# Benzodiazepine and Memory

**Benzodiazepines and memory.**
T Roth, T Roehrs, R Wittig, F Zorick
British Journal of Clinical Pharmacology, Vol. 18, Issue S1, February 1984
**Abstract**

Benzodiazepines possess anterograde amnesic properties, disrupting both short-term and long-term memory function. The amount of amnesia is systematically related to dose effects and half-life differences among the benzodiazepines. Memory deficits are found for episodic, semantic, and iconic memory function. The deficits in long-term memory are probably the result of a disruption of consolidation of information in memory and not retrieval from memory. The disruption is produced by rapid sleep onset. Thus the long-term amnesia is really a retrograde effect of sleep and not the anterograde effect of the drug.

**Anterograde amnesia linked to benzodiazepines.**
Mejo, Susan L.
**No article**
The Nurse Practitioner, Oct 1992, 17(10):44, 49-50
**Abstract**

Benzodiazepines, shown to affect memory, can produce anterograde amnesia (i.e., a loss of memory for events occurring forward in time). Following the ingestion of a benzodiazepine, short-term memory is not affected, but long-term memory is impaired. The memory loss may occur because events are not transferred from short-term memory to long-term memory and thus not consolidated into memory storage. Information stored prior to the ingestion of a benzodiazepine is not affected. Memory impairment is more likely in benzodiazepines that have a high benzodiazepine-receptor affinity, that accumulate in the body, that are given in high doses or intravenously, or that are eliminated slowly**. Individuals taking benzodiazepines are often unaware of their memory impairment unless it is pointed out to them.** Elderly clients experiencing memory impairment may be embarrassed to mention the problem. Alternatives to prescribing benzodiazepines include antidepressant medications, exercise or psychotherapy. When prescribing a benzodiazepine, it is important to fully inform patients of the drug's potential side effects and to maintain the lowest effective dose for the shortest period of time.

**Benzodiazepine Pharmacology and Central Nervous System–Mediated Effects**
Charles E. Griffin, Adam M. Kaye, Franklin Rivera Bueno and Alan D. Kaye
Ochsner Journal June 2013, 13 (2) 214-223;
**Abstract**

**Background** Owing to the low therapeutic index of barbiturates, benzodiazepines (BZDs) became popular in this country and worldwide many decades ago for a wide range of conditions. Because of an increased understanding of pharmacology and physiology, the mechanisms of action of many BZDs are now largely understood, and BZDs of varying potency and duration of action have been developed and marketed. Although BZDs have many therapeutic roles and BZD-mediated effects are typically well tolerated in the general population, side effects and toxicity can result in morbidity and mortality for some patients. The elderly; certain subpopulations of patients with lung, liver, or kidney dysfunction; and patients on other classes of medication are especially prone to toxicity.

**Methods** This review details the present knowledge about BZD mechanisms of action, drug profiles, clinical actions, and potential side effects. In addition, this review describes numerous types of BZD-mediated central nervous system effects.

**Conclusion** For any patient taking a BZD, the prescribing physician must carefully evaluate the risks and benefits, and higher-risk patients require careful considerations. Clinically appropriate use of BZDs requires prudence and the understanding of pharmacology.