

TABLE 3

## ADVERSE DRUG INTERACTIONS IN DENTISTRY: SEDATIVES AND ANXIOLYTICS.

EXAMPLE OF ADVERSE DRUG INTERACTION*	SIGNIFICANCE RATING†	CLINICAL IMPLICATIONS
<b>Summation Interactions With Central Nervous System Depressants</b> Diazepam and alcohol Antihistamines and barbiturates	1	In combination, central nervous system depression is additive for sedatives and anxiolytics; loss of consciousness, respiratory depression and death are possible complications.
<b>Chloral Hydrate Interactions</b> Alcohol	1	Each drug limits the metabolism of the other; depression is greater than additive.
Warfarin and dicumarol	4	Competition for plasma protein binding of anticoagulant causes hypoprothrombinemia.
Furosemide	2	Rare reports of diaphoresis, tachycardia, hypertension.
<b>Barbiturate Interactions</b> Valproic acid and phenobarbital	3	Elimination rate of barbiturates is decreased; sedation is prolonged and enhanced.
Warfarin	5	Bleeding risk increases when chronic barbiturate therapy is discontinued.
<b>Benzodiazepine Interactions</b> <b>Drugs increasing rate of metabolism</b> Rifampin	3	Bioavailability of triazolam and oral midazolam is significantly reduced.
Carbamazepine	3	Bioavailability of triazolam and oral midazolam is significantly reduced.
<b>Drugs decreasing rate of metabolism</b> Verapamil and diltiazem	2	Level of sedation is increased and prolonged.
Cimetidine	3	Level of sedation is increased and prolonged.
Erythromycin and azole antimycotics	2	Bioavailability of triazolam and oral midazolam is markedly increased.†
Protease inhibitors: indinavir and nelfinavir	2	Bioavailability of triazolam and oral midazolam is markedly increased.

\* Ratings are specific to dental therapy— that is, drug therapy occurs before the dental appointment; doses are within the range recommended in dentistry; local anesthetics are used for regional anesthesia; sedation regimens are prescribed for only one day's duration.

† Previously discussed by Hersh.<sup>2</sup>

sedative commonly used for sedation of preschool children in pediatric dentistry,<sup>52,53</sup> has been implicated in various drug interactions. Chloral hydrate, when administered with other sedatives, may increase levels of CNS depression. This interaction may permit practitioners to decrease the doses of both CNS depressants and, therefore, limit the side effects of the

individual drugs. A reduced dose of chloral hydrate combined with the sedative antiemetic promethazine has been shown to decrease the incidence of nausea and vomiting appreciably.<sup>54,55</sup> Similarly, the use of N<sub>2</sub>O in combination with chloral hydrate may improve the level of sedation. However, this therapeutic advantage may be lost when N<sub>2</sub>O is used in

combination with higher doses of chloral hydrate, because the combination may increase CNS depression to such an extent that the child's protective reflexes become compromised.<sup>37</sup>

*Alcohol.* Beyond the summation of CNS depressant effects one would expect, the combination of chloral hydrate with alcohol potentiates the effect of alcohol by altering its