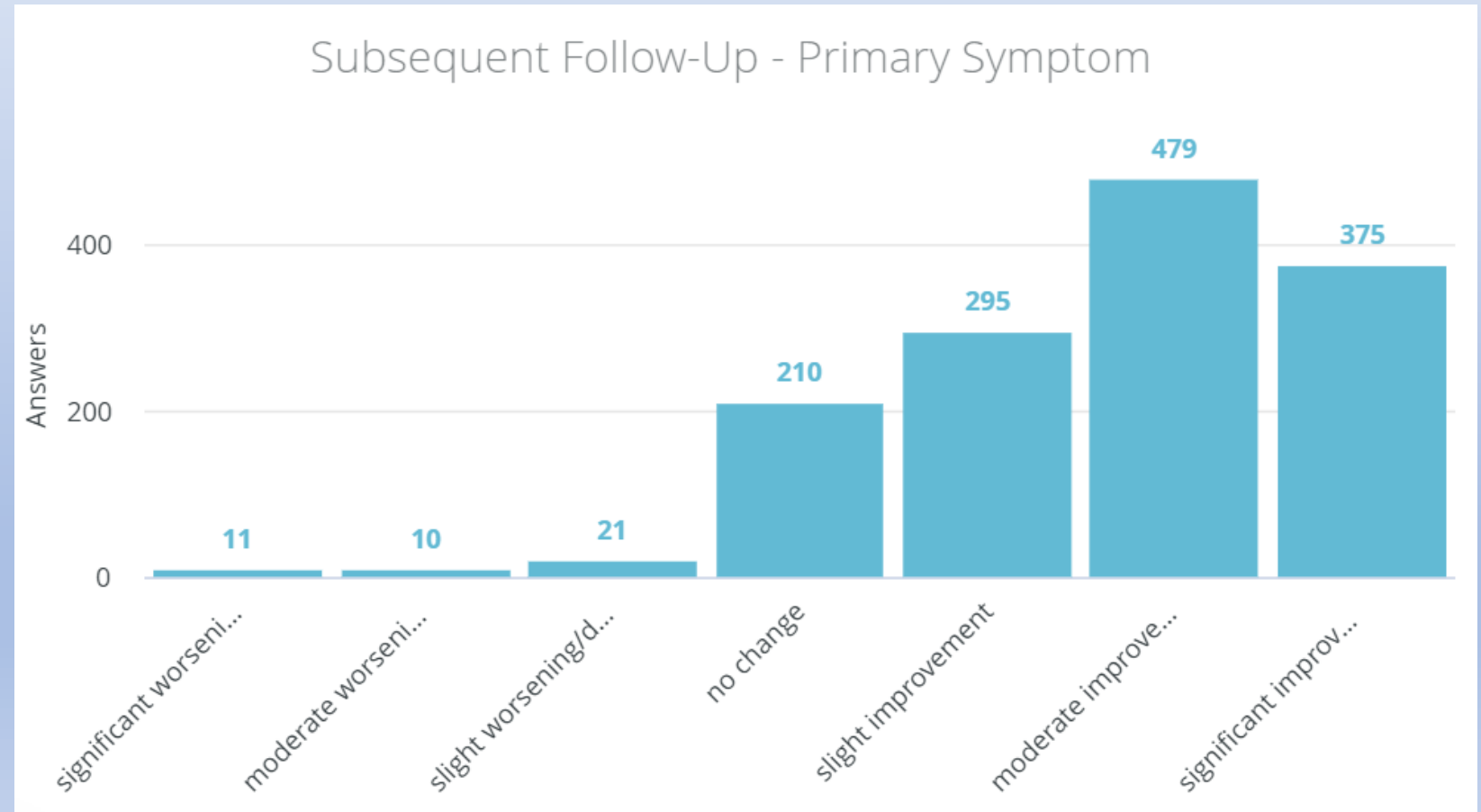
Is cannabis a real medication?

YES

- Pain
- Insomnia
- Tremors
- Anxiety/PTSD
- Seizures
- Inflammation

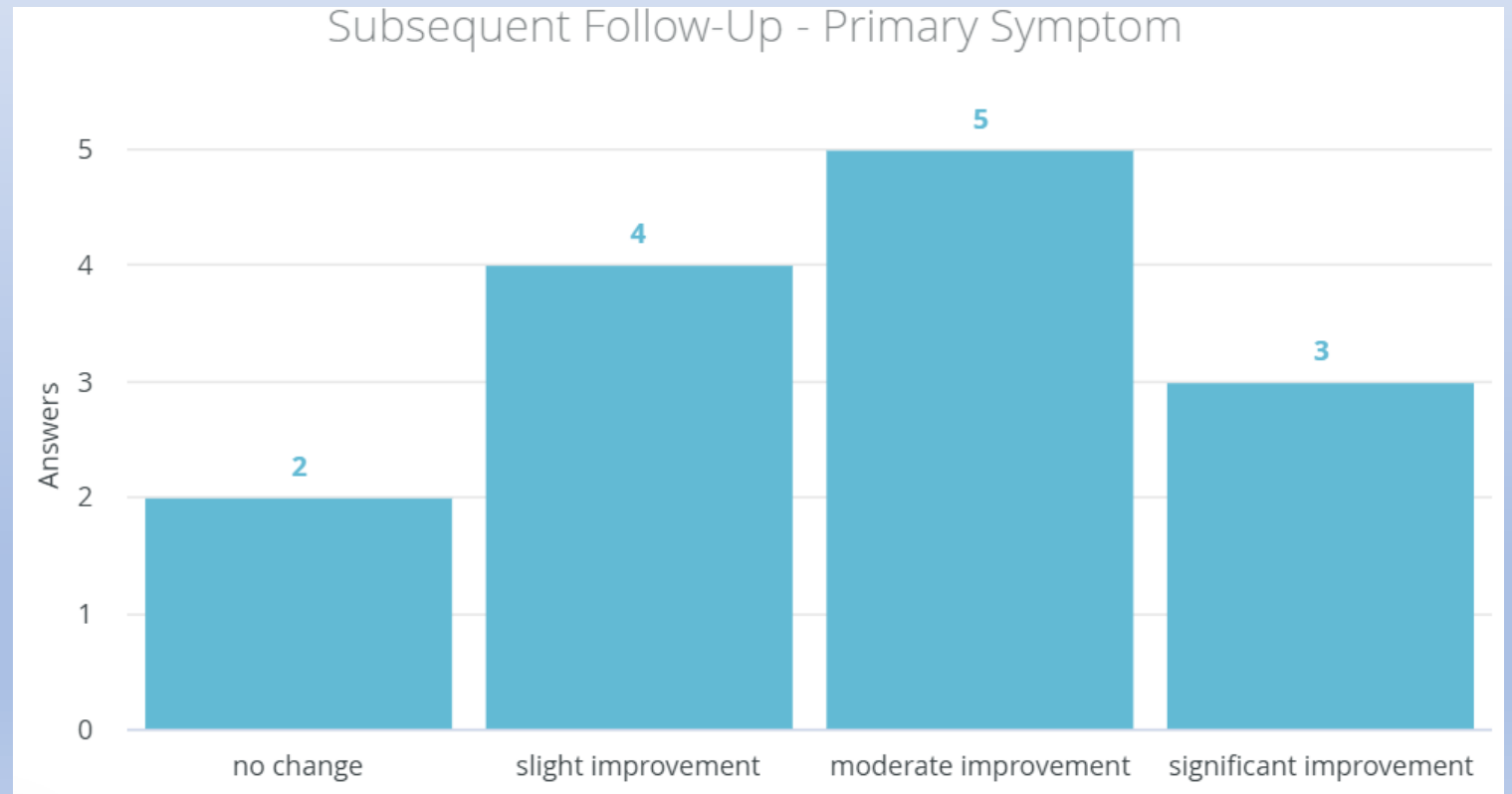
PerceiveMD **PAIN** Stats

- Average dose 25-50 mg/d
- 76% had some improvement @ 1 month
- 82% had some improvement @ 3+ months
- Average pain PRIOR to starting cannabis **7.4/10**
- Average reduction pain 48% (3.8/10)
 - 14% experienced >80% improvement



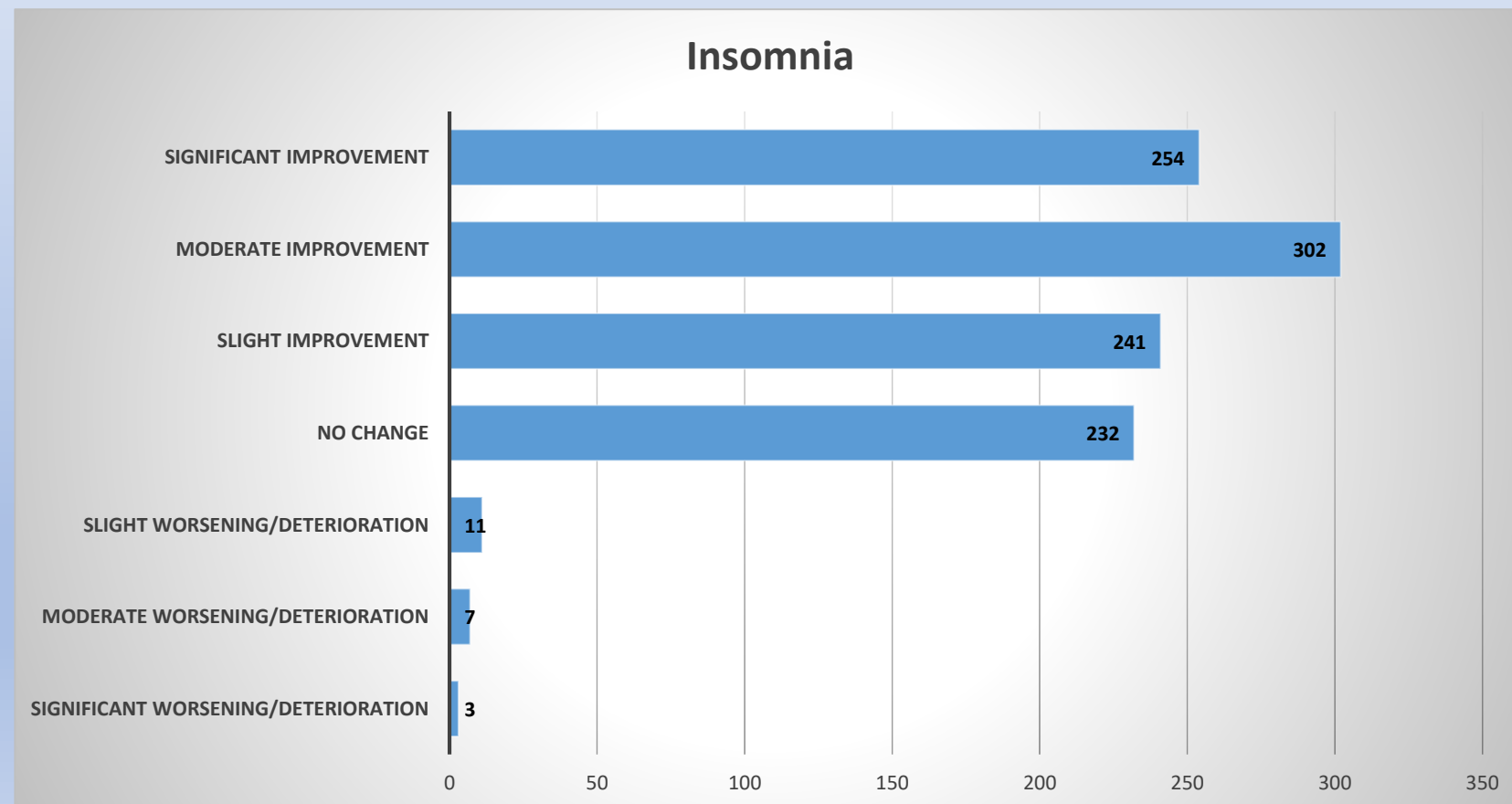
PerceiveMD TREMOR Stats

- Average dose 25 mg/d
- 79% experienced some improvement @1 month



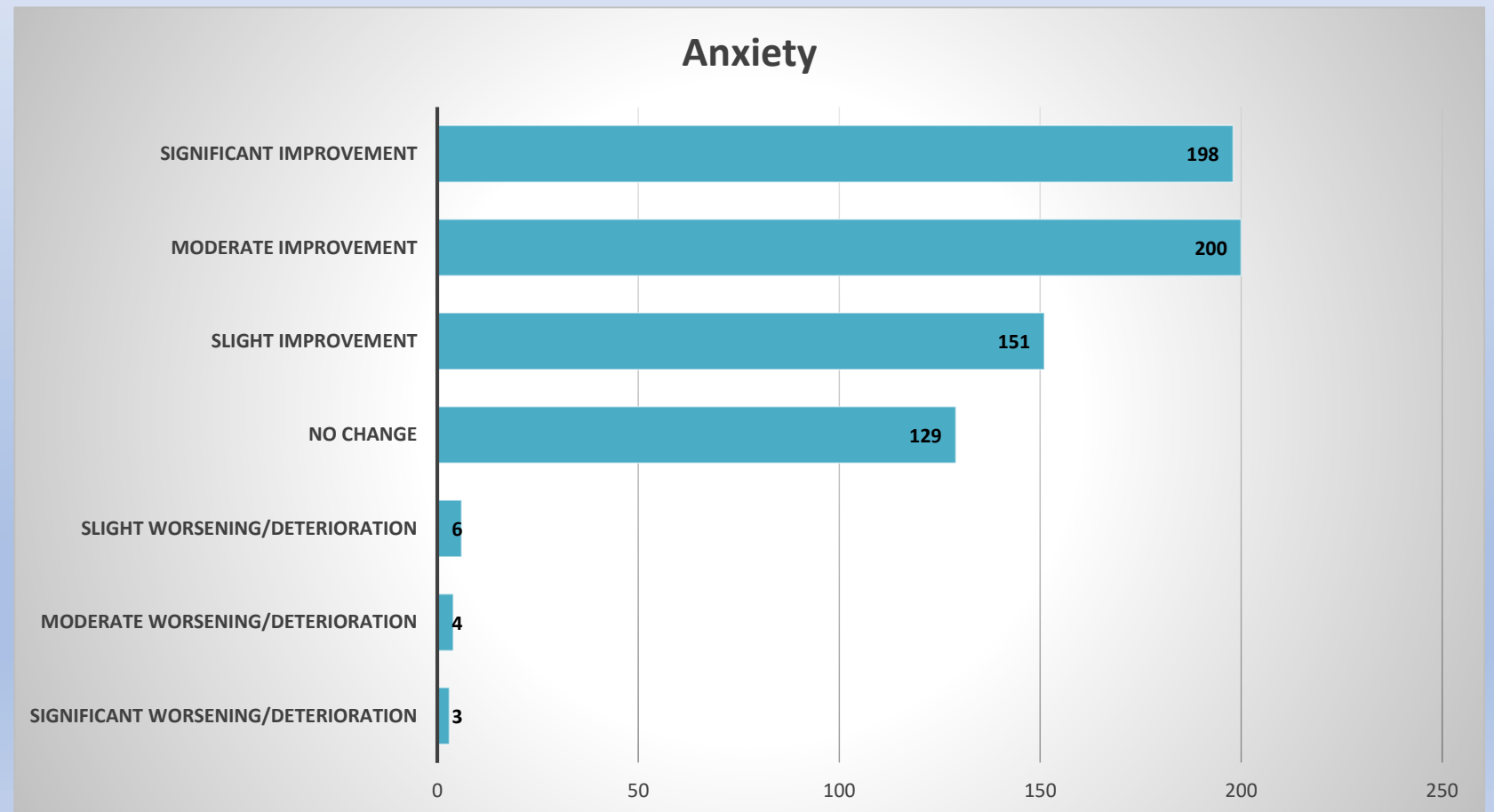
PerceiveMD **INSOMNIA** Stats

- Average dose 26 mg/d (10-50 mg/d)
- 76% had some improvement in sleep @ 1 month
- 83% @ 3+ month



PerceiveMD **ANXIETY** Stats

- Average dose 27mg/d
- 79% showed some improvement with anxiety @ 1 month
- 87% showed some improvement @ 3+ months



Are there risks to taking cannabis?

YES

Side Effects- THC

- Euphoria (“high”)
- Drowsiness
- Imbalance
- Dizziness
- Dry mouth
- Palpitations
- Worsening of anxiety and depression – mostly with long term use of higher doses
- Hallucinations – usually dose dependent (i.e. higher dose = higher chance)

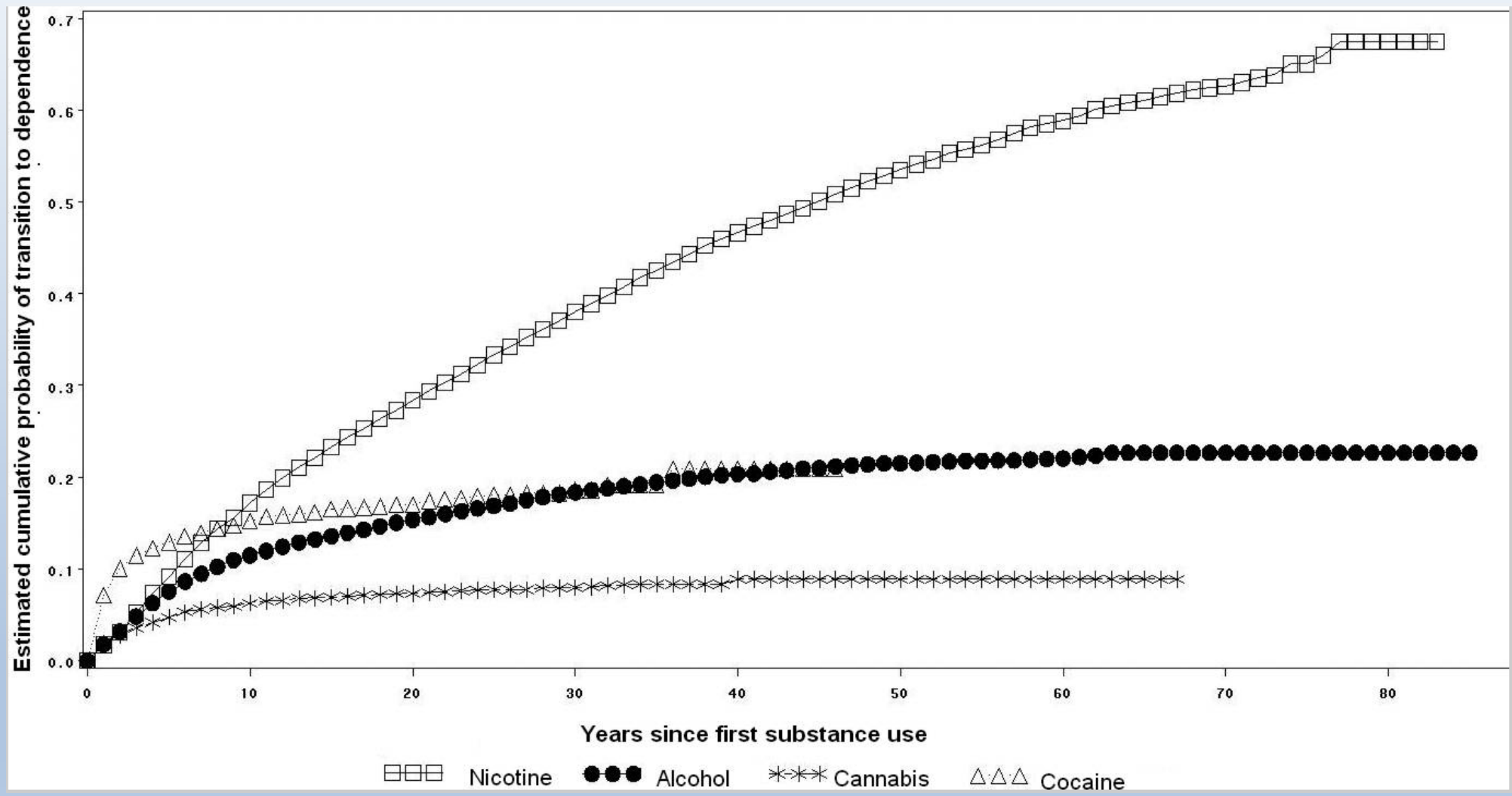


Side Effects - CBD

- Loose stool/diarrhea
- Feel energized (rare)
- Dizziness or light-headedness (possibly more due to THC component)



Addictions - THC



Addiction risk - CBD

- No documented risk of addiction or withdrawal symptoms
- Some studies suggest role as intervention for other addictions
 - Cocaine
 - Opioids
 - Other psychostimulants
 - +/- cannabis + tobacco



Should I just get cannabis from a store and try it out myself?

NO

- No medical supervision
 - Dosing
 - Side effects
 - Drug interactions
- No extended benefit coverage/tax deductible
- No product selection help

How much does medical cannabis cost?

- OIL:
 - \$0.09-0.11/mg CBD
 - \$0.09-0.14/mg THC
- Capsule*:
 - \$0.11-0.15/mg CBD
 - \$0.13-0.17/mg THC
- 1000 mg oil ~\$90
 - @ 25mg/d use-> 40 days



Weighing Your Options:
Different Ways to
Consume Cannabis

How do I get seen at PerceiveMD?

- Recently moved to completely virtual and serving entire province of BC
- Referral from GP
- Seen by:
 - Pharmacist
 - Nurse
 - MD
 - Cannabis coach/educator
- Help with:
 - Dosing
 - Side effects
 - Drug interactions
 - Education
 - Compassion pricing



QUESTIONS?

PerceiveMD.ca

1-844-935-2999