

EEG & Drug Effects

Family	Drugs	Purpose	EEG Impact
Neuroleptics	examples	sedative	sedative increase delta, theta and beta above 20Hz and decrease alpha and beta below 20Hz.
Neuroleptics	examples	non-sedative types	decrease alpha and increase beta in general.
Anxiolytics			decrease alpha and increase beta especially 13-20Hz beta
Benzodiazepines	Valium and Ativan		decrease alpha and increase 20-30Hz beta
SSRIs	Prozac, Paxil, and Zoloft	a class of antidepressants used in the treatment of depression, anxiety disorders, and some personality disorders.	decrease alpha in frontal alpha and a mild increase in 18-25Hz beta.
MAO Inhibitors		antidepressants	tend to increase 20-30Hz beta while decreasing all other frequencies
Tricyclic antidepressants	Imipramine and Amitriptyline	useful in depressed patients with insomnia, restlessness, and nervousness	increase delta and theta while decreasing alpha and increases beta 25Hz and up band
	Lithium	used for the treatment of manic/depressive (bipolar) and depressive disorders	increases theta, mildly decreases alpha and increases beta
Amphetamines	Adderall, Vyvanse, and Dexedrine.	a group of drugs that act by increasing levels of norepinephrine, serotonin, and dopamine in the brain	decrease slow wave activity and increases beta in the 12-26Hz range
Marijuana		recreational	increases frontal low frequency alpha – affects EEG for three days
Opiates	Opium, Hydromorphone, Oxymorphone, Heroin, Morphine, Oxycodone, Talwin, Codeine, Methadone, Meperidine, Hydrocodone, Vicodin		generate high amplitude slow alpha in the 8Hz range
Barbiturates	Brevital thiamyl Surital thiopental Pentothal, amobarbital, Amyta, pentobarbital, Nembutal,	produce a wide spectrum of central nervous system depression, from mild sedation to coma,	Increased beta at 25-35 Hz amplitude

	secobarbital, Seconal, Tuinal Phenobarbital, Luminal, mephobarbital, Mebaral	and have been used as sedatives, hypnotics, anesthetics, and anticonvulsants	
Caffeine			Increases beta and decreases slower waves

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