Christchurch Medicines Information Service
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Cannabis-Based Products

- Medicinal cannabis products contain tetrahydrocannabinol (THC) and/or cannabidiol (CBD) in differing concentrations.
- THC and CBD are pharmacologically distinct: they do not have the same mechanisms of action or clinical effects (beneficial or adverse). THC is the main psychoactive constituent responsible for the 'high' derived from cannabis, whereas CBD is less psychoactive.
- All medicinal cannabis products are subject to the requirements of Aotearoa's Medicinal Cannabis Scheme and must meet minimum quality standards. The Ministry of Health maintains a list of products that meet these standards, which can be prescribed by any doctor. Meeting the standard does not mean they have been approved by Medsafe; safety and efficacy have not been assessed for any product unless it has been approved. Currently the only approved products are Sativex® spray (CBD+THC) and Epidyolex® liquid (CBD).

Overall, the evidence for efficacy of cannabis-based products is very limited, and none are funded.

	THC	CBD
Indications **Evidence** **Dose**	**Spasms in multiple sclerosis** Moderate evidence of slight benefit over placebo in RCTs. Sativex® spray: typical starting dose 1-2 sprays/day with maintenance dose in trials 8 sprays/day (maximum 12).	**Paediatric epilepsy syndromes** Moderate evidence of benefit in RCTs. Epidyolex® liquid: 2.5-10 mg/kg BD in trials; however, specialists often use smaller doses in clinical practice.
	Chemotherapy-induced nausea and vomiting Weak evidence for benefit over placebo but no better than conventional antiemetics. Starting doses in trials 2.5-5 mg BD, titrated up to 20 mg/day (given 3-4 times daily).	**Anxiety** Weak evidence for benefit in RCTs and case series.
	Chronic pain Weak evidence for slight benefit in RCTs. Starting dose in trials 2.5 mg BD, titrated up to 15 mg BD.	**Pain** RCTs have not shown benefit over placebo.
Common adverse reactions	**Incidence >10%** Drowsiness, dizziness, dry mouth, anxiety, nausea and vomiting, impaired concentration, memory and coordination	**Incidence >10%** Drowsiness, diarrhoea or vomiting, loss of appetite, weight loss, increased transaminases
	Incidence 1-10% Euphoria, blurred vision, increased appetite	
Pharmacokinetics	Metabolised by CYP2C9, 2C19 and 3A. Half-life 25-36 hours.	Metabolised by CYP3A and 2C19, and UGT1A7/9 and 2B7 (to active metabolite). Half-life 60 hours.
Interactions	Additive CNS adverse effects with other CNS depressants. THC concentrations may be increased or decreased by CYP2C9, 2C19 and 3A inhibitors or inducers, respectively.	May inhibit CYP2C19, 2C8/9, 3A4/5 and 1A2, P-glycoprotein, and UGT1A9 and 2B7, and therefore may increase concentrations of substrates for these enzymes/transporters. CBD concentrations may be increased or decreased by CYP3A and 2C19 inhibitors or inducers, respectively.
Legislation	**Cannabis oral liquids/spray** THC >2% of total product (with or without CBD): Class B1 CD. Prescribe on CD prescription. 90-day period of supply dispensed monthly. Store in CD cabinet (except for Sativex®: store in fridge). Record in CD register. **Dried cannabis plant** THC and CBD: Class C1 CD. Prescribe on conventional prescription form. 90-day period of supply dispensed monthly. Store in CD cabinet. Best practice to record in CD register but no legal requirement.	**Oral liquids/spray** Prescription medicine: not a CD. Prescribe on conventional prescription form. 90-day period of supply and can dispense stat. Store on dispensary shelf.

RCTs = Randomised Controlled Trials; CNS = Central Nervous System; CD = Controlled Drug

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