

Cannabidiol oil – potential adverse effects and drug interactions

Prescribing tip for information only

Cannabis is made up of large number of different components the two most important of which are CBD (cannabidiol) and THC (tetrahydrocannabinol). The therapeutic benefits of cannabis are associated with the cannabidiol component. CBD oil is widely sold in health food stores as a food supplement. Its production is not regulated and therefore the quality and content of the products available cannot be guaranteed. **Due to an increasing popularity of self-administration of over-the-counter bought CBD, doctors and pharmacists should be aware of its potential interactions and adverse effects.**

The information available on drug interactions is limited and restricted mainly to theoretical interactions and in vitro studies. Data suggests that CBD and THC act as enzyme inhibitors of cytochrome P-450 isoenzymes. Therefore caution should be taken when cannabis-based medicines are co-administered with any medications that are CYP inhibitors or inducers.

Table 1: Interactions with THC and CBD

Interacting medication	Interaction
Alcohol	Additive CNS depressant effects
Antiplatelets / anticoagulants	Increase risk of bleeding
Chlorpromazine	Increase in clearance of chlorpromazine
Ketoconazole	Increase in CBD and THC concentration
Rifampicin	Reduction in CBD and THC concentration
Theophylline	Increase in clearance of theophylline

Table 2: Interactions with THC

Interacting medication	Interaction
Amphetamines, methylphenidate and modafinil	Increase in effects of amphetamines and stimulants
Cocaine	Increase in effects of cocaine
Indinavir	Reduction in indinavir concentration
Opioids	Synergistic effect with opioids
Nicotine	Increase in effects of nicotine
Pentobarbital	Increase in adverse effects of pentobarbital
Propranolol	Reduction in adverse effects of cannabis

Table 3: Interactions with CBD

Interacting medication	Interaction
Anticonvulsants	Increase in concentration and rise in LFTs of some anticonvulsants
Clobazam	Increase in clobazam concentration
Phenytoin	Increase in phenytoin concentration

Due to the lack of experience with cannabis-based medicinal products there may still be undiscovered drug drug interactions not stated in the tables above. Different cannabis-based medicinal products will contain varied concentrations of THC and CBD which may impact on the DDIs seen. It is recommended that any suspected adverse reaction is reported via [the yellow card scheme](#).

The most common adverse effects found in studies were somnolence, decreased appetite, vomiting, diarrhoea and elevated liver enzymes. Information regarding CBD safety is limited to few human studies and information should be interpreted cautiously. Further studies are needed to evaluate the full safety profile.

For further information regarding potential adverse events with CBD oil a specific UKMi Q&A has been published: [Cannabis based medicinal products - potential drug interactions](#)

To contact the Medicines Optimisation Team please phone 01772 214302