

03 - Psychotropic effects of caffeine

Psychotropic effects of caffeine

902 The Maudsley® Prescribing Guidelines in Psychiatry CHAPTER 12 General effects of caffeine ■
■ Acute use can increase systolic and diastolic blood pressure (BP) by up to 10mmHg for up to 4 hours.³ Chronic moderate use probably has little effect on BP.⁹ ■ ■ May enhance reinforcing effects of nicotine and possibly other drugs of misuse.^{10,11} ■ ■ Caffeine has important psychotropic effects (Table 12.2), may worsen existing psychiatric illness and may interact with psychotropic drugs. ■ ■ Caffeine is an antagonist at adenosine A1 and A2A receptors, thus stimulating dopamine pathways. Psychotropic effects of caffeine Withdrawal An established withdrawal syndrome exists; symptoms include headache, depressed mood, anxiety, fatigue, irritability, nausea, dysphoria and craving.¹² Pharmacokinetics ■ ■ Absorption: Rapid after oral administration, especially in liquid form. ■ ■ Metabolism: ■ ■ Half-life of 2.5–4.5 hours. ■ ■ Metabolised by CYP1A2, a hepatic cytochrome enzyme that exhibits genetic polymorphism. This may account for the large interindividual differences that are seen in the ability to tolerate caffeine.¹³ Note that CYP1A2 is induced by smoking and inhibited by a number of drugs such as fluvoxamine. ■ ■ This metabolic pathway may become saturated at higher doses.¹⁴ ■ ■ Interactions (Table 12.3): ■ ■ Caffeine competitively inhibits CYP1A2. Chronic caffeine use may increase plasma levels of drugs metabolised by CYP1A2. Plasma levels of some drugs may be reduced if caffeine is withdrawn. Table 12.2 Dose and psychotropic effects of caffeine. Dose Psychotropic effect Generally Central nervous system stimulation Increase catecholamine release, particularly dopamine⁶ Low to moderate dose^{2,7} Elation Impulsivity Peacefulness Large doses >600mg/day⁸ (sensitive [non-tolerant] individuals may experience effects at lower doses; tolerance develops in long-term users) Anxiety Insomnia Psychomotor agitation Excitement Rambling speech Delirium Psychosis

Revision #1

Created 2026-01-04 20:18:16 UTC by Omar Ayman

Updated 2026-01-04 20:18:16 UTC by Omar Ayman