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**The Electronic Library of Trauma Lectures®**

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The Electronic Library of Trauma Lectures®

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Notice
Trauma Nursing is an ever-changing field. Standard safety precautions must be followed, however, as new research and clinical experience broaden our knowledge, changes in treatment and drug therapy become necessary or appropriate. Readers are advised to check the product information currently provided by the manufacturer of each drug to be administered to verify the recommended dose, the method and duration of administration, and contraindications. It is the responsibility of the treating physician relying on experience and knowledge of the patient to determine dosages and the best treatment of the patient. Neither the Publisher nor the editor assumes any responsibility for any injury and/or damage to persons or property.

The Society of Trauma Nurses
I dedicate my work to my parents Ann and Mike Ziglar who gave me the opportunity to be successful in my career. I attribute my success and perseverance of completing the Electronic Library of Trauma Lectures project to members of the Executive Board (Heidi, Beverlee and Katie) who believed in me.

Michele K. Ziglar

I have so many reasons to thank my family, friends, and colleagues for their unwavering support, encouragement, and love. To my family whom I love dearly. To my brother who has been my mentor, my friend, and my confident. To my parents whose sacrifices and love have supported me through life’s journey. Your lives demonstrated such faith and courage that I strive to emulate. And, for my dear father who passed away during the work on this project. I am grateful for the influence you have had in my life and for your gift of humor. Your strength of conviction and your commitment to integrity instilled values and taught lessons that inspires and endures.

Vicki J. Bennett

Dedicated to the extraordinary staff with whom I have had the honor to work throughout my career as a trauma coordinator and with gratitude to the surgeon who helped me step out the door and enter the world of Trauma care, Michael Rhodes, MD.

Donna Nayduch

For my husband, Chris, and children, Brittany, Thai, Jared and Adam.

Genell Hilton

The Trauma in the Elderly chapter is dedicated in loving memory to Bruno & Dolores Laskowski, my parents, who died in 2003 from injuries caused by a motor vehicle crash.

Linda Laskowski
The Trauma Rehabilitation Chapter is dedicated to the memory of William H. Shull, MD (1960 -2003). Director of Neurotrauma Rehabilitation in the Department of Rehabilitation at the University of Pennsylvania Medical Center in Philadelphia. In this life, he always "seized the day’ and will be remembered as a scholar, dedicated patient advocate, caring physician, colleague, teacher and humanitarian; he touched so many with his knowledge, compassion, and joy of life. Thank you on behalf of the many trauma patients and families who lives are better because of you.

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The Society of Trauma Nurses (STN), a premier nursing organization representing nurses world-wide, is committed to advancing the trauma nursing profession through continuing education. The STN strives to enhance the delivery of care through collaboration and education across the globe to improve patient outcomes that save lives.

The STN brings value to nursing education by introducing one of the most respected educational resources available for teaching nurses. The Electronic Library of Trauma Lectures® is a CD of trauma related presentations considered the pre-eminent industry resource on trauma nursing care. The Electronic Library is designed to complement the highly acclaimed text, Trauma Nursing: From Resuscitation Through Rehabilitation 3rd edition, (2002) by McQuillan, et al. and serves as a complete educational program for training nurses across the trauma continuum of care.

Each presentation contains learning objectives, a detailed lecture format with built-in instructor notes and discussion questions. Additionally, there are post-test questions and answers for each presentation that may be used for self-assessment purposes.

Clinical experts in the field of trauma care participated in the project both as authors and reviewers. Any comments or feedback regarding the Electronic Library are welcomed and may be e-mailed to the ElectronicLibrary@TraumaNurseSoc.org.

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Acknowledgements

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The publication of this book represents a landmark in the STN’s publishing history. The prompt Electronic Library is our first book on a CD which is a revolutionary change in printing of a traditional textbook.

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**Presentation Objectives**

#1 - Evolution of the Trauma Cycle

- Describe four important points related to the epidemiology of trauma
- Discuss trauma system development
- Discuss the evolution of trauma nursing in regard to the impact on trauma system development

#2 - Injury Prevention

- Discuss the history of injury prevention activities
- Describe the process for program development
- Identify the components of injury prevention evaluation
- Discuss ideas for injury prevention activities in one's own community

#3 - Trauma Rehabilitation

- Provide an operational definition of trauma rehabilitation
- Provide an overview of the history of trauma rehabilitation
- Define the populations of patients requiring trauma rehabilitation
- Discuss current issues in trauma rehabilitation: funding, acceptance of disabled, trauma prevention
- Review the role of the trauma rehabilitation nurse
- Understand components of the rehabilitation team
- Demonstrate awareness of factors influencing rehabilitation potential
- Describe the differences in rehabilitation settings: inpatient, outpatient, and residential/home-based
- Discuss the differences in approach to rehabilitation across the continuum of care

#4 - Mechanism of Injury

- Describe the risk of injury
- Understand the effect of injury on society
- Understand how knowledge of the mechanism of injury assists in patient evaluation
- Compare blunt trauma injury patterns to penetrating trauma injuries
- Describe the incidence of traumatic brain injuries
- Describe the incidence of spinal injuries
- Describe the biomechanics of fractures and injury patterns
#5 - Shock and Multiple Organ Dysfunction Syndrome

- Identify shock categories and their various presentations in the trauma patient
- Describe phases of shock state regardless of pathology
- Recognize compensatory changes in hemorrhage
- Discuss defects in cellular signaling leading to SIRS and MODS and their management in trauma
- Summarize interventions that positively influence resuscitation outcomes

#6 - Initial Management of Traumatic Shock

- Define shock
- Discuss types of shock
- Describe the four classes of shock & associated clinical signs and symptoms
- Recognize clinical indicators for endpoints of resuscitation
- Discuss the components of the trauma resuscitation primary survey and associated interventions
- Prioritize treatment goals in the management of the patient in hypovolemic (hemorrhagic) shock
- List the fluid options for treating volume deficit in the resuscitation phase

#7 – Analgesia, Sedation and Neuromuscular Blockade

- Define pain
- Describe mechanisms of pain
- Describe physiologic effects of pain
- Identify indications for sedation
- Identify appropriate agents for pain management and sedation
- Describe appropriate nonpharmacologic interventions for pain and sedation management
- Describe the normal physiologic response of the neuromuscular junction
- Discuss the indications for neuromuscular blockade in the trauma patient
- Explain nursing assessment and monitoring of the chemically paralyzed patient
- Describe assessment of analgesia and sedation in trauma patients throughout all phases of care
- Identify age appropriate pain assessment tools for use throughout the trauma care continuum
- Describe analgesia and sedation considerations in select patient populations
#8 - Psychosocial Impact of Trauma

- Define crisis
- List three critical factors of crisis
- Differentiate between family and patient perception of crisis
- Discuss post traumatic stress syndrome

#9 - Traumatic Brain Injuries

- Identify the functional anatomy of the brain and how traumatic brain injury (TBI) affects it
- Describe the neurological assessment of the TBI patient
- Explain management strategies which reduce the risk of secondary injury to the brain following TBI

#10 - Maxillofacial and Ocular Injuries

- Discuss assessment priorities for a patient with maxillofacial trauma
- Prioritize the care of a patient with facial injuries
- Discuss psychosocial support for a patient with maxillofacial injuries

#11 - Spinal Cord Injuries

- Define the types of spinal cord injury
- Identify the signs and symptoms of acute spinal cord injury
- Discuss the systemic sequelae of spinal cord injury through the cycle of trauma
- State the standard medical and nursing modalities for the management of spinal cord injury

#12 - Thoracic Injuries

- Explain the importance of “mechanism of injury” related to thoracic trauma
- Identify treatments for thoracic injuries
- Discuss the nursing management of patients with thoracic injuries
- Develop a plan of care for the patient experiencing a thoracic injury
#13 - Abdominal Injuries

- Describe the mechanisms of injury for abdominal trauma
- State appropriate assessment and diagnostic studies for the patient with abdominal trauma
- Discuss various injuries of the abdomen
- Describe complications of abdominal trauma
- Discuss nursing care and list appropriate interventions for patients with abdominal trauma through the continuum of care

#14 - Genitourinary Injuries and Renal Management

- Describe the mechanisms of injury for genitourinary (GU) trauma
- Identify the appropriate physical assessment and diagnostic studies for ongoing assessment of the GU injured patient
- List interventions appropriate during the critical care phase of injury for GU injured patients
- Identify interventions for GU injured patients in the intermediate phase of care
- Differentiate between the pathophysiology of prerenal, intrarenal, and postrenal failure
- Describe the clinical presentation of the patient in acute renal failure and list treatment strategies
- Compare and contrast hemodialysis, peritoneal dialysis, and continuous renal replacement therapies

#15 - Musculoskeletal Injuries

- Review the anatomy of the musculoskeletal system
- Discuss the phases of musculoskeletal trauma care: resuscitation, operative, critical care, and rehabilitation
- Describe the classification of musculoskeletal injuries
- Discuss the general management principles in caring for musculoskeletal injuries
- Discuss complication management principles involving musculoskeletal trauma

#16 - Soft Tissue Injuries and Wound Healing

- Describe soft tissue anatomical structures
- Describe the various types of soft tissue injuries
- Discuss wound assessment and management considerations from time of the injury through complete healing of the wound
#17 - The Pregnant Trauma Patient
- Discuss the epidemiology of trauma as it relates to the pregnant woman
- Identify physiologic and anatomic changes in pregnancy that affect maternal assessment after traumatic injury
- Describe key elements in the clinical management of the pregnant trauma patient from the resuscitation phase through rehabilitation

#18 - Pediatric trauma
- Explain unique characteristics related to pediatric trauma care
- Describe management considerations for the pediatric trauma patient
- Describe assessment strategies in caring for critically injured child

#19 - Trauma in the Elderly
- Analyze factors that increase injury susceptibility and severity in the elderly population
- Describe management strategies that promote optimal trauma care for elderly patients

#20 - Burn Injuries
- Discuss the care of the burn injured patient
- Outline major pathophysiologic changes associated with burns
- Discuss appropriate medical and nursing management of the patient with burn injuries

#21 - Substance Abuse and Interpersonal Violence
- Describe the epidemiology of substance abuse and injury
- Discuss the clinical issues and management involved in caring for patients with substance abuse
- Define intimate partner violence
- Discuss the care issues involved in caring for victims of intimate partner violence
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Chapter 5 - Shock and MODS


Chapter 6 – Initial Management of Shock


**Chapter 10- Maxillofacial and Ocular Injuries**


**Chapter 16 - Soft Tissue Injuries and Wound Healing**


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Chapter 19 - Trauma in the Elderly


