formation on nursing books, visit our website **www.jaypeebrothers.com,** for detailed information on nursing books, visit our website **www.jaypeebrothers.com**

Celebrating 50 YEARS
Passion, Quality and Innovation in Healthcare Publishing

Textbook on First Aid & Emergency NURSING



I Clement

2nd Edition

JAYPEE

Contents

1. Introduction to First Aid **1**

1.1 Introduction *2*; 1.2 History of First Aid *2*; 1.3 Definition *3*; 1.4 Meaning of First Aid *3*; 1.5 Aims of First Aid *3*; 1.6 Objectives of First Aid *4*; 1.7 Philosophy of First Aid *4*; 1.8 Scope of First Aid *4*; 1.9 Golden Rules of First Aid *4*; 1.10 Types of First Aid *5*; 1.11 Principles of First Aid *5*; 1.12 Importance of First Aid *6*; 1.13 Qualities of a First Aider *6*; 1.14 Responsibilities of a First Aider *7*; 1.15 Limitations of the First Aider *7*; 1.16 Safety Measures of the First Aider *8*; 1.17 Preparing for Emergencies *8*; 1.18 Goals of Emergency Medical Treatment *9*; 1.19 Principles Applied in Emergency Management *9*; 1.20 History Collection from Patient/ Relatives *9*; 1.21 Ethical and Legal Consideration in First Aid *10*; 1.22 First Aid Code of Practice *13*; 1.23 First Aid Kit *14*; 1.24 Solutions Used in First Aid *14*; 1.25 Reporting, Record Keeping and Documenting *15*

2. First Aid Assessment **17**

2.1 Introduction *18*; 2.2 First Aid Assessment Principles *18*; 2.3 Emergency Approachment *19*; 2.4 Moving the Injured Victim *21*; 2.5 First Aid Assessment Techniques *25*; 2.6 Skills Required for the First Aider *26*; 2.7 Casualty Assessment *27*; 2.8 Methods of Victim Assessment *29*; 2.9 Diagnosing of Victim *29*; 2.10 Vital Signs *30*; 2.11 Blood Pressure *35*; 2.12 General Head-to-Toe Examination *37*

3. Bandaging **40**

3.1 Introduction *41*; 3.2 Meaning of Bandage *41*; 3.3 Definition *42*; 3.4 Indications *42*; 3.5 Purpose of Bandaging *43*; 3.6 Functions of Bandages *43*; 3.7 General Principles *43*; 3.8 Types of Bandages *44*; 3.9 Bandaging Materials *45*; 3.10 Assessing before Applying Bandage *46*; 3.11 Bandaging Procedure *46*; 3.12 Special Bandages *47*; 3.13 General Rules for Applying Bandages *48*; 3.14 Applying Roller Bandage *48*; 3.15 Methods of Application *50*; 3.16 Circular Turn *51*; 3.17 Spiral Turn *51*; 3.18 Spiral Reverse Turns *51*; 3.19 Figure-of-Eight Turns *52*; 3.20 Spica Bandage *52*; 3.21 Hand Bandage *52*; 3.22 Wrist, Forearm, and Upper Arm Bandage *53*; 3.23 The Upper Arm *53*; 3.24 Spica of Shoulder Bandage *54*; 3.25 Bandages for the Foot, Ankle and Legs *54*; 3.26 Bandage for the Knee *55*; 3.27 Spica of Hip Bandage *55*; 3.28 Head and Other Bandage *56*; 3.29 Ear Bandage *56*; 3.30 Eye Bandage *57*; 3.31 Breast Bandages *57*; 3.32 Stump Bandage *58*; 3.33 Many Tail Bandages *58*; 3.34 T-Bandages *59*

4. Slings and Binders **61**

4.1 Introduction *61*; 4.2 Uses of Triangular Bandage *62*; 4.3 Application of Triangular Bandage in Bandaging Other Parts of the Body *64*; 4.4 Slings *66*; 4.5 Methods of Sling *67*; 4.6 Application of Sling Procedure *68*; 4.7 Binders *70*; 4.8 Application Techniques of Binder *70*; 4.9 Abdominal Binders *71*; 4.10 Applying Abdominal, T- and Breast Binders *72*

5. Wounds and Hemorrhage **75**

5.1 Introduction *76*; 5.2 Definition of Wound *77*; 5.3 Meaning of Wounds *77*; 5.4 Classifications of Wound *77*; 5.5 Principles of First Aid in Wounds *79*; 5.6 Complications of Wounds *79*; 5.7 Principles in Wound Care *80*; 5.8 First Aid Measures in Minor Wounds *80*; 5.9 First Aid Measures in Major Wounds *81*; 5.10 Prevention of Wounds Infection *83*; 5.11 Wound Care *84*; 5.12 Sterile Dressing *86*; 5.13 Hemorrhage *86*; 5.14 Classifications of Hemorrhage *87*; 5.15 Assessment of Hemorrhage and Bleeding Wounds *89*; 5.16 Classification of Blood Loss *90*; 5.17 Control of Bleeding by Pressure Dressing *90*; 5.18 Internal Hemorrhage *94*; 5.19 First Aid Measures for Bleeding from Special Parts *95*

6. Basic Life Support **103**

6.1 Introduction *103*; 6.2 Meaning of BLS *104*; 6.3 Definition *104*; 6.4 Objectives and Goals of BLS *105*; 6.5 Steps of BLS *106*; 6.6 Chain of Survival *109*; 6.7 Mouth-to-Mouth Method *110*; 6.8 Mouth-to-Nose Method *111*; 6.9 Mouth-to-Stoma Method *111*; 6.10 Mouth-to-Barrier Device *112*; 6.11 Check for a Pulse *112*; 6.12 Perform External Chest Compressions *113*; 6.13 Two-Rescuer CPR *115*; 6.14 Switching Functions *116*; 6.15 Complications of CPR *116*; 6.16 Infant BLS *117*; 6.17 Nurses' Role in BLS *121*

7. Injuries/Trauma **123**

7.1 Introduction *125*; 7.2 Definition *125*; 7.3 ABCDE of Trauma *125*; 7.4 Types of Traumatic Experiences *127*; 7.5 Assessment of Injury *128*; 7.6 Trauma Scoring Systems *129*; 7.7 Multidisciplinary Trauma Team *130*; 7.8 Levels of Care Provided in Trauma Center *130*; 7.9 Types of Physical Injuries *132*; 7.10 Skeletal Injuries *132*; 7.11 Strain *134*; 7.12 Sprain *135*; 7.13 Dislocation *137;* 7.14 Chest Injuries *138*; 7.15 Rib Fracture *140*; 7.16 Flail Chest *141*; 7.17 Intra-abdominal Injuries *142*; 7.18 Blunt Abdominal Trauma *146*; 7.19 Crush Injuries *148*; 7.20 Multiple Injuries *149*; 7.21 Head Injury *151*; 7.22 Spinal Cord Injury *154*; 7.23 Road Accidents *159*; 7.24 Post-traumatic Stress Disorder *160*; 7.25 Trauma Case Manager Interventions *163*; 7.26 Role of Trauma Nurse *163*; 7.27 Emergency Nurse Practitioner (ENP) *164*

8. Shock **165**

8.1 Introduction *165*; 8.2 Definition *166*; 8.3 History of Shock *166*; 8.4 Effects of Shock *166*; 8.5 Stages of Shock *166*; 8.6 Causes of Shock *167*; 8.7 Progress of Shock *167*; 8.8 Types of Shock *167*; 8.9 Factors Influencing the Degree of Shock *168*; 8.10 Signs and Symptoms of Shock *169*; 8.11 Pathology of Shock *170*; 8.12 Organs Involvement in Shock *170*; 8.13 Diagnostic Approach and Evaluation *172*; 8.14 Complications of Shock *172*; 8.15 Assessment of Shock *173*; 8.16 First Aid in Shock *174*; 8.17 Hypovolemic Shock *175*; 8.18 Anaphylaxis *177*; 8.19 Cardiogenic Shock *179*; 8.20 Neurogenic Shock *181*; 8.21 Septic Shock *181*

9. Fracture **185**

9.1 Introduction *187*; 9.2 Definition *187*; 9.3 Causes of Fracture *187*; 9.4 Types of Fracture *187*; 9.5 Signs and Symptoms of Fracture *190*; 9.6 Complications of Bone Fractures *191*; 9.7 Principles of Fracture Management *191*; 9.8 First Aid Treatment of Fractures *191*; 9.9 Emergency Management *192*; 9.10 First Aid

Measures in Orthotrauma *193*; 9.11 Immobilization of the Fractured Part *194*; 9.12 Facial Fractures *195*; 9.13 Cheekbone and Nose Fractures *197*; 9.14 Collarbone Fracture *197*; 9.15 Upper Arm Fracture *198*; 9.16 Elbow Fracture *199*; 9.17 Fracture of the Forearm and Wrist *200*; 9.18 Fractures of the Hand and Fingers *200*; 9.19 Fracture of the Rib Cage *201*; 9.20 Flail Chest Injuries *202*; 9.21 Fracture of Backbone/Spine *203*; 9.22 Fracture of Pelvis *206*; 9.23 Fracture of Hip and Thigh *206*; 9.24 Fracture of the Lower Leg *208*; 9.25 Splints *209*; 9.26 Plaster Casts and Application *211*; 9.27 Traction *214*; 9.28 Methods of Lifting and Transfer the Injured *217*; 9.29 Nurses' Role in Fracture First Aid *218*; 9.30 Management of Complications *219*

10. Burns and First Aid Measures **221**

10.1 Introduction *223*; 10.2 Definition *223*; 10.3 Burns Classification *223*; 10.4 Causes of Burns and Scalds *226*; 10.5 Characteristics of Burn Injury *227*; 10.6 Complications of Burns *228*; 10.7 Preventing All Degrees of Burns *229*; 10.8 First Aid Management of Burns *229*; 10.9 Wound Care in Burns *231;* 10.10 Chemical Burns *232*; 10.11 Fires *233*; 10.12 Electrical Burns *234*; 10.13 Preventive Measures of Electrical Burns *236*; 10.14 Lightning and its Protecting and Preventive Measures *236*

11. Poisoning **238**

11.1 Introduction *240*; 11.2 Definitions *240*; 11.3 Goals Poison Management *240*; 11.4 Concept of Poisoning *240*; 11.5 Initial Evaluation of Patient with Poisoning *243*; 11.6 Diagnosis of Poisoning *245*; 11.7 Physical Examination *245*; 11.8 Clinical Laboratory Tests *245*; 11.9 Special Procedures Performed for Patients with Poisoning *246;* 11.10 Swallowed Poisons 249; 11.11 Corrosive Poisons *250*; 11.12 Noncorrosive Poisons *252*; 11.13 Inhaled Poisons *253*; 11.14 Injected Poisons *256*; 11.15 Food Poisoning *257*; 11.16 Household Poisons *260*; 11.17 Drug Poisoning *261*; 11.18 Alcohol Poisoning *262*; 11.19 Industrial Poisons *263*; 11.20 Common Indian Plant Poisoning *264*; 11.21 Drugs *267*; 11.22 Metal Poisoning *267*; 11.23 Organic Chemical Poisoning *267*; 11.24 Alcohol Poisoning *268*

12. Bites and Stings **270**

12.1 Introduction *271*; 12.2 Dog Bite *272*; 12.3 Snake Bites *274*; 12.4 Insect Sting *276*; 12.5 Cat Bite *277*; 12.6 Rat Bite *278*; 12.7 Bees and Wasp Bites *278*; 12.8 Ticks and Mites Bites *279*; 12.9 Spider Bite *280;* 12.10 Leech Bite *281*; 12.11 Fish Stings *282*; 12.12 Blue-ringed Octopus *284*

13. Foreign Bodies **285**

13.1 Introduction *287*; 13.2 Definition *287*; 13.3 Symptoms of Foreign Body *287*; 13.4 Foreign Body Retrieval *288*; 13.5 Techniques Used for Foreign Body Retrieval *289*; 13.6 Benefits and Risks of Foreign Body Retrieval *290*; 13.7 Limitations of Foreign Body Detection and Removal *290*; 13.8 Need of Emergency Care *290*; 13.9 Foreign Bodies in the Respiratory Tract *291;* 13.10 Foreign Bodies in the Alimentary Tract *293*; 13.11 Foreign Bodies in the Eye *297*; 13.12 Foreign Bodies in the Ear *299*; 13.13 Foreign Bodies in the Nose *303*; 13.14 Foreign Bodies in the Throat *305*; 13.15 Foreign Bodies in the Skin *306*

14. Common Emergencies and Resuscitation Measures **310**
14.1 Introduction *311*; 14.2 Meaning of Resuscitation *311*; 14.3 Resuscitation Measures *311*; 14.4 Choking *312*; 14.5 Asphyxia *314;* 14.6 Suffocation *317*; 14.7 Hanging, Strangling and Throttling *318*; 14.8 Drowning *319*; 14.9 Smoke Inhalation *320;* 14.10 Fires *321*; 14.11 Shock *322*; 14.12 Anaphylactic Reactions *325*

15. Environmental Emergencies **328**
15.1 Introduction *329*; 15.2 Illness Caused by Heat Exposure *329*; 15.3 Effects of Chronic Heat Exposure *330*; 15.4 Heat-related Morbidity and Mortality *330*; 15.5 Mechanism of Heat Loss *331*; 15.6 Nonfreezing Cold Injuries *331*; 15.7 Freezing Cold Injuries *332*; 15.8 Heat Stroke *332*; 15.9 Heat Exhaustion *335;* 15.10 Heat Cramps *337*; 15.11 Frostbite *338*; 15.12 Accidental Hypothermia *339*; 15.13 Sunburn *340*; 15.14 Snow Blindness and Welder's Flash *341*; 15.15 Trench Foot *342*; 15.16 Chilblain *343*; 15.17 Heat Rash *344*

16. Minor Ailments **346**
16.1 Introduction *347*; 16.2 Headache *347*; 16.3 Cough *349*; 16.4 Dyspnea *351*; 16.5 Hypoxia *354*; 16.6 Cheyne-Stokes Respiration *356*; 16.7 Cyanosis *357*; 16.8 Hypercapnea *360*; 16.9 Hypocapnea *361;* 16.10 Respiratory Acidosis *363*; 16.11 Respiratory Alkalosis *365*; 16.12 Hypoglycemia *366*; 16.13 Syncope *368*; 16.14 Nurses' Roles in Minor Ailments *370*

17. Handling and Transport of Injured **372**
17.1 Introduction *373*; 17.2 General Principles *373*; 17.3 Lifting Casualty *373*; 17.4 Carries for One First Aider *374*; 17.5 Carries for Two First Aiders *375*; 17.6 Lifting a Casualty in a Wheelchair *376*; 17.7 Stretchers *377*; 17.8 Preparing a Stretcher or Trolley Bed *379*; 17.9 Loading a Stretcher *380;* 17.10 Manual Lifts *381*; 17.11 Loading a Casualty in the Recovery Position *382*; 17.12 Loading an Ambulance *384*

18. Sports Injuries **386**
18.1 Introduction *387*; 18.2 Definition *387*; 18.3 Risk Factors that Causes Injury *387*; 18.4 Causes of Sports Injuries *388*; 18.5 Types of Sports Injuries *389*; 18.6 Most Common Sports-related Injuries *389*; 18.7 Symptoms of Sports Injuries *391*; 18.8 Prevention of Sports Injuries *393*; 18.9 Soft Tissue Injuries *394;* 18.10 Managing Soft Tissue Injuries *395*; 18.11 Immediate Treatment of Skin Injuries *396*; 18.12 Hard Tissue Injuries *396*; 18.13 Assessment of Injuries *397*; 18.14 Knee Injuries *398*; 18.15 Jumper's Knee *401*; 18.16 First Aid for Sprains, Strains and Joint Injuries *402*; 18.17 Osgood-Schlatter's Syndrome *402*; 18.18 Bursitis *403*; 18.19 Shin Pain *404*; 18.20 Tennis Leg *405*; 18.21 Achilles Tendinitis *407*; 18.22 Retrocalcaneal Pain *408*; 18.23 Plantar Fasciitis *409*; 18.24 Blisters *410*; 18.25 Athlete's Foot *411*; 18.26 Frozen Shoulder *412*; 18.27 Tennis Elbow *413*; 18.28 Wrist Pain in Gymnasts *414*; 18.29 Finger Tendon Injury *415*; 18.30 Eye Injuries *416*; 18.31 Dental Injury *417*; 18.32 Ear Injury *419*; 18.33 Under Water Diving Injury *420*; 18.34 Maxillofacial Injuries *421*; 18.35 Nasal Injuries *421*; 18.36 Treatment Modalities of Sports Injuries *422*; 18.37 Cold *424*; 18.38 Ultrasonic *424*; 18.39 Faradic Stimulation *424*; 18.40 Manual Therapy *425*

19. Disaster Nursing **427**

19.1 Introduction *428*; 19.2 Meaning of Disaster *429*; 19.3 Definition *429*; 19.4 Definitions of Disaster Nursing *429*; 19.5 Goals of Disaster Nursing *430*; 19.6 Principles of Disaster Nursing *430*; 19.7 Health Effects of Disaster *430*; 19.8 Factors Affecting Disaster *431*; 19.9 Types of Disaster *431*; 19.10 Levels of Disaster *432*; 19.11 Natural Disaster *432*; 19.12 Man-made Disaster *433*; 19.13 Psychological Reaction to a Disaster *436*; 19.14 Disaster Management of Health Sector in India *437*; 19.15 Important Agencies in India *437*; 19.16 Nurse's Role during Disaster *438*; 19.17 Prevention, Mitigation and Preparedness Activities *438*; 19.18 Relief Response *439*; 19.19 Stages of Disaster Involvement *439*; 19.20 Steps of Safety Measures during Disaster *440*; 19.21 Role of Community Health Nurse in Disaster Management *441*; 19.22 Disaster Response *442*; 19.23 Disaster Recovery *442*; 19.24 Disaster Management *443*; 19.25 International Agencies in Disaster *444*; 19.26 Impact of Disaster on Community *445*; 19.27 Hospital Disaster Manual *445*; 19.28 Disaster Plan *447*; 19.29 Management of Mass Casualties *448*; 19.30 Role of Nursing in Disaster *449*

20. Triage and Ambulance Service in Disaster **452**

20.1 Introduction *452*; 20.2 Meaning of Triage *452*; 20.3 Triage Category *453*; 20.4 Objectives of Triage Nursing *453*; 20.5 Goals of Triage *454*; 20.6 Principles of Triage *454*; 20.7 Triage Process *454*; 20.8 Triage Priorities *455*; 20.9 Patients Assessment *456*; 20.10 Phases of Disaster *456*; 20.11 START Model of Triage *457*; 20.12 The Impact of Disaster First Aiders *458*; 20.13 Triage Nurse *462*; 20.14 Role of Triage Nurse *463*

21. Emergency Department **464**

21.1 Introduction *465*; 21.2 Definition *466*; 21.3 Meaning of Emergency Department *466*; 21.4 Goals of Emergency Department *466*; 21.5 Need of Emergency Care *467*; 21.6 Function of Emergency Care/Casualty *467*; 21.7 Designing for Accident and Emergency Department (A and ED) *468*; 21.8 Infrastructure and Design of Casualty *469*; 21.9 Site, Area and Design *470*; 21.10 Staff Requirement in Emergency Department *476*; 21.11 Common Problem Faced in Emergency Department *477*; 21.12 Managerial Issues in Emergency Departments *477*; 21.13 Medicolegal Aspects of Emergency Department *478*; 21.14 Infection Control Practices for Emergency Department *478*

22. Nursing Process **481**

22.1 Introduction *482*; 22.2 Definition *482*; 22.3 The Purpose of Nursing Process *482*; 22.4 Characteristics of a Nursing Process *482*; 22.5 Steps in the Nursing Process *483*; 22.6 Benefits of Nursing Process *484*; 22.7 Nursing Assessment *485*; 22.8 Nursing Diagnosis *487*; 22.9 Nursing Planning *489*; 22.10 Nursing Implementation *491*; 22.11 Nursing Evaluation *492*; 22.12 Emergency Nursing Practice *493*

23. Physical Examination **494**

23.1 Introduction *495*; 23.2 Definition *495*; 23.3 Meaning of Physical Examination *495*; 23.4 Purpose *496*; 23.5 Methods of Examination *496*; 23.6 Head-to-Toe Examination *498*; 23.7 Preparation of the Environment *502*; 23.8 Preparation of the Equipment *502*; 23.9 Preparation of the Patient *505*;

23.10 Assistance in the Examination *505*; 23.11 General Physical Examination: Quick Reference Guide *509*; 23.12 Nurse's Responsibilities during Physical Examination *514*

24. Pharmacological Therapy in Emergencies **515**

24.1 Introduction *519*; 24.2 Purpose and General Action of Drugs *519*; 24.3 Routes of Drug Administration *519*; 24.4 Side Effects and Toxic Effects of Drug *520*; 24.5 Important Antidotes *521*; 24.6 Adverse Effects of Drugs *521*; 24.7 Factors Involved in Adverse Effects of Drugs *522*; 24.8 Scientific Principles *523*; 24.9 Responsibilities of the Nurse *523*; 24.10 Routine Times of Administration *524*; 24.11 Drugs are Classified according to their Action *524*; 24.12 Special Points to be Noted during any Injection *525*; 24.13 Drugs Used in Cardiac Arrest *526*; 24.14 Emergency Drug Management *527*

25. Medical-Surgical Emergencies **540**

25.1 Introduction *543*; 25.2 Epistaxis (Nosebleed) *543*; 25.3 Esophageal Varices *544*; 25.4 Status Epilepticus *547*; 25.5 Increased Intracranial Pressure (ICP) *551*; 25.6 Cerebral Venous Thrombosis (CVT) *554*; 25.7 Stroke *556*; 25.8 Aortic Aneurysm *565*; 25.9 Asystole *567*; 25.10 Cardiogenic Shock *569*; 25.11 Cardiac Arrest *573*; 25.12 Hepatic Encephalopathy (HE) and Coma *576*; 25.13 Diabetic Ketoacidosis (DKA) *580*; 25.14 Myxedema Coma *586*; 25.15 Altered Level of Consciousness (LOC) *588*; 25.16 Unconsciousness *595*

26. Psychiatric Emergencies **601**

26.1 Introduction *602*; 26.2 Meaning of Psychiatric Emergencies *603*; 26.3 Role of the ED in Managing Mental Illness *603*; 26.4 Mental State Examination *603*; 26.5 Overactive Patients *604*; 26.6 Violent Patient *605*; 26.7 Underactive or Depressed Patients *606*; 26.8 Suicidal Patients *607*; 26.9 Sexual Assault *608*; 26.10 Delirium Tremens (Alcoholic Hallucinosis) *610*; 26.11 Hysteria *612*; 26.12 Rape *613;* 26.13 Sudden Infant Death Syndrome (SIDS) *614*

27. Emergencies in Reproductive, Maternal and Childbirth **617**

27.1 Introduction *618*; 27.2 Definition *618*; 27.3 Types of Obstetric Emergencies *618*; 27.4 Immediate Assessment *619*; 27.5 Obstetric Emergencies during Labor and Delivery *619*; 27.6 Clinical Manifestations of Obstetric Emergencies *620*; 27.7 Diagnostic Evaluation in Obstetrical Emergency *620*; 27.8 Emergency Care Activities *621*; 27.9 Preventive Measures *621*; 27.10 Vasa Previa *621*; 27.11 Cord Presentation and Prolapse *623*; 27.12 Shoulder Dystocia *625*; 27.13 Amniotic Fluid Embolism (AFE) *629*; 27.14 Obstetrical Shock *632*; 27.15 Rupture of Uterus *637*; 27.16 Obstructed Labor *640*; 27.17 Miscarriage *642*; 27.18 Childbirth *642*

28. Pediatric Emergencies **649**

28.1 Introduction *650*; 28.2 Pediatric Emergency Nursing Care *650*; 28.3 Pediatric Triage *650*; 28.4 Pediatric Triage Approach *651*; 28.5 Assessment Skills *652*; 28.6 Child Abuse *653*; 28.7 Infantile Convulsions *656*; 28.8 Burns *658*; 28.9 Drowning *662*; 28.10 Foreign Bodies *664*; 28.11 Poisoning *665*; 28.12 Naphthalene Poisoning *667*; 28.13 Asphyxia Neonatorum *668*; 28.14 Idiopathic Respiratory Distress Syndrome (RDS) *670*

29. Community Emergencies **672**

29.1 Introduction *673*; 29.2 Definition *674*; 29.3 Factors Affecting Disaster *674*; 29.4 Types of Disaster *675*; 29.5 Natural Disaster *675*; 29.6 Man-made Disaster *678*; 29.7 Triage *679*; 29.8 Earthquakes *680*; 29.9 Floods *681*; 29.10 Cyclones *682*; 29.11 Lightning *683*; 29.12 Civil Defense *684*; 29.13 High Explosive (HE) Bombing *685*; 29.14 Incendiary Bombs *685*; 29.15 Nuclear Weapons *685*; 29.16 Chemical Warfare *686*; 29.17 Biological Warfare *686*; 29.18 Emergency Management Continuum *687*; 29.19 Disaster Management *688*; 29.20 Disaster Response *689*; 29.21 Disaster Interventions *690*; 29.22 Community Measures in Disaster *692*; 29.23 Nurses' Role in Disaster Management *692*

30. Advanced Lifesaving Procedures **696**

30.1 Advanced Cardiac Life Support *697*; 30.2 Cardioversion and Defibrillation *702*; 30.3 Pacemakers *705*; 30.4 Arterial Blood Gas (ABG) Analysis *711*; 30.5 Mechanical Ventilation *714*; 30.6 Ventilator Setting Up *721*; 30.7 Artificial Airway Management *727*; 30.8 Endotracheal Intubation *730*; 30.9 Suctioning Techniques *734*; 30.10 Endotracheal Extubation *737*; 30.11 Tracheostomy Care *739*; 30.12 Tracheostomy Suctioning *744*

Glossary **747**

Index **753**

2 First Aid Assessment

TERMINOLOGY

- **ABC:** Airway, breathing and circulation.
- **AED:** Automated external defibrillator.
- **Airway:** The passages which transfer air from the outside environment to the lungs; the trachea, bronchi, bronchioles and alveoli.
- **Artery:** A blood vessel carrying blood away from the heart; contains oxygen-rich, high-pressure blood in the systemic cardiorespiratory system.
- **Avulsion:** A tearing away of a section of skin from the layers of tissue beneath it.
- **Bystander:** Any person, trained or untrained, who assists in an emergency situation, but not as part of a duty of employment.
- **Capillary:** The smallest blood vessels in the body; the skin is rife with capillaries.
- **Carotid artery:** The main artery providing blood supply to the head.
- **Causation:** Determination of whether the defendant's actions are causally linked to any harm.
- **Circulation:** The movement of blood throughout the body; performed by the heart.
- **Consciousness (level of):** A state of awareness or lack thereof.
- **Consent:** A legal condition whereby a person can be said to have given consent based upon an appreciation and understanding of the facts and implications of an action.
- **CPR:** Cardiopulmonary resuscitation.
- **Cyanosis:** The bluish coloration of the skin due to the presence of deoxygenated blood near the skin surface; occurs when the oxygen saturation of arterial blood falls below 85%.
- **Defibrillation:** Delivering a therapeutic dose of electrical energy to the affected heart with a device called a defibrillator.
- **Diabetes:** A disease causing an inability to regulate the level of sugar (glucose) in the blood.
- **Distal:** The point on a limb furthest from its point of attachment to the body.
- **Duty of care:** A legal obligation imposed on an individual requiring that they exercise a reasonable standard of care while performing any acts that could foreseeably harm others.
- **Edema:** Swelling in the lower legs and ankles. Edema is caused by a fluid build-up in the body.
- **EMS:** Emergency medical system or emergency medical services.
- **History:** One of the three parts of a secondary survey.

JAYPEE BROTHERS

- **Hypoxia:** A condition in which insufficient oxygen reaches body tissue.
- **Incision:** A clean-cut caused by a sharp-edged object.
- **Insulin:** a hormone that allows glucose to travel from the bloodstream into the cells.
- **Laceration:** Irregular wounds caused by a blunt impact to soft tissue which lies over hard tissue; tearing of skin.
- **Landmark:** The location of compressions; on the midline of the chest, even with the nipples.
- **Liability:** A legal doctrine that makes a person responsible for the damage and loss caused by their acts and omissions regardless of culpability; the requirements to prove liability are: (a) a duty of care exists, (b) the standard of care was breached and (c) causation exists.
- **Myocardial infarction:** Heart attack; bleeding or blockage cuts off blood flow to part of the heart muscle.
- **Nailbed:** The tissue under the nail; pinching the nail and observing the blood return to the nailbed is a good test of circulation at that location.
- **Proximal:** The point on a limb closest to its point of attachment to the body.
- **Puncture:** A wound caused by an object puncturing the skin.
- **Semiprone position:** A position which keeps the tongue from obstructing the airway and allows any fluids to drain from the mouth (aka recovery position).
- **Standard of care:** The degree of prudence and caution required of an individual who is under a duty of care; the requirements of the standard are closely dependent on circumstances.
- **Tachycardia:** A rapid pulse generally a pulse over 100 at rest.
- **Vein:** A blood vessel that carries blood toward the heart; most veins carry low-oxygen blood.

2.1 INTRODUCTION

First aid is the initial care provided to someone who has suddenly fallen ill, or who has been injured, until more advanced care is provided or the person recovers. Immediate and effective first aid may reduce the severity of the injury or illness and promote recovery. Knowledge of first aid is important for everyday life at home, work, or in the community. Not every incident requiring first aid will be life-threatening, however the more people with basic first aid knowledge, the better the chances are of saving a life. First aider must act quickly, calmly and correctly in order to preserve life, prevent deterioration in casualty's condition and promote recovery.

2.2 FIRST AID ASSESSMENT PRINCIPLES

- A rapid but calm approach
- A quick assessment of the situation and the casualty
- A correct diagnosis of the condition based on the history of the incident, symptoms and signs
- Immediate and appropriate treatment of any conditions
- Proper disposal of the casualty according to the injury or condition.

Role of first aider: First aid is the help given to someone who is injured or ill, to keep them safe until they can get more advanced medical treatment by seeing a doctor, health professional or go to hospital. The role of a first aider is to give someone this help, while making sure that they and anyone else involved are safe and that they do not make the situation worse.

JAYPEE BROTHERS

I. Assess the Situation Quickly and Calmly

- **Safety:** Are you or they in any danger? Is it safe for you to go up to them?
- **Scene:** What caused the accident or situation? How many casualties are there?
- **Situation:** What is happened? How many people are involved and how old are they? What do you think the main injuries could be?

II. Protect Yourself and Them from Any Danger

- Always protect yourself first—never put yourself at risk
- Only move them to safety if leaving them would cause them more harm
- If you cannot make an area safe, call 999/112 for emergency help (Fig. 2.1).



Fig. 2.1: Call for help

III. Prevent Infection Between You and Them

- Wash your hands or use alcohol gel
- Wear disposable gloves
- Do not touch an open wound without gloves on
- Do not breathe, cough or sneeze over a wound or a casualty.

IV. Comfort and Reassure

- Stay calm and take charge of the situation
- Introduce yourself to them to help gain their trust
- Explain what is happening and why
- Say what you are going to do before you do it.

V. Assess the Casualty

- If there is more than one casualty, help those with life-threatening conditions first
- Start with the primary survey and deal with any life-threatening conditions
- Then, if you have dealt with these successfully, move on to the secondary survey
- Priorities the most life-threatening conditions
- Then move on to less serious ones
- Get help from others if possible.

VI. Arrange for the Right Kind of Help

- Call for an ambulance if you think it is serious
- Take or send them to hospital if it is a serious condition but is unlikely to get worse
- For a less serious condition call 111 for medical advice (in England)
- Suggest they see their doctor if they are concerned about a less serious condition
- Advise them to go home to rest, but to seek help if they feel worse
- Stay with them until you can leave them in the right care.

2.3 EMERGENCY APPROACHMENT

Approach

- This should be quick but calm and controlled.
- Do not place yourself in danger when approaching the casualty.
- Give your identification and if there are no doctors, nurses or other trained people present, calmly take charge.

JAYPEE BROTHERS

Assessing the Situation

Assess the situation and decide on the priorities of action (Fig. 2.2).



Fig. 2.2: Priority based approach in emergency

I. Safety

- Minimize the risk of danger to yourself and to any bystanders
- Guard against any further arising of casualties. In road accidents
- Instruct a bystander to control the traffic, keeping it away from yourself and the casualty
- Watch out for fire risks especially from petrol spillage and switch off the ignition of the vehicles concerned.

Gas and poisonous fumes: If possible cut off the source.
Electrical contact: Break the contact if possible and take the necessary precautions against further contact.
Fire and collapsing buildings: Move the casualty to safety immediately.

II. By Getting Others to Help you

- Call bystanders to help you in treatment, e.g. controlling severe bleeding or supporting a badly injured limb
- Bystanders causing nuisances should be asked to control traffic or crowds or be sent to telephone for assistance
- Make them understand the message correctly.

III. Determine the Priorities of Treatment

In order to determine the condition of the casualty perform the following checks immediately.
Airway and breathing: Quickly check that the airway is open and that the casualty is breathing; if not, start artificial ventilation immediately (Fig. 2.3).
Pulse and circulation: Quickly check the pulse and heartbeat if not start external cardiac massage.
Bleeding: Check the casualty for any severe bleeding and control it.



Fig. 2.3: Assessment of airway

JAYPEE BROTHERS

Risk	*Possible injuries requiring first aid*
Manual handling	Fractures, lacerations, sprains and strains
Slip and reio hazards	Fractures, sprains and strains, lacerations
Machinery	Crush injuries, amputations, fractures, lacerations, eye injuries
Work at height	Head injury, loss of consciousness, spinal injury, fractures, sprains and strains
Workplace transport	Crush injuries, fractures, sprains and strains, spinal injuries
Electricity	Electric shock, burns
Chemicals	Poisoning, loss of consciousness, burns, eye injuries

Unconsciousness

- Place an unconscious casualty or one whose breathing is noisy, in the recovery position and establish the level of responsiveness.
- If there is any possibility of spinal injury, do not move the casualty unless difficulty in breathing makes it essential.

Shock: Keep the casualty warm, quiet and lying down until skilled help arrives.

Other Needs

- Unless there is immediate danger to life from the surroundings treat all fractures and large wounds before moving a casualty.
- If the casualty is in danger temporarily immobilize the injured part before moving.

Following conditions require the first aider's prompt attention, i.e. priority of treating casualties may be in following orders.

Highest Priority

- Respiratory arrest, airway obstruction
- Cardiac arrest
- Severe bleeding
- Severe head injuries
- Open chest wound
- Open abdominal wounds
- Severe shock
- Burns involving respiratory treat
- Unconsciousness.

Second Priority

- Severe burns
- Injuries to spine
- Moderate bleeding
- Conscious patient with head injuries
- Multiple fractures.

Lowest Priority

- Minor bleeding
- Minor burn
- Obvious mortal wounds where first response is not helpful
- Obvious death.

2.4 MOVING THE INJURED VICTIM (FIG. 2.4)

The condition of a collapsed or injured casualty may be worsened by movement, causing increased pain, injury, blood loss and shock. However, all casualties who are in danger

JAYPEE BROTHERS

must be moved to safety. Concern for protecting the neck should not hinder the evaluation process or lifesaving procedures. Remember—the airway takes precedence over any fracture or other injuries; the breathing unconscious casualty must remain on his/her side.



Fig. 2.4: Transporting the injured

Reasons for moving casualty may include:

- To ensure safety for yourself and the casualty
- In danger if they are not moved (e.g. lying on a road or railway line, etc.)
- To protect from extreme weather conditions
- Difficult terrain making it impossible to treat the casualty
- To prepare for evacuation (e.g. from remote areas, to a helicopter, etc.)
- To make possible the care of airway and breathing (e.g. turning casualty onto side, or onto his/her back for CPR)
- To make possible the control of severe bleeding (e.g. move out of a car to reach the bleeding wound)
- To conduct a basic triage for a multiple casualty incident. Where possible, someone (the most experienced first aider would be best) should stay with the casualty, whilst others seek assistance. When moving the casualty becomes necessary and others are available to help, the most experienced first aider should take charge and explain clearly and simply the method of movement to the assistants and to the casualty, if conscious.

Moving techniques

Emergency moves: There are a range of lifting and moving techniques that can be used for moving a casualty (Fig. 2.5). The most common emergency techniques used when the casualty or rescuer are in immediate danger include:

- Clothing drag—dragging the casualty by their clothing.
- Blanket or sheet drag—using a blanket or sheet to drag the casualty.
- Bent arm drag—reach under the casualty's armpits from behind, grasp the forearms or wrists and drag.

Nonemergency moves: The type of move used will depend upon the illness or injury the casualty is suffering from, factors at the scene, equipment and personnel resources

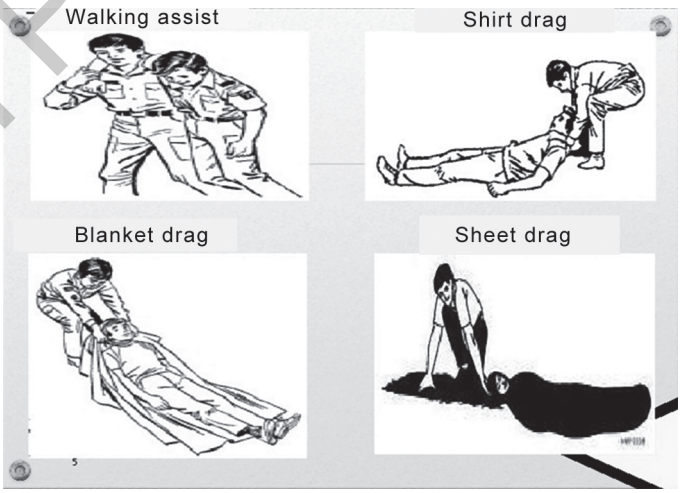

Fig. 2.5: Emergency moves

JAYPEE BROTHERS

available. These moves involve 2–3 rescuers to transfer a casualty to a better location, to a stretcher or other device:

- Direct ground lift: 2–3 rescuers to lift to a stretcher.
- Extremity lift: Not if spinal injury suspected, short distances, to stair chair.
- Blanket lift: Not if head/spinal injuries suspected.
- Draw sheet method: Roll casualty from bed to stretcher.
- Log roll: Trained team, roll casualty from supine to side for examination of back or place a spine board under.

Safety

- Ensure safety when preparing to move the casualty
- Always informs the casualty of your intentions prior to the move. The uninformed casualty may suddenly reach out or attempt to grab onto something. This may result in the rescuers stumbling or falling which could cause an unexpected injury.

Casualty safety while moving:

- Use resources if available, such as spine boards, stretchers, blankets, etc. to assist with the move make sure carrying device is locked in position and ready to use as per manufacturer's instructions.
- Cover the casualty if possible with a sheet or blanket and secure them to the device, tuck loose straps and items away, never leave casualty alone.
- Avoid bending or twisting the casualty's neck and back, spinal injury can be aggravated by rough handling.
- Try to have three or four people to assist with support of the head and neck, chest, the pelvis and limbs, and spinal immobilization if required.

First aider safety while moving casualty:

- **Communicate:** Decide ahead of time how the casualty is to be moved and what verbal commands will be used. During the lift, be in charge and provide appropriate instructions to those assisting.
- **Safe manual handling:** Consider the weight of the casualty and the weight of the stretcher or other equipment being carried before lifting. Determine if additional help is needed, e.g. four people on all corners over rough terrain. Know your own physical limitations, consider that of others assisting.
- **Lift without twisting or rotating your body:** This can put additional strain on the back muscles resulting in injury. Flex at the hips, not the waist and bend at the knees.
- **Maintain a firm grip:** Turn corners slowly and squarely, avoid any sideways movements. Be aware of trip hazards such as rugs, grates, door jams, etc.

Spinal Immobilization

Manual stabilization: It can be provided by standing behind an upright casualty or lying/kneeling above the head of a casualty lying on their back. Hold the casualty's head firmly, whilst stabilizing arms by locking elbows together or resting elbows on the ground. The aim is to maintain the casualty's head in a neutral position aligned with the body, thus avoiding side-to-side movements.

Using devices: There are risks associated with using specific devices. Consider the time taken in application, which may lead to delays in getting them to a hospital or providing other necessary first aid.

Cervical collars: The most common collars are made from hard plastic, with soft foam padding, and are applied to the neck of the casualty to maintain the cervical spine in a neutral position and prevent head movement. A cervical collar may be used to decrease the range of motion in the neck immediately after an injury. The use of a cervical collar should

JYPEE BROTHERS

be limited because minimizing the activity of the neck can cause its own problems. These devices should only be used by those trained in their use. They need to be accurately sized and fitted. Manual stabilization should be maintained in addition to the cervical collar. The cervical collar serves as a precaution and it should only be removed by trained personnel who can clinically assess and clear the neck of spinal injury. Cervical collars have been shown to be associated with potential harm, the risks increasing with duration of use (Fig. 2.6).



Fig. 2.6: Cervical collar application

Adverse effects may include:

- Discomfort and pain
- Restricted mouth opening and difficulty swallowing
- Airway compromise should the casualty vomit
- Pressure on neck veins raising intracranial pressure (harmful to head injuries)
- Hiding potential life-threatening conditions.

Spinal Boards

Rigid backboards placed under the casualty can be used by first aiders should it be necessary to move them. Casualties will usually have a cervical collar in place and should be adequately immobilized prior to moving.

Cervical spine immobilization will not be beneficial unless the motion of the trunk is also controlled effectively. Where resources allow, manual stabilization should be applied to further stabilize the head and neck during movement of a casualty on a spinal board (Fig. 2.7).

Casualties should not be left on rigid spinal boards. Healthy people left on spinal boards develop pain in the neck, back of the head, shoulder blades and lower back. Conscious casualties may try to move around in an attempt to get comfortable, potentially worsening their injury.

Children: After road traffic accidents, conscious infants should be left in their rigid seat or capsule until assessed by ambulance personnel. If possible, remove the infant seat or capsule from the car with the infant/child in it.

Types of spine boards and stretchers may include:

- **Short backboard:** It is used when a spinal injury is suspected and the casualty is in a seated position. A vest type (such as a Kendrick extrication device) is also used when a casualty needs to be removed from a car or a confined space. It wraps around the casualty and has all the straps attached or enclosed.
- **Long backboard:** It is used when a spinal injury is suspected requiring spinal immobilization, for rapid extrication, also provides secondary support when using a short spine board.
- **Flexible stretcher:** It is not for spinal injury, for limited space, on stairs, cramped corners, when other equipment is not available.
- **Basket stretcher:** It is commonly used in rescue situations, e.g. winching patients into helicopters. Will fit onto wheeled stretchers.



Fig. 2.7: Transporting the injured by spinal board

JAYPEE BROTHERS

- **Scoop (orthopedic) stretcher:** It is not for spinal injury, designed to easily lift supine patients, used to 'scoop' casualty from ground without changing their position, good in confined spaces where other stretchers cannot fit, can be placed with casualty onto a wheeled stretcher for transport.
- **Stair chair:** For casualty that can sit up while being carried, useful for downstairs, or through narrow passageways, must be transferred to stretcher once at the ambulance portable / folding stretchers: use to go downstairs, downhill, over rough terrain, move from a narrow spot, used as a backup to a wheeled stretcher, easily loaded/off loaded into ambulance, types: basic/breakaway/with folding wheels.
- **Wheeled stretcher-2 basic types:** One person, e.g. roll in with special wheels; and two person to move/carry in narrow spaces, e.g. lift in, one rescuer on each side; adjustable to different heights and angles; adjustable to elevate the legs or raise head and shoulders; additional equipment may be attached including oxygen, IV lines, cardiac monitors, defibrillators, can take up to 200 kg.

2.5 FIRST AID ASSESSMENT TECHNIQUES (FIG. 2.8)

ABC (and sometimes D) the most common term referred to in first aid is ABC, which stands for Airway, Breathing, and Circulation. In fact, the term also is commonly used among emergency health professionals. The D stands for Deadly bleeding or Defibrillation.

- **Airway:** The first aider needs to make sure the casualty's airway is clear. Chocking, which results from the obstruction of airways, can be fatal.
- **Breathing:** When the first aider has determined that the airways are not obstructed, he/she must determine the casualty's adequacy of breathing, and if necessary provide rescue breathing.
- **Circulation:** If the casualty is not breathing the first aider should go straight for chest compressions and rescue breathing. The chest compressions will provide circulation. The reason is time—checking circulation to a nonbreathing casualty consumes time that could be used with chest compressions and rescue breathing. With less serious casualties (those that are breathing), the first aider needs to check the casualty's pulse.
- **Deadly bleeding or defibrillation:** Some organizations have this fourth step, while others include this as part of circulation.



Fig. 2.8: First aid assessment techniques

Primary Survey: Danger, Response, Airway, Breathing (DRAB)

Danger

Check for dangers to the casualty and to you as a first aider. If there is danger present, can you get rid of the danger, or move the casualty from the danger? If there is nothing you can do, stay away and get professional help. The worst thing a rescuer can do is become another victim.

Response

If safe to approach, is the casualty conscious? See if the patient is alert, ask questions and see if you get a response, find out whether he/she responds to your touch. Very well-trained first aiders will know how to find out whether the casualty responds to pain.

JAYPEE BROTHERS

Airway

Is the casualty's airway open and clear? If not try to clear it. Trainers advice first aiders to have the casualty lying on their back, and then to place one hand on his/her forehead and place two finger from the other hand on the casualty's chin and gently tilt the head back while slightly raising the chin further upwards. Any obstructions need to be removed from the casualty's mouth, including dentures. First aiders are trained only to put their fingers in the casualty's mouth if they can see an obstruction there (Fig. 2.9).

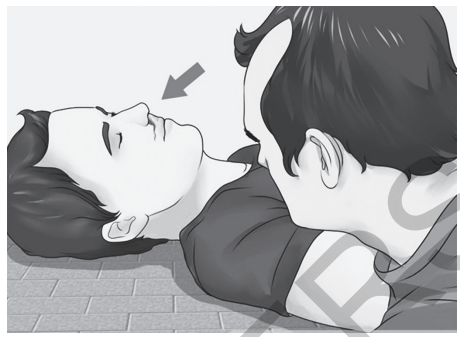

Fig. 2.9: Respiratory assessment of victim

Breathing

Is the casualty breathing effectively? The first aider should look at the chest for movement, his/her mouth for signs of breathing (e.g. sounds), and get close to the casualty and see if air exhalation can be felt on the first aider's cheek.

Secondary Survey: Deformities, Open Wounds, Medic Alert Tags, Swellings (DOMS)

If the casualty is breathing adequately, then it is possible to carry out a secondary survey. This is a rapid whole body check. As soon as this has been done, the casualty should be placed in a recovery position. At this point the first aider should call for an ambulance.

2.6 SKILLS REQUIRED FOR THE FIRST AIDER (FIG. 2.10)

- Control the scene of accident.
- Gain access to the patient.
- Evaluate the scene in terms of safety and possible cause of accident.
- Gather information from patient and bystanders.
- Determine vital signs (pulse, breathing, skin temperature).



Fig. 2.10: Skills required for the first aider: Observation, palpation, auscultation and documentation

JAYPEE BROTHERS

- Determine diagnostic signs and relate those to possible injuries or sudden illnesses that require emergency care.
- Perform the necessary ABCs of emergency care.
  - Open airway
  - Breathing (breathlessness provide artificial ventilation)
  - Circulation (pulselessness provide one and two rescuer cardiopulmonary resuscitation)
  - Bleeding control (hemorrhage controlled by direct pressure and elevation, pressure points and tourniquets).
- Diagnosis and care for shock.
- Diagnosis and care for soft tissue and internal injuries including basic dressing and bandaging techniques.
- Diagnosis and care for open and closed fractures, sprains, strains and dislocations, including cold treatment and basic splinting techniques.
- Detect and care for poisoning including alcohol and drug abuse.
- Diagnosis and care for heart attack, stroke, diabetic, coma, insulin shock, and epileptic or other seizures.
- Diagnosis and care for facial injuries, head injuries, neck and spinal injuries and chest injuries including fractured ribs, flail chest and penetrating chest wounds.
- Diagnosis and care for burns and smoke inhalation.
- Diagnosis and care for exposure to heat and cold which includes heat cramps, heat exhaustion, heat stroke, hypothermia, and frost bite.
- Assist in childbirth and care of the newborn.
- Psychological and proper emergency care to victims of crises and disasters.
- Perform proper transformation techniques.

2.7 CASUALTY ASSESSMENT (FIG. 2.11)

When a casualty is sick or injured, we need a system to evaluate their condition or illness.

Danger

Firstly, you must ensure that it is safe for you to assist the casualty. Protect everyone from any danger, protect yourself with gloves and other protective equipment, and call for help immediately. Do not proceed with treatment if it is too dangerous, call for experts.

Response

Secondly, you must try to get a response from the casualty. If they appear unconscious, gently shake their shoulders, firmly ask questions (but do not shout), like 'can you hear me?' Ask them to try to squeeze your hand. If the casualty responds and can talk, assess their state of consciousness (slurred speech, dizzy, etc.) and move onto the verbal secondary survey. If they are not responding, treat them as unconscious and call the ambulance immediately.



Fig. 2.11: Casualty assessment

For casualty assessment there are two stages:

1. *Primary survey:* The first stage follows the DRSABCD action plan. This is where you try to get a response from the casualty as described above.

JAYPEE BROTHERS

2. *Verbal secondary survey:* The second stage is carried out using the 'no touch technique' and involves a visual and verbal examination of his/her injuries without touching them. Gain consent from the conscious casualty, or their careers, and explain what you are going to do. Listen carefully to the casualty's responses to the questions that you ask. If injuries are found during these examinations, then further evaluate what treatment is required. Where there is more than one casualty, the care of the unconscious casualty has priority.

History

A history is the complete story concerning the accident or illness. What happened prior to the illness or accident can be vital when working out what is wrong with the casualty, especially if they are unconscious. It is a short story that leads up to and includes the incident. It includes any previous or current health conditions and medications.

The casualty, bystanders or relatives can be invaluable in these cases.

Ask Questions Such as

- 'Do they suffer from any allergies?'
- 'Are there any previous relevant illnesses?'
- 'Are they on any medications?'
- 'Has this happened before?'
- 'What were they doing at the time?'
- 'What signs or symptoms were they showing?'

A way to remember what to find out is using AMPLE history:
A—Allergies
M—Medications (anticoagulants, insulin and cardiovascular medications especially)
P—Previous medical/surgical history
L—Last meal (time)
E—Events/environment surrounding the injury, i.e. exactly what happened.

Medic alert: Is an internationally recognized emblem that is custom engraved on bracelets and necklace providing instant access to primary medical conditions/allergies or 'special needs'. A 24 hrs telephone hotline number and individual membership ID registration number are also engraved on these items, to ensure confidential identification.

Signs and Symptoms

Signs: Signs are observations about the casualty's condition. Look for visible signs of injury or illness. For example, is the casualty pale? Is the casualty sweaty? Is the casualty bleeding?
Symptoms: Symptoms are how the casualty feels. Ask them to tell you what they are feeling. For example, are you suffering from a headache? Are you in pain? Do you feel sick, dizzy or unwell?
Blood pressure (BP): When a person loses blood, the blood pressure falls and the casualty will have pale, cold, clammy skin. The pulse is usually faster than normal and they may become thirsty. Another good indicator of blood loss is the color of the tongue. If it is pale, it means blood loss. Although taking a blood pressure is not part of first aid, there are several indicators or signs that would lead the first aider to suspect blood loss.
Normal or adequate: A person is said to have an adequate blood pressure if the color immediately returns when you press and release pressure on a fingernail or skin.
Inadequate: If the area is still pale after 2 seconds, this indicates their blood pressure is low, which may be a cause for concern.

JAYPEE BROTHERS

for detailed information on nursing books, visit our website **www.jaypeebrothers.com,** for detailed information on nursing books, visit our website **www.jaypee**

Textbook on
First Aid & Emergency
NURSING

Salient Features

- Deals with curative, preventive and rehabilitative care to the patients who met with accidents and emergencies
- Redesigned to meet all students' and teachers' needs
- Prepared on the basis of Indian Nursing Council syllabus
- Text is treated in a systematic and logical manner
- Covers all the specialty areas prescribed by the curriculum
- First aid nursing concepts are introduced in a sequential way with full explanations and illustrations
- Helps to build leadership skills in accidents and emergency department areas.
- Extremely useful for first aid personnel, diploma, undergraduate and postgraduate students, teachers of nursing and practicing nurses



I Clement is Principal, Columbia College of Nursing, Bengaluru, Karnataka, India. He obtained Doctorate in Nursing from Sri Ramachandra University, MSc (Nursing) from The Tamil Nadu Dr MGR Medical University, MA (Sociology) from Annamalai University, MA (Child Care and Education) from Alagappa University, Tamil Nadu; PG (Hospital Administration) from New Delhi. He received Florence Nightingale Award from His Excellency Shri Bhardwaj, Governor of Karnataka at Raj Bhavan, Bengaluru on International Nurses Day. He is an eminent author and a dynamic personality with a thirst for continuing education in nursing and the allied sciences. He is a Life Member of Trained Nurses' Association of India (New Delhi), Christian Medical Association of India, Indian Hospital Association, Indian Society of Psychiatric Nurses, Asian Association of Cardiac Nurses, Indian Red Cross Society, St Johns Ambulance, Nursing Research Society of India, Indian Society of Medical Surgical Nursing, (Chennai), Indian Society of Neuroscience Nursing and General Secretary of Medical Surgical Association of India, Bengaluru. He has contributed articles to Nightingale Nursing Times (New Delhi), Nurses of India, The Nursing Journal of India and Asian Journal of Cardiac Nurses. He has organized many workshops and conferences, presented research and scientific papers in various conferences and workshops at state, national and international levels. Presently, he is a Member of National Editorial Advisory Board for International Journal of Practical Nursing, New Delhi, India.

Available at all medical bookstores
or buy online at www.jaypeebrothers.com

JAYPEE BROTHERS
Medical Publishers (P) Ltd.
www.jaypeebrothers.com

Join us on facebook.com/JaypeeMedicalPublishers

ISBN 978-93-5270-526-9