

Dr. Răzvan Adam

**Dr. Dan Ioan
Mănăstireanu**

**Dr. Sorin
Tudorache**

**Dr. Cosmin
Moldovan**

First Aid Measures

Basics for Students

HAMANGIU PUBLISHING HOUSE
BUCHAREST, 2023

Main author

Dr. Razvan Adam

University Lecturer

Faculty of Medicine, Titu Maiorescu University of Bucharest

Doctor of Medicine

Co-authors

Dr. Dan Ioan Mănăstireanu

University Professor

Faculty of Medicine, Titu Maiorescu University of Bucharest

Doctor of Medicine

Dr. Sorin Tudorache

University Lecturer

Faculty of Medicine, Titu Maiorescu University of Bucharest

Doctor of Medicine

Dr. Cosmin Moldovan

University Associate Professor

Faculty of Medicine, Titu Maiorescu University of Bucharest

Doctor of Medicine

Content

1. Cardio-respiratory and cerebral resuscitation	
<i>(Dan Ioan Mănăstireanu, Răzvan Adam, Sorin Tudorache)</i>	1
Introduction	1
Clinical anatomy notions applied to resuscitation maneuvers	2
Physiology and pathophysiology applied to cardio respiratory and cerebral resuscitation maneuvers	12
Therapeutic maneuver groups in cardio respiratory and cerebral resuscitation (CRCR)	14
Stages of cardiopulmonary and cerebral resuscitation, BLS	18
Recommendations of the European Resuscitation Committee	30
External Chest Compressions Only Method	32
Bibliography	35
2. Special situations in resuscitation	
<i>(Răzvan Adam, Dan Ioan Mănăstireanu)</i>	38
Hypothermia	38
Immersion and submersion	40
Intoxications	41
Cardio respiratory arrest in pregnant women	43
Cardiopulmonary arrest in the dental office	45
Electrocution	45
Anaphylaxis	46
Bibliography	49
3. First aid in long or short term loss of consciousness	
<i>(Răzvan Adam, Dan Ioan Mănăstireanu)</i>	51
Nervous system disorders	51
First aid in loss of consciousness (lipothymia, syncope, coma)	52
Epilepsy	56

Stroke	58
Transient ischemic attack	58
Acute myocardial infarction (Ischemic heart attack – Angina attack)	59
Diabetic coma	59
Acute ethyl alcohol poisoning	60
Bibliography	62
4. First aid to victims at the scene of the accident (Răzvan Adam)	64
Whiplash injury	64
First aid measures at the scene of the accident	66
Injury clearance techniques	67
Mobilisation for transport and stretching	71
Transport from the scene of the accident	73
Triage of victims	74
Procedures for removing casualties from the danger zone	76
Bibliography	79
5. Organisation of medical interventions in disaster situations (Răzvan Adam)	80
Disaster definition and categories	80
Disaster medicine (definition, requirements)	81
Phases of pre-hospital disaster management	83
Medical treatment of victims at the disaster site	85
Remote medicine – health care units (hospitals)	89
Victim marking system, triage categories	90
Bibliography	94
6. First aid in haemorrhage and haemorrhagic shock (Răzvan Adam, Cosmin Moldovan)	96
Definition of haemorrhages	96

Classification of haemorrhages _____	96
First aid in case of digestive haemorrhages _____	99
Hemorrhagic (hypovolemic) shock _____	103
Classification _____	104
Clinical manifestations _____	105
First aid _____	107
Bibliography _____	110
7. First aid measures in osteoarticular trauma: fractures, dislocations, sprains (<i>Răzvan Adam</i>) _____	112
Polytrauma – Polyfractured Confusion _____	112
1. Fractures _____	112
Etiopathogenesis _____	112
Classification of fractures _____	113
Clinical examination _____	116
Complications of fractures _____	116
The first aid for fractures _____	116
Immobilisation methods for the upper limb _____	117
Immobilisation methods for the lower limb _____	119
2. Dislocations _____	121
Definition _____	121
Classification of sprains _____	121
Clinical signs of sprains _____	123
Dislocation treatment _____	124
3. Sprains _____	125
Definition _____	125
Classifying sprains _____	125
First aid in sprains _____	125
Bibliography _____	127

8. First aid in soft tissue injuries associated with osteoarticular injuries (<i>Răzvan Adam</i>) _____	129
Subcutaneous tissue lesions _____	129
Excoriation _____	129
Contusions _____	130
Haematoma _____	131
Skin lesions _____	131
Puncture wound _____	132
Cut wound _____	133
Gunshot wound _____	134
Bibliography _____	136
9. First aid in traumatic brain injury (<i>Răzvan Adam</i>) _____	137
Definition _____	137
Etiology _____	137
Classification _____	137
Morphopathology _____	139
Clinical examination in TBI: must identify lesions _____	144
First aid _____	146
Bibliography _____	149
10. First aid in injuries caused by temperature drop (<i>Răzvan Adam</i>) _____	151
1. Local lesions, frostbite _____	151
Classification _____	151
Predisposing factors _____	152
First aid _____	152
2. Hypothermia _____	153
Classification _____	153
Symptoms _____	154

First aid for hypothermia _____	154
Bibliography _____	157
11. First aid in burns (<i>Răzvan Adam</i>) _____	159
Incidence of burns _____	159
Etiology of burns _____	159
Anamnesis _____	160
First aid for burn victims. On-scene care _____	160
Smoke inhalation injury _____	161
Carbon monoxide poisoning _____	162
Treatment of smoke inhalation injury _____	162
Extent. Depth of burn _____	163
Fluid resuscitation _____	164
Bibliography _____	166
12. First aid in oro-maxillo-facial trauma (<i>Răzvan Adam</i>) _____	168
Epidemiology _____	168
Traumatic injuries to teeth, periodontal ligaments and alveolar bone _____	168
Traumatic injuries of the mandible, fractures, dislocations _____	170
Traumatic injuries of the jaw _____	174
Traumatic injuries of the malar complex (zygomatic maxillary) _____	176
First aid/treatment in midface fractures _____	177
Bibliography _____	179