

### Drug Effects on EEG

Family	Drugs	Purpose	EEG Impact
Neuroleptics	Haldol, Prolixin, Thorazine, Mellaril	sedative	increase delta, theta and beta above 20 Hz and decrease alpha and beta below 20 Hz.
Neuroleptics	Seroquel, Risperdal, Geodone	non-sedative and antipsychotic medications	decrease alpha and increase beta in general.
Anxiolytics	Valium, Halcion, Librium, Dalmane	anxiety relief	decrease alpha and increase beta, especially 13-20 Hz beta
Benzodiazepines	Valium, Xanax, and Ativan	anxiety, panic relief	decrease alpha and increase 20-30 Hz beta
SSRIs	Prozac, Paxil, and Zoloft	a class of antidepressants used in the treatment of depression, anxiety disorders, and some personality disorders.	decrease in frontal alpha and a mild increase in 18-25 Hz beta.
MAO Inhibitors	Marplan, Parnate, Eldepryl	antidepressant	tendency to increase 20-30 Hz 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; increase beta 25 Hz and up band
Antipsychotics	Lithium	used for the treatment of manic/depressive (bipolar) and depressive disorders	increases theta, mildly decreases alpha and increases beta
Amphetamines	Ritalin, 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 increase beta in the 12-26 Hz 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	pain relief	generate high amplitude slow alpha in the 8 Hz range
Barbiturates	Brevital, thiamylal (Surital), thiopental (Pentothal), amobarbital, Amytal, pentobarbital, Nembutal, secobarbital, Seconal, Tuinal, Phenobarbital, Luminal, mephobarbital, Mebaral	produce a wide spectrum of central nervous system depression, from mild sedation to coma, and have been used as sedatives, hypnotics, anesthetics, and anticonvulsants	increase beta at 25-35 Hz amplitude
Caffeine		increases alertness	increases beta and decreases slower waves
Alcohol	All alcoholic beverages	Pleasure, entertainment	Increased Alpha, then Theta increases.

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<b>Drug/Type</b>	<b>Impact/Effect on EEG</b>
<b>Barbiturates</b>	Increases 25-35 Hz beta amplitude
<b>Benzodiazepines</b>	Increase beta
<b>Caffeine</b>	Increases beta and decreases slower waves
<b>Marijuana</b>	Effects EEG for three days
<b>SSRIs</b>	Decrease alpha and increase beta

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