

Undesirable Effects and Complications of Treatment with Hypnotic Drugs at Therapeutic Doses (*modified from Estivill et al.*)

Class/drug (half-life)	Hangover effect	Rebound insomnia	Tolerance	Dependence/abuse	Comments
Hypnotic BZDs					
Short (<6h)					
triazolam	0	+++	+++	++	Can have depressant effect on respiration compared with other BZDs
midazolam	0	+++	+++	++	
brotizolam	0	+++	+++	++	
Intermediate (6-24h)					
loprazolam	+ / ++	++ / +++	++ / +++	++	At high doses, hangover effect greater
lormetazepam	+ / ++	++ / +++	++ / +++	++	
flunitrazepam	+ / ++	++ / +++	++ / +++	++	
Long (>24h)					
flurazepam	+++	0 ^a	+	++	Should be avoided because of increased risk of falling and fractures
nitrazepam	+++	0 ^a	+	++	
quazepam	+++	0 ^a	+	++	
Hypnotic non-BZDs					
Short					
zolpidem	0	+	0	0	Tolerance and hangover effects may occur with overdosage and/or longterm treatment
zopiclone	++	++	+	+	Doses >7.5 mg can increase adverse events without increased efficacy
zaleplon	b	0	may appear after 5 wks	b	No sedative effects are observed the day after administration and no significant psychomotor changes have been reported 5-6h following administration of 10mg at midnight

a. With BZDs that have a long half-life, rebound insomnia is not common and appears later

b. The available data are not conclusive

BZD = benzodiazepine

0 indicates no effect; + indicates slight effects; ++ indicates moderate effects; +++ indicates severe effects

Terzano MG et al. *Insomnia in General Practice. Clin. Drug Invest.* 2005;25(12):745-764

Estivill E, Bove A., Garcia-Borreguero D, et al. *Consensus on drug treatment, definition and diagnosis for insomnia. Clin. Drug Invest.* 2003;23(6):351-85