



TNCC™

TRAUMA NURSING CORE COURSE

An **EN A**® *Course*

PROVIDER MANUAL
STUDY GUIDE

SEVENTH EDITION

EN A®
EMERGENCY NURSES ASSOCIATION
SAFE PRACTICE, SAFE CARE

Acknowledgement

The Emergency Nurses Association would like to extend its appreciation to the TNCC Seventh Edition Revision Work Team for the development and implementation of the Trauma Nursing Core Course (TNCC).

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Introduction

This is an additional tool to help you study and work through the components and concepts presented in the 7th edition of the *Trauma Nursing Core Course Provider Manual*. This study guide is NOT meant to replace reading the entire book, but rather to supplement and help you to gain further understanding. Read each chapter, then review and answer the questions in the study guide.

Note: The chapters covered and the number of questions per chapter do not reflect the importance, length, or representation of the content in the written examination. They only reflect the presence of new content or content that is frequently missed or misunderstood.

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Chapter 2 • Teamwork and Trauma Care

1. What roles are vital to a trauma team?

2. What are the characteristics of an effective team?

3. What are the key foundations to successful teamwork in the care of the trauma patient?

4. What tools can be used to promote communication within a team structure? What are the benefits of each?

Chapter 4 • Biomechanics, Kinematics, and Mechanisms of Injury

1. Define the following terms:

Kinematics

Biomechanics

Mechanism of Injury

2. Describe Newton's Three Laws of Motion and the Law of Conservation of Energy:

Newton's First Law of Motion

Newton's Second Law of Motion

Newton's Third Law of Motion

Law of Conservation of Energy

3. Describe how Newton's Laws of Motion and the Law of Conservation affect energy transfer in traumatic injury, and give an example.

4. What are the five forms in which energy exist?

1. _____

2. _____

3. _____

4. _____

5. _____

5. Differentiate between internal and external forces of energy transfer in the context of trauma.

6. How do internal forces protect the body from injury?

7. List the four main types of traumatic injury and give an example of each.

1. _____

2. _____

3. _____

4. _____

8. Differentiate between deceleration and acceleration forces.

9. What environmental and pathophysiologic factors are considered when the mechanism of injury is a fall?

1. _____

2. _____

3. _____

4. _____

10. Describe the three impacts in the motor vehicle impact sequence.

1. _____

2. _____

3. _____

11. Define the five mechanisms of injury in blast trauma.

1. _____

2. _____

3. _____

4. _____

5. _____

12. Describe the usefulness of the Haddon Matrix in prevention and reduction of injury.

Chapter 5 • Initial Assessment

1. Fill in the blanks of the steps of the initial assessment:

Preparation and _____

Across-the-room observation to identify any uncontrolled _____

and reprioritize to _____

Primary Survey

A: _____

B: _____

C: _____

D: _____

E: _____

Resuscitation Adjuncts

F: _____

G: _____

L: _____

M: _____

N: _____

O: _____

P: _____

Reevaluation for signs of internal uncontrolled hemorrhage and _____

Secondary Survey with reevaluation adjuncts

H: _____

I: _____

Reevaluation and _____

Definitive care or _____

2. Why is there repeated emphasis on assessment for hemorrhage throughout the initial assessment?

3. Which tool can be used to rapidly assess the level of consciousness during the A – Airway and Alertness step? Why is it important to determine alertness along with airway? What are the components of this tool?

4. Which method of opening the airway is recommended for use in trauma?

5. Describe the current guidelines for volume resuscitation in hemorrhagic shock.

6. Exposure and environmental control is included in the Primary Survey. Why is it such a high priority?

7. **G** used to represent only Give Comfort Measures (pain). It has expanded now to Get Resuscitation Adjuncts and includes multiple adjuncts used during the resuscitation phase. List the components of Get Resuscitation Adjuncts.

8. Part of the History in the Secondary Survey is a review of the prehospital report using the mnemonic MIST. What are the components of a MIST report?

9. Discuss why the insertion of a urinary catheter is no longer part of the primary survey.

10. Describe the endpoints of resuscitation and their normal values.

Chapter 6 • Airway and Ventilation

1. Differentiate between SaO_2 , SpO_2 , PaO_2 , and FiO_2 .

2. Define the following terms:

Ventilation

Diffusion

Perfusion

3. What is the most common cause of airway obstruction in the patient with altered mental status?

4. Identify contributing factors to ineffective ventilation.

5. Identify the criteria for use and measurement of the airway adjuncts.

6. What are the three indications for definitive airway management?

1. _____

2. _____

3. _____

7. What are two types of rescue airways and what is their major risk when used?

1. _____

2. _____

8. List, in order, the seven steps of verifying ETT placement.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

9. Identify and explain the circumstances in which the pulse oximetry reading may be unreliable and why.

10. Differentiate between qualitative and quantitative end-tidal carbon dioxide.

11. Define hyperoxia and the pulse oximetry parameters used to monitor it.

12. Discuss the steps of rapid sequence intubation.

Chapter 7 • Shock

1. Describe the etiology and pathophysiology of the four main classifications of shock.

1. _____
2. _____
3. _____
4. _____

2. Define the components of cardiac output.

3. Differentiate the signs and symptoms of compensated, decompensated, and irreversible shock. List clinical manifestations of each phase of shock.

4. List the three components of the trauma triad of death.

1. _____
2. _____
3. _____

5. Describe the goals of damage control resuscitation.

6. List the components of a massive transfusion protocol.

7. Which lab value is unique to the administration of large amounts of banked blood and why?

8. Define damage control surgery and its purpose.

9. Describe the interventions, in order, for control of hemorrhage with extremity injuries.

Chapter 8 • Pain

1. Define oligoanalgesia.

2. Differentiate between acute and chronic pain.

3. Give examples of self-report and behavioral assessment tools for assessment of pain.

4. Describe physiologic effects of pain for each system.

5. Describe the optimum combination of pain management techniques.

6. List nonpharmacologic pain management interventions.

7. Describe the components of each of the three steps of the World Health Organization (WHO) pain ladder.

8. Differentiate between the four levels of procedural sedation and anesthesia.

9. Describe the responsibilities of the nurse during procedural sedation.

Chapter 9 • Brain, Cranial, and Maxillofacial Trauma

1. Define and list three types of primary brain injury.

1. _____
2. _____
3. _____

2. Discuss causes of secondary brain injury and give three examples.

1. _____
2. _____
3. _____

3. Describe the effect of hypercarbia on cerebral blood flow. What are benefits and risks of hypercarbia in the context of intracranial pressure and cerebral blood flow?

4. Define the components of and use for the FOUR (Full Outline of UnResponsiveness) Score.

5. Describe three tests for the presence of cerebral spinal fluid in otorrhea or rhinorrhea.

1. _____
2. _____
3. _____

6. Differentiate between epidural, acute subdural, and chronic subdural hemorrhage.

7. Differentiate between mild, moderate, and severe traumatic brain injury.

8. Define second impact syndrome.

9. Define and provide assessment findings for postconcussive syndrome.

10. List signs and symptoms of LeFort I, II, and III, and mandibular fractures.

11. List the indications and contraindications of mannitol for brain injury.

Chapter 10 • Ocular Trauma

1. Define the two classifications of open globe eye injuries.

2. Define anisocoria.

3. Differentiate cycloplegic medications from ophthalmic sympathomimetic medications.

4. Describe assessment findings and treatment for corneal abrasions.

5. List interventions for an intraocular foreign body.

6. List which ocular injuries are treated with antibiotic therapy.

7. Differentiate the grades of traumatic hyphema.

8. Describe the treatment goal of treatment for chemical ocular burns.

Chapter 11 • Thoracic and Neck Trauma

1. Describe the characteristics of a flail chest, including the clinical assessment findings.

2. Differentiate simple pneumothorax, open pneumothorax, tension pneumothorax, and hemothorax.

3. List interventions for a pulmonary contusion.

4. List the components of the Beck triad as they relate to cardiac tamponade.

5. Describe the insertion sites used for needle thoracentesis and chest tubes and explain why they are different.

Chapter 12 • Abdominal and Pelvic Trauma

1. Describe the injury patterns for blunt abdominal trauma.

2. Differentiate Cullen sign, Grey Turner sign, and Kehr sign.

3. Describe the process for assessing pelvic stability.

4. Define an unstable pelvic fracture and list the presenting clinical findings.

5. What is the greatest threat in an unstable pelvic fracture? Describe how to apply a sheet as a pelvic binder.

6. Which mechanisms of injury are associated with renal injury?

Chapter 13 • Spinal Cord and Vertebral Column Trauma

1. Describe the different mechanisms of injury to the vertebral column.

2. Differentiate primary and secondary spinal cord injury.

3. Differentiate spinal shock from neurogenic shock.

4. Describe how the respiratory system is affected by the level of spinal cord injury.

5. Differentiate between complete and incomplete spinal cord injury and how sacral sparing is related.

6. What assessment findings differentiate neurogenic shock from hypovolemic shock?

7. Describe the four types of thoracic vertebral fractures.

1. _____
2. _____
3. _____
4. _____

8. What criteria allow the trauma patient cervical spinal clearance using NEXUS?

Chapter 14 • Musculoskeletal Trauma

1. Define the ten types of fractures.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

2. List the assessment findings, most common sites, and treatment for compartment syndrome. Which symptoms are considered early signs? Which is considered the hallmark sign? Which electrolyte is most important?

3. What mechanism of injury is commonly associated with rhabdomyolysis? What organ is most often affected?

4. List the six assessment P's of musculoskeletal trauma.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

5. Define residual limb.

6. Describe the care of an amputated part.

Chapter 15 • Surface and Burn Trauma

1. Define the following terms:

Abrasion

Avulsion

Contusion

Hematoma

Laceration

Puncture

2. Describe interventions for frostbite.

3. Describe signs of burns to the airway that may indicate airway edema.

4. What burn injuries meet the criteria for admission to a burn center?

5. What complications are associated with electrical burns?

6. Discuss the importance of temperature regulation with burns.

7. Differentiate between the resuscitation replacement guidelines for thermal burns >20% and electrical burns.

8. Discuss the parameters for monitoring urinary output in the adult and pediatric patient with thermal burns.

Chapter 16 • Special Populations: The Pregnant Trauma Patient

1. What assessment findings differentiate a placental abruption from a uterine rupture?

2. What intervention is used to treat hypotension from aortocaval compression?

Chapter 17 • Special Populations: The Pediatric Trauma Patient

1. Describe the components and the use of the Pediatric Assessment Triangle.

1. _____
2. _____
3. _____

2. Describe the manifestations of an increased work of breathing in the pediatric patient.

3. What clinical finding is the result of a relative inability to increase contractility in order to improve cardiac output?

4. What behavioral signs may be signs of decreased cerebral perfusion or hypoxia?

Chapter 18 • Special Populations: The Older Adult Trauma Patient

1. Describe the activities and associated factors related to low-energy trauma in the older adult.

2. List common injuries from falls in the older adult population.

3. What condition is associated with a fall from which the older adult cannot rise? What complications result from this condition?

4. Review the age-related anatomic and physiologic change of the older adult in relation to the components of the initial assessment.

5. Describe the fluid resuscitation of an older adult patient related to fluid overload, when to administer red blood cells, and the use of anticoagulant medication.

6. Describe effects of common medications in relation to the older adult trauma patient.

Chapter 19 • Special Populations: The Bariatric Trauma Patient

1. Describe common patterns and severity of injuries in the bariatric trauma patient.

2. Which comorbid conditions factor into the risks of the bariatric trauma patient? And how?

3. Describe the pathophysiologic changes of the systems of the bariatric patient and the effects on trauma resuscitation efforts.

4. Describe techniques to improve the intubation process for the bariatric trauma patient.

5. Discuss the use and insertion of nasogastric tubes in the bariatric patient.

Chapter 20 • Special Populations: The Interpersonal Violence Trauma Patient

1. Differentiate family and intimate partner violence from community violence.

2. List the populations at higher risk for interpersonal violence.

3. Describe the types of abuse and the associated signs of each.

4. What cues to abuse may be obtained during the history portion of the initial assessment?

5. Describe specific injuries associated with interpersonal violence and abuse.

6. List the basic components of evidence collection.

7. Describe steps to maintain the forensic chain of custody.

Chapter 21 • The Psychosocial Aspects of Trauma Care

1. List factors that affect the level of distress experienced after a traumatic event.

2. Describe interventions that can facilitate patient and family coping with trauma.

3. Differentiate stress reaction, crisis, fear, anxiety, grief, bereavement, and mourning.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

4. Describe interventions used for patients with language and communication needs.

5. List techniques used for preventing escalation.

6. Differentiate compassion fatigue, secondary traumatic stress, and burnout in nurses.

1. _____
2. _____
3. _____

7. Describe the methods used to build resilience.

8. Differentiate debriefings from defusings in critical incident stress management.

9. Describe an ethical consideration related to trauma care.

Chapter 22 • Disaster Management

1. Describe the four phases of emergency management.

1. _____
2. _____
3. _____
4. _____

2. Define the components of the Incident Command Structure.

3. What is the goal of disaster triage?

4. What components are considerations when designing a decontamination area?

5. Define the four categories of disaster triage and the difference between adult and pediatric definitions.

6. Describe the signs and symptoms of common chemical, biologic, radioactive, and explosive agents.

Chapter 23 • Transition of Care for the Trauma Patient

1. List the EMTALA conditions to be met prior to transfer.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

2. Differentiate the four levels of trauma center

1. _____
2. _____
3. _____
4. _____

3. What factors are considered in the decision to transport a trauma patient?

4. What are the nursing considerations in preparation for and during transport?

Chapter 24 • Post Resuscitation Care in the Emergency Department

1. List delayed injuries and commonly missed injuries by system.

1. _____
2. _____
3. _____
4. _____
5. _____

2. What are the risks resulting from hypothermia in the trauma patient?

3. What injury is often associated with rib fracture? What intervention can limit the risk of pneumonia from this injury?

4. What are the risk factors for acute respiratory distress syndrome?

5. What treatment strategies help lower the risk of ARDS?

6. What interventions will help prevent ventilator acquired pneumonia?

7. Describe the components of abdominal compartment syndrome.

8. What are the effects of abdominal compartment syndrome by system?

9. What interventions treat pulmonary embolus?

10. Define the components of capnography.
