
TABLES

S.1. Signs and Symptoms of Agent Exposure	xxiii
1.1. Symptom Frequency for 18,495 Gulf War Veterans Evaluated in the Comprehensive Clinical Evaluation Program	4
3.1. Lewisite: Attributes and Responses	19
3.2. Incapacitating Levels of Lewisite	21
3.3. Chemical and Physical Properties of Phosgene Oxime	28
3.4. Chemical and Physical Properties of Sulfur Mustard	33
3.5. Effects of Exposure to Mustards (H or HD)	41
4.1. Relative Lethalities of Selected Natural and Synthetic Poisons	54
4.2. Comparative Lethality of Some Toxins and Chemical Agents in Mice	57
4.3. Exposure Effects of Ricin	62
4.4. Effects of Varied Trichothecene (T-2) Exposures	76
5.1. Nerve Agent Chemical Structure	108
5.2. Persistence of Nerve Agents	111
5.3. Anticholinesterase Potency of Organophosphates	118
5.4. Estimates of Nerve Agent Lethality or Incapacitation to Humans	127
5.5. Nerve Agent Exposure Limits Established by the U.S. Army Surgeon General	128

5.6.	Molar Concentration of Agent Required to Inhibit Half of Enzyme Activity	137
5.7.	Results of Other Delayed-Neuropathy Studies	138
5.8.	Signs and Symptoms Following Short-Term Nerve Agent Exposure	141
5.9.	Severity Classifications for Organophosphate Pesticide Poisoning	142
5.10.	Signs and Symptoms in Patients with Moderate to Severe Sarin Exposure	143
5.11.	Incidence of Symptoms in Workers Accidentally Exposed to Tabun and Sarin (mild cases)	144
5.12.	Signs and Symptoms of Dermal Exposures to Nerve Agents	151
5.13.	Summary of Published Work on Chronic Effects of Long-Term Exposure to Small or Subclinical Organophosphate Quantities	161
5.14.	Summary of Published Work on Delayed Effects of Acute or Symptomatic Organophosphate Intoxications	162
5.15.	Estimates of Threshold Levels for Eye Effects of Selected Nerve Agents	183
5.16.	Estimates of Incapacitating Levels of Selected Nerve Agents	183
B.1.	Chemical and Physical Properties of Tabun	196
B.2.	Chemical and Physical Properties of Sarin	197
B.3.	Chemical and Physical Properties of Soman	198
B.4.	Chemical and Physical Properties of Cyclosarin	199
B.5.	Chemical and Physical Properties of Thiosarin	200
B.6.	Chemical and Physical Properties of VX	201
B.7.	Dermal Exposures to Nerve Agent Required for Lethality to Humans	202
B.8.	Dermal Exposures to Nerve Agent: Other Effect Thresholds for Humans	202
B.9.	Exposures to Nerve Agent Vapor Required for Lethality or Incapacitation of Rhesus Monkeys	203

B.10. Animal Performance Effects of Nerve Agent Exposures	203
B.11. Signs and Symptoms Comparison, Percentage Reduction in AChE Activity	204