

TABLE OF CONTENTS

	Page	
CHAPTER 1	GENERAL INFORMATION	
Paragraph 101.	Purpose of AMedP-6(B), Part I	1-1
102.	General Impact of Nuclear Weapons	1-1
CHAPTER 2	CONVENTIONAL AND NUCLEAR WEAPONS - ENERGY PRODUCTION AND ATOMIC PHYSICS	
SECTION I	- GENERAL	
Paragraph 201.	Introduction	2-1
SECTION II	- MECHANISMS OF ENERGY PRODUCTION	
Paragraph 202.	Definition of Explosion	2-1
203.	Conventional Chemical Explosion	2-1
204.	Nuclear Detonations	2-2
205.	Elements and Atomic Structure	2-2
206.	Isotopes	2-3
207.	Atomic Mass Unit	2-5
208.	Symbols and Notation	2-6
209.	Fission	2-6
210.	Critical Mass	2-7
211.	Fusion	2-10
SECTION III	- RADIOACTIVITY AND NUCLEAR RADIATION	
Paragraph 212.	General	2-10
213.	Radioactivity	2-10
214.	Measurement of Radioactivity	2-11
215.	Nuclear Radiation	2-13
216.	Interaction With Matter	2-14
217.	Gamma Interaction	2-16
218.	Interaction of Charged Particles	2-18
219.	Specific Ionization	2-18
220.	Stopping Power	2-19
221.	Half-Value Layer	2-19
222.	Neutron Interaction	2-20
223.	Elastic Collisions	2-21
224.	Inelastic Collisions	2-22
225.	Neutron-to-Gamma Ratios	2-23
CHAPTER 3	EFFECTS OF NUCLEAR EXPLOSIONS	
SECTION I	- GENERAL	
Paragraph 301.	Introduction	3-1
302.	General Effects of Nuclear Explosions	3-1
303.	Initial Energy Transfer and Formation of Fireball	3-2
304.	Types of Bursts	3-3

	Page
SECTION II - BLAST	
Paragraph 305. Formation of Blast Wave	3-4
306. Propagation of Blast Wave in Air	3-5
307. Static Overpressure and Dynamic Pressure	3-6
308. Blast Loading	3-9
309. Drag Loading	3-10
310. Shock Waves in Other Media	3-10
SECTION III - THERMAL RADIATION	
Paragraph 311. Formation of Thermal Radiation	3-11
312. Propagation of Thermal Energy	3-11
313. Rate of Thermal Emission	3-12
314. Shielding	3-13
315. Yield and Altitude	3-13
316. Thermal Effects	3-14
SECTION IV - NUCLEAR RADIATION	
Paragraph 317. Sources of Nuclear Radiation	3-15
318. Initial Radiation	3-16
319. Residual Radiation	3-17
320. Fallout	3-17
CHAPTER 4 BIOLOGICAL EFFECTS OF A NUCLEAR EXPLOSION	
SECTION I - GENERAL	
Paragraph 401. Introduction	4-1
SECTION II - BLAST INJURY	
Paragraph 402. General	4-1
403. Direct Blast Injury	4-1
404. Indirect Blast Wind Drag Forces	4-3
405. Missile Injury	4-3
406. Crush and Translational Injuries	4-5
SECTION III - THERMAL INJURY	
Paragraph 407. Mechanism of Injury	4-6
408. Thermal Effects	4-6
409. Thermal Energy and Burns to Exposed Skin	4-6
410. Flash Burns Under Clothing	4-7
411. Flame Burns	4-8
412. Eye Injuries	4-8
CHAPTER 5 BIOPHYSICAL AND BIOLOGICAL EFFECTS OF IONIZING RADIATION	
SECTION I - GENERAL	
Paragraph 501. Introduction	5-1

	Page
SECTION II - BASIC BIOPHYSICAL ACTION OF IONIZING RADIATION	
Paragraph 502. Nuclear Radiation	5-1
503. Gamma Radiation	5-2
504. Neutron Radiation	5-2
505. Beta Radiation	5-4
506. Alpha Radiation	5-5
507. Radiochemical Action	5-6
SECTION III - CELLULAR EFFECTS OF IONIZING RADIATION	
Paragraph 508. General	5-7
509. Relative Cellular Radiosensitivity	5-8
510. Relative Organ Radiosensitivity	5-9
511. Radiation-Induced Chromosome Damage	5-9
512. Genetic Effects	5-10
513. Cell Kinetic Effects	5-10
514. Bone-Marrow Kinetics	5-11
515. Erythropoietic	5-11
516. Myelopoietic	5-12
517. Thrombopoietic	5-12
518. Gastrointestinal Kinetics	5-13
SECTION IV - SYSTEMIC EFFECTS OF WHOLE-BODY IRRADIATION	
Paragraph 519. General	5-14
520. Median Lethal Dose (LD ₅₀)	5-14
521. Reproductive Cell Kinetics and Sterility	5-18
522. Recovery	5-18
SECTION V - DELAYED EFFECTS	
Paragraph 523. General	5-21
524. Carcinogenesis	5-21
525. Cataract Formation	5-21
526. Chronic Radiodermatitis	5-22
SECTION VI - INTERNAL IRRADIATION	
Paragraph 527. Introduction	5-22
528. Incorporation of Radioactive Material	5-23
529. Elimination of Isotopes	5-24
CHAPTER 6 GENERAL MEDICAL EFFECTS OF NUCLEAR WEAPONS: DIAGNOSIS, TREATMENT, AND PROGNOSIS	
SECTION I - GENERAL	
Paragraph 601. Introduction	6-1
SECTION II - BLAST INJURIES	
Paragraph 602. General	6-1
603. Diagnosis	6-1

	Page
Paragraph 604. Treatment	6-1
SECTION III - THERMAL INJURIES	
Paragraph 605. General	6-2
606. Diagnosis	6-2
607. Area of Burn	6-2
608. Involvement of Critical Organs	6-3
609. Depth of Burn	6-4
610. Treatment	6-4
611. Care of Burn Wound	6-6
SECTION IV - RADIATION INJURY AND COMBINED INJURY	
Paragraph 612. General	6-6
613. Clinical Course of Radiation Sickness	6-7
614. Hematopoietic Syndrome	6-17
615. Gastrointestinal Syndrome	6-17
616. Neurovascular Syndrome	6-19
617. Diagnosis	6-20
618. Decontamination of Patient	6-23
619. Initial Treatment for Patients With Whole-Body Radiation Injury	6-24
620. Diagnosis and Treatment of Patient With Combined Injuries	6-25
621. Management of Infection	6-25
622. Future Concerns for Management of Radiation Injuries	6-26
623. Effect of Radiation Injury on Response to Trauma	6-27
624. Effect of Injuries on Response to Radiation Sickness	6-28
SECTION V - PUBLIC HEALTH ASPECTS OF NUCLEAR WARFARE	
Paragraph 625. Epidemic Disease Hazards Caused by Nuclear War	6-30
626. Biomedical Impact of Nuclear Winter	6-31
SECTION VI - PSYCHOLOGICAL ASPECTS OF NUCLEAR WARFARE	
Paragraph 627. General	6-31
628. Diagnosis	6-32
629. Factors Determining Response	6-32
630. Treatment	6-33
631. Prevention	6-34
CHAPTER 7 MEDICAL PLANNING AND OPERATIONS IN NUCLEAR WAR	
SECTION I - GENERAL	
Paragraph 701. Introduction	7-1
SECTION II - STAFF-LEVEL MEDICAL PLANNING AND OPERATIONAL ACTIVITIES	
Paragraph 702. General	7-2
703. Organization of the Medical Support System	7-2
704. Mobility of Medical Support	7-3

	Page
Paragraph 705. Coordination with other Allies	7-3
706. Casualty and Damage Assessment	7-3
707. Logistical Support System	7-4
708. Personnel and Medical Unit Requirements	7-5
709. Command Radiation Guidance	7-5
SECTION III - MEDICAL UNIT PLANNING AND OPERATIONAL ACTIVITIES	
Paragraph 710. General	7-7
711. Unit Mobility	7-7
712. Rescue and Damage Control	7-9
713. Handling Large Numbers of Casualties	7-9
714. Unit Operations in Fallout	7-10
715. Performance of Mission in a Radiologically Contaminated Environment	7-10
716. Field Expedient Fallout Shelters	7-12
717. Handling of Radiologically Contaminated Patients	7-13
718. Patient Decontamination	7-14
 ANNEX	
A RADIATION DETECTION AND MEASUREMENT	A-1
B HAZARDS OF NUCLEAR WEAPONS ACCIDENTS	B-1
C GENERAL GUIDELINES FOR MEDICAL SUPPORT IN NUCLEAR ACCIDENTS	C-1
 REFERENCES	References-1
GLOSSARY	Glossary-1
INDEX	Index-1