

# The Electronic Library of Trauma Lectures® Overview

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## Editors

### **Pat Manion BSN, MS, RN, TCRN Editor-in-Chief**



Pat Manion is an experienced educator, critical care nurse, and trauma nurse. Her clinical and educator experience included many years of critical care in surgical, medical and cardiac critical care units. As a Trauma Program Manager, she held positions in two American College of Surgeons verified Level II Trauma Centers. Most recently she has been employed as a project manager and an independent educator and consultant. A long time member of the ENA, she has been a TNCC Instructor and State Faculty and contributed to the 6th edition of the TNCC manual. She also held the offices of Michigan ENA Trauma Chairperson, State President and State Secretary and was awarded the Emergency Nurse Excellence Award in

2004. A member of the Society of Trauma Nurses for more than 20 years, she has served on the Board of Directors as Annual Conference Chairperson for 5 years, Secretary for 2 years, and Membership Chairperson for 2 years.

She is an experienced mentor for new trauma program managers and trauma medical directors, particularly in the process and performance improvement arena and has served as a trauma designation site visitor for a number of states.

Ms. Manion has taught hundreds of new trauma nurses and has presented trauma lectures throughout the state of Michigan, at the national ENA Scientific Assembly and at the STN Annual Conference.

## Disclaimer

### 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 licensed health provider(s) to determine specific treatment interventions and pharmacological regimens based on standard of practice and patient condition. Neither the Publisher nor the editor assumes any responsibility for any injury and/or damage to persons or property.

The Society of Trauma Nurses

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### The Electronic Library of Trauma Lectures®

The Society of Trauma Nurses is a professional nonprofit organization whose mission is to ensure optimal trauma care to all people locally, regionally, nationally and globally through initiatives focused on trauma nurses related to prevention, education and collaboration with other healthcare disciplines. The Society of Trauma Nurses' advocates for the highest level of quality trauma care across the continuum. We accomplish this through an environment that fosters visionary leadership, mentoring, innovation and interdisciplinary collaboration in the delivery of trauma care.

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 collection of trauma related presentations considered the pre-eminent industry resource on trauma nursing care. The Electronic Library is designed to serve 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 posttest 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 [info@traumanurses.org](mailto:info@traumanurses.org).

## **File Organization of the E-Library Presentations**

Files including presentations, self-assessment tests and answer keys and references are stored in 18 chapters:

- **Chapter 01: The Trauma Team: From Prehospital Through the Emergency Department**
- **Chapter 02: Emergency Preparedness**
- **Chapter 03: Mechanism of Injury**
- **Chapter 04: Hemorrhagic Shock**
- **Chapter 05: Traumatic Brain Injury**
- **Chapter 06: Maxillofacial and Ocular Injuries**
- **Chapter 07: Spinal Column and Spinal Cord Injuries**
- **Chapter 08: Neck Trauma**
- **Chapter 09: Thoracic Trauma**
- **Chapter 10: Abdominal Trauma**
- **Chapter 11: Genitourinary Trauma**
- **Chapter 12: Musculoskeletal Trauma**
- **Chapter 13: Soft Tissue Trauma**
- **Chapter 14: Pregnancy Trauma**
- **Chapter 15: Pediatric Trauma**
- **Chapter 16: Geriatric Trauma**
- **Chapter 17: Burn and Inhalation Injury**
- **Chapter 18: Obesity and Trauma**

# Presentation Objectives

## **Chapter 1 - The Trauma Team: From Prehospital Through the Emergency Department**

- Describe the differences between Prehospital EMS and the Emergency Department (ED) environments
- Describe basic prehospital EMS operations
- Describe basic prehospital EMS care abilities
- Describe prehospital EMS to Trauma ED handoff
- Describe Trauma ED operations
- Recognize signs of trouble in the “fresh” trauma patient
- Describe evidence-based practice changes/controversies in prehospital and ED trauma care
- Explain tips to provide the best patient care

## **Chapter 2 - Emergency Preparedness**

- Gain an understanding of the epidemiology of disasters
- Review the incidence of mass casualty events
- Explore the hospital, regional and national Incident Command System and the planning cycle
- Review the ethical and psychosocial implications associated with an emergency response

## **Chapter 3 - Mechanism of Injury**

- State how the fundamental principles of physics apply to various types of injuries
- Given a specific mechanism of injury, predict injury patterns

## **Chapter 4 - Hemorrhagic Shock**

- Define hemorrhagic shock
- List common causes of hemorrhagic shock in the trauma patient
- Recognize the signs and symptoms of hemorrhagic shock
- Explain the importance of early control of hemorrhage in trauma patients
- Describe initial management of hemorrhagic shock
- Describe ongoing evaluation of the trauma patient with hemorrhagic shock
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## **Chapter 5 - Traumatic Brain Injury**

- Identify the functional anatomy of the brain and the effects of traumatic brain injury (TBI)
- Describe the neurologic assessment and initial management of the TBI patient
- Identify management strategies to reduce the risk of secondary injury and minimize complications

## **Chapter 6 - Maxillofacial and Ocular Injuries**

- Identify the key anatomical structures of the face and eye and the impact of force on those structures
- Discuss assessment priorities for a patient with maxillofacial and ocular injuries
- Prioritize the care of a patient with facial and ocular injuries
- Discuss psychosocial support for a patient with maxillofacial and ocular injuries

## **Chapter 7 - Spinal Column and Spinal Cord Injuries**

- Identify the components of the spine
- Assess for spine and spinal cord injury
- Discuss the initial management of the spinal cord injured patient
- Evaluate the long term needs of the spinal cord injured patient
- Describe the systemic effects of spinal cord injury

## **Chapter 8 - Neck Trauma**

- Recognize the mechanism of injury and associated injury patterns across the spectrum of neck trauma.
- Assess for the soft and hard symptoms of neck trauma.
- Identify the diagnostic modalities used to evaluate patients with neck trauma.
- Discuss the medical and nursing interventions appropriate for the management of the patient with neck trauma.

## **Chapter 9 - Thoracic Injuries**

- Identify anatomy within the thorax
- List life-threatening injuries that should be identified during the primary survey
- Describe resuscitative interventions for patients with thoracic trauma
- Explain clinical manifestations associated with life-threatening injuries
- Identify general treatment for patients with thoracic trauma

## **Chapter 10 - Abdominal Trauma**

- Describe common mechanisms of injury seen in abdominal trauma
- Discuss various injuries of the abdomen
- State appropriate assessment and diagnostic studies for the patient with abdominal trauma
- Describe abdominal compartment syndrome and the importance of early recognition

## **Chapter 11 - Genitourinary Trauma**

- Describe the mechanisms of injury for genitourinary (GU) trauma
- Identify the appropriate physical assessment and diagnostic studies for the initial and ongoing assessment of the GU injured patient
- Identify three complications that can occur during the hospitalization of a patient who has sustained a GU injury

## **Chapter 12 - Musculoskeletal Trauma**

- Describe the assessment, interventions, and nursing priorities across the continuum of care for patients with musculoskeletal injury
- Discuss the use of Multimodal Analgesia (MMA) and nursing care implications for patients with traumatic musculoskeletal injuries
- Explain indications and strategies for open and closed reduction of fracture/dislocations
- Discuss the prevention, recognition and interventions for compartment syndrome and rhabdomyolysis

## **Chapter 13 - Soft Tissue Trauma**

- Identify various soft tissue injuries
- Define the major phases of wound healing
- Identify factors that contribute to wound healing
- Describe surgical and non-surgical treatments of soft tissue injuries

## **Chapter 14 - Pregnancy in Trauma**

- Discuss the epidemiology, incidence and prevention of trauma in pregnancy
- Identify physiologic & anatomic changes in pregnancy pertinent to trauma care
- Discuss resuscitative management unique to the pregnant trauma patient

## **Chapter 15 - General Concepts in Pediatric Trauma Care**

- Describe at least one difference in the respiratory and cardiovascular system between children and adults
- Discuss assessment of Traumatic Brain Injury in the pediatric patient
- Identify the differences in spinal, thoracic, and abdominal injuries in the pediatric patient relative to adults
- Identify physical differences and specific developmental stages for different age groups and apply assessment and intervention strategies
- Discuss at least two important considerations in the approach to victims of child abuse

## **Chapter 16 - Geriatric Trauma**

- List the most common mechanisms of injury in the elderly
- Discuss four physiological changes that make the elderly trauma patient vulnerable to complications
- Identify three factors that increase the likelihood of geriatric ground level falls
- Describe issues with pain control in the elderly
- Describe the process for rapid reversal of anticoagulants in head injured patients
- Discuss the importance of aligning goals of care
- Discuss safe discharge in the elderly population

### **Chapter 17 - Burn and Inhalation Injury**

- Identify types of burn injury
- Describe assessment of the burn patient
- Identify patients requiring transfer to a burn center
- Understand the significance of inhalation injury on burn patient outcomes

### **Chapter 18 - Obesity and Trauma**

- Describe how the obesity epidemic impacts the delivery of trauma care
- Describe how obesity impacts body systems
- Discuss the challenges and considerations associated with resuscitation and management of the obese trauma patient
- Describe management approaches to care of the injured obese patient with blunt, penetrating, or burn injuries

## How to Use the E-Library

### How to Use the Presentations for a Lecture - Instructions for Instructor

The Electronic Library of Trauma Lectures® contains:

- 1) Eighteen lectures
- 2) Corresponding tests with answer keys
- 3) References for presentations

The instructor can use the Power Point presentation in three ways.

1. **Slide Show:** The slide series will open in the slide show mode ready to be used for presentation.
2. **Notes Page:** Click the View Tab and choose Notes Page for extensive notes available to be used by the instructor.
3. **Handout:** Print Slides 3 per page which can be used as a handout for the attendee.

### Tests and Answer Key

There are eighteen tests and answer keys corresponding to each of the presentations.

### File Formats

The presentations are saved in PowerPoint format. The tests, answer keys, and references are saved in Microsoft Word format.

### How to Use the Presentations Internally

The Electronic Library of Trauma Lectures® may be distributed for the purposes of educating a mass group of nurses internally, for online education, and self-study.

Institutions interested in this method should send a letter of request via mail or email to the Society of Trauma Nurses. Upon review, STN will provide the requestor with a signed letter granting the institution permission to distribute the presentations internally within the hospital system.

Send Correspondence to:

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### Continuing Education

The Electronic Library of Trauma Lectures® is not approved for continuing education nursing contact hours although the files and resources included with the presentations are designed so that institutions may apply for approval using the materials provided in the files.