

# Cannabis: Effects & Interactions

MacCallum CA, Russo E. Practical considerations in medical cannabis administration and dosing. 2018  
Eadie et al. Duration of Neurocognitive Impairment with Medical Cannabis Use: A Scoping Review. 2021

## Managing Adverse Effects

### MILD / MODERATE EFFECTS

- Encourage patient to reach out to for support
- Use breathing & mindfulness (eg. box breathing)
- Use distraction techniques

### SEVERE EFFECTS

- Recommend patient to safely proceed to ER (eg. someone else to drive)
- Stop cannabis use

### Possible Adjustments to Address the Adverse Effects

- Return to previously tolerated dose
- Add or increase CBD
- Reduce THC dose
- Change Chemovar
- Change route of administration
- Stop cannabis use if risks outweigh benefit

## Adverse Effects

### Most Common

THC - RELATED .....  
 THC & CBD - RELATED

- Dizziness
- Cognitive effects
- Dry mouth
- Anxiety
- Drowsiness
- Fatigue
- Nausea

### Common

THC - RELATED .....  
 THC & CBD- RELATED

- Euphoria
- Blurred Vision
- Headache

### Rare

THC - RELATED .....  
 ROUTE-SPECIFIC

- Orthostatic hypotension
- Psychosis or Paranoia
- Depression
- Ataxia or discoordination
- Tachycardia
- Cannabis hyperemesis syndrome
- Amotivational syndrome

- Diarrhea (due to carrier oil)
- Cough, Phlegm, Diarrhea (smoking)

 [www.safe-cannabis.com](http://www.safe-cannabis.com)  
 [info@dr.carolinemaccallum.com](mailto:info@dr.carolinemaccallum.com)  
 [@camacallum](https://twitter.com/camacallum)  
 [@dr.carolinemaccallum](https://www.instagram.com/dr.carolinemaccallum)

## Drug Interactions - Enzymes

### CYP 3A4

- **Inducers:** may decrease THC and/or CBD concentration  
 Drugs: Carbamazepine, phenobarbital, phenytoin, rifampin, St. John's wort
- **Inhibitors:** may increase THC and/or CBD concentration  
 Drugs: Azole antifungals, clarithromycin, diltiazem, erythromycin, grapefruit, HIV protease inhibitors, macrolides, mifepristone, verapamil
- **Substrates:** CBD is a potential inhibitor of CYP 3A4, and can increase 3A4 substrates. Take Caution with medications with a smaller therapeutic index (e.g. tacrolimus).  
 Drugs: Alprazolam, atorvastatin, carbamazepine, clobazam, cyclosporine, diltiazem, HIV protease inhibitors, buprenorphine, tacrolimus, cyclosporine, phenytoin, sildenafil, simvastatin, sirolimus, verapamil, zopiclone

### CYP 2C9

- **Inducers:** may decrease THC conc. (CBD effect unlikely)  
 Drugs: Amiodarone, fluconazole, fluoxetine, metronidazole, valproic acid, sulfamethoxazole
- **Inhibitors:** may increase THC conc. (CBD effect unlikely)  
 Drugs: Carbamazepine, rifampin
- **Substrates:** THC and/or CBD may increase drug levels, should monitor for toxicity  
 Drugs: Warfarin, rosuvastatin, phenytoin

### CYP 2C19

- **Inducers:** may decrease THC and CBD concentration  
 Drugs: Carbamazepine, rifampin, St. John's wort
- **Inhibitors:** may increase THC and CBD concentration  
 Drugs: cimetidine, omeprazole, esomeprazole, ticlopidine, fluconazole, fluoxetine, isoniazid
- **Substrates:** CBD may increase the level of medications metabolized by 2C19. (THC effect unlikely)  
 Drugs: aripiprazole, citalopram, clopidogrel, diazepam, escitalopram, moclobemide, norclobazam, omeprazole, pantoprazole, sertraline

### CYP 1A1 / 1A2

- **Substrates:** Smoking cannabis can stimulate isoenzymes and increase the metabolism of these medications.  
 Drugs: Amitriptyline, caffeine, clozapine, duloxetine, estrogens, fluvoxamine, imipramine, melatonin, mirtazapine, olanzapine, theophylline

### p-glycoprotein

- **Substrates:** CBD may inhibit p-glycoprotein drug transport. Monitor for toxicity. (THC effect unlikely)  
 Drugs: Dabigatran, digoxin, loperamide