

Cannabidiol: What you should dare to ask and know

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In hemp (*Cannabis sativa*) are found many cannabinoids derived from the same precursor, cannabigerol (CBG). Specific enzymes convert CBG into other molecules, the best known of which are tetrahydrocannabinol (THC), the major addictive psychotropic of cannabis, and cannabidiol (CBD), which is not addictive but whose side effects deserve to be better known.

CBD, an active substance most often of natural origin, is part of the phyto-cannabinoids. CBD is present in the dried cannabis flower and in products of complex composition which, to be marketed, must be, according to the regulations, low in THC (the most psychoactive substance in cannabis). Many products containing CBD are thus marketed: oils, cosmetic products, food products (alcoholic or non-alcoholic beverages, sweets, herbal teas) and products for veterinary use [1].

Unlike THC, CBD does not fall under the regulation of narcotics or psychotropic drugs. However, the decree of December 30, 2021 indicates that products containing CBD cannot, for fear of being subject to criminal penalties, make therapeutic claims, unless they have been authorized as a medicinal product¹. With regard to the European regulation on novel foods, the European Food Safety Authority (EFSA) has suspended the evaluation of CBD pending additional data on safety of use.

In the human body, CBD binds to dozens of different receptors, including those for serotonin and dopamine, and to excitatory and inhibitory amino acids. The data observed “in vitro” (cell cultures) and in animals cannot be extrapolated to humans in terms of clinical, therapeutic or adverse effects. Apart from its use in adjuvant therapy [2] at high doses in drug-resistant epilepsy, scientific evidence for a therapeutic use of CBD alone is lacking.

Often presented under the name of "light cannabis", "legal cannabis" or "wellness cannabis", CBD is claimed to promote "well-being", with users reporting purposes of use to relieve anxiety, stress or pain, to improve sleep, or even to help withdrawal from cannabis (rich in THC) [3]. It is then difficult to distinguish between a proper effect of the substance (pharmacological) and a placebo effect.

¹ This is the case, in particular, for a drug containing exclusively purified cannabidiol, Epidyolex, authorized in France for certain forms of drug-resistant epilepsy, and which falls under the regulations for poisonous substances.

CBD can induce adverse effects (digestive disorders, liver toxicity, drowsiness, fatigue), whose frequency increases with the dose per intake and the daily dose. There is also a risk of interaction with many drugs, the higher the dose of CBD consumed. An increase in the blood levels of some of these drugs, and therefore of their adverse effects, may result.

As CBD is not a substance classified as a narcotic, its use when driving a car is not prohibited. However, products containing CBD always contain THC, but in variable amounts, which the consumer may not be clearly aware of. Depending on the THC concentration, the amount and the frequency of use of the CBD product, it is therefore possible for a CBD user to test positive for THC during sport practice or in the context of road safety.

In sport, the benefits of CBD, especially during the recovery phases, are not well established, and one should not ignore its potential side effects such as decreased alertness or digestive disorders, which may be incompatible with sports performance. CBD is not a doping substance. Nevertheless, its use in sportsmen can lead, as already mentioned, to a positive test for THC [4].

The French National Academy of Medicine draws attention to the risks associated with the use of CBD and proposes that :

- information on the packaging of non-pharmaceutical products containing CBD be improved: risk of drug interactions; procedure for reporting an adverse reaction; risks associated with driving; risk of testing positive for THC in the context of road safety or sport;
- users should be informed on the dose in milligrams of CBD consumed per intake, and that, if it exceeds 50 mg/day, this intake should be preceded, in the case of ongoing drug addiction treatment, by prior research, with a health professional (doctor, pharmacist), of possible drug interactions, and that it should not lead to a discontinuation of drug addiction treatment ;
- given the diversity of CBD-containing products, the regulations and conditions of access to these products be harmonized, so that users have access to information, and even appropriate support, in the event of use of these products ;
- finally, that research explore the hypothesis that smoking CBD may constitute a behavioral incentive to use cigarettes (tobacco or cannabis).

References

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- [2] Alvarez J.C. et al, Cannabidiol (CBD): what to remember? Tox Anal Clin, 2022, 34, p. 211-214
- [3] Authier N. Le Petit Livre du CBD, Op cit, 64-65
- [4] Mareck U. et al, Preliminary data on the potential of unintentional antidoping rule violations by permitted cannabidiol (CBD) use, Drug Test Anal, 2021, 13, pp. 539-549