



Dear Registrant

On behalf of AMR and ITLS of Michigan we are pleased to acknowledge your registration to the ITLS Recert course. The course will be held at American Medical Response (AMR) in Grand Rapids, MI (see map).

We are sure you will find the course to be an enjoyable experience. Enclosed you will find:

1. The ITLS text (if requested) and pre-course test. Note an answer key is not provided. We urge that you use it as a positive tool for course preparation.
 2. A tentative course agenda. The final agenda will be available at registration.
 3. A map of the course location.
 4. Student Waiver form. Please review and be prepared to sign at course registration.
- Your textbook is a very informative and, indeed, the foundation of the course. It should be pointed out, however, that the text is written as a generic, international guide. ITLS of Michigan has tailored the International program to better meet the needs of EMS in Michigan.

We look forward to meeting and working with each of you in this effort to improve pre-hospital trauma assessment and management. If you have any questions please contact me at (616) 482-6686 or e-mail David_Maatman@amr-ems.com

Sincerely,

A handwritten signature in blue ink that reads 'David V. Maatman'.

David V. Maatman, EMT-P/IC
Course Coordinator

**ITLS of Michigan
ITLS Recertification Course Agenda
Morning**

Date:

Location: AMR
Grand Rapids, MI

| | |
|-------------|--------------------------------------|
| 800-815 | Sign In & Coffee |
| 815-830 | Welcome & Course Overview |
| 830-915 | Fundamentals of ITLS |
| 915-1000 | Airway Management Case Presentations |
| 1000-1200 | Testing |
| | 1. Moulage Scenario |
| | 2. Written Exam |
| 1200 approx | Adjourn |



Dear ITLS Participant,

ITLS of Michigan would like to welcome you to your ITLS course. ITLS has been an active part of EMS education in Michigan since 1983 and continues its pursuit to be the leader in pre-hospital trauma care and education.

The ITLS provider and recertification courses, in Michigan, have gone through extensive changes over the years. Many of these changes have been based on the input we receive from participants like you. Recently we modified the format and content of the course to be more congruous with *Continuing Education/Ongoing Education* instead of *Refresher Training*. Instead of repeating what was taught in your initial training, we will build on your existing knowledge base. In view of this concept, we have certain expectations of your preparedness to take this course. Some of these expectations are:

- ❑ You have read the current ITLS Provider textbook (7th edition) and understand the objectives at the beginning of each chapter.
- ❑ You reviewed the pre-test.
- ❑ You have fundamental understanding of pre-hospital emergency care and the associated skills e.g.:
 - Patient assessment
 - Spinal immobilization (long board & short board device)
 - Basic airway management
 - Splinting techniques
 - Use of personal protection equipment (PPE)
 - Advanced airway management (advanced providers only)
 - Vascular access (advanced providers only)

In Michigan, ITLS is a pass/fail course. To successfully complete the course you must: be in attendance for the entire course, score at least a 76% on the written post-test (which is based on the current ITLS Provider textbook), and pass a practical scenario. Critical actions for the practical include: perform a primary survey, repeat the ongoing assessment at least twice, provide appropriate airway management, maintain c-spine (if indicated) during the entire scenario, identify and treat all life threatening injuries and conditions, have an appropriate scene time (no unnecessary delays), and apply a c-collar before transport and extrication.

We are confident you will find the ITLS course challenging yet enjoyable. Thank you for your commitment to EMS trauma care.

Sincerely,

ITLS of Michigan

**ITLS of Michigan, Inc,
Student Waiver**

I understand that there are physical requirements which will be asked of me during this course involving physical contact, patient movement and extrication activities. I am under no physical restrictions at this time which would prevent my participation in this program. I have not sustained any recent injuries or illnesses which would preclude participation. Likewise, I do not currently suffer any illnesses (e.g. current infectious diseases) or injuries which would pose a risk to myself, students, instructors or simulated victims by my participation. I hereby release ITLS of Michigan, Inc. and the sponsoring agency or agencies of the course of any responsibility for any illnesses or injuries which may arise during participation in the course but occur as a consequence of any preexisting conditions.

Students Printed Name

Students Signature

Emergency Contact Number

Date

- 1 . A 34 year old man is injured in a motor vehicle collision. Physical examination is normal except for diffuse abdominal tenderness. He is conscious and vital signs obtained enroute to the hospital are respirations 20 per ,minute, pulse rate is 120 per minute blood pressure 100/60; How should this patient be managed in the field?
 - A. Intravenous fluid at a "keep open" rate
 - B. Intravenous fluid at 20 ml/kg bolus
 - C. Fentanyl 100 mcg intravenous
 - D. Insert an oropharyngeal airway and assist ventilations
- 2 . What is Sellick's maneuver?
 - A. A method allowing the rescuer to hold a mask on the face with both hands
 - B. A system used to calculate minute volume
 - C. Another name for Mallampati
 - D. Posteriorly directed pressure applied to the cricoid cartilage
- 3 . For which one of the following viruses is there currently an effective vaccine?
 - A. Delta hepatitis
 - B. Hepatitis B
 - C. Hepatitis C
 - D. Human immunodeficiency virus
- 4 . A 16 year old girl is rescued from a burning house. She has 25% partial thickness burns, and the burned areas are hot to the touch. What is the appropriate treatment?
 - A. Apply ice to burned areas until cool to touch
 - B. Apply clean water to burned areas for up to 1-2 minutes
 - C. Apply iced water to burned areas until cool to touch
 - D. Do not apply anything to burned areas other than clean sheets
- 5 . Proper immobilization of a forearm (radius and ulna) fracture involves splinting which of the following?
 - A. Elbow and fracture site
 - B. Fracture site only
 - C. Wrist and fracture site
 - D. Wrist, elbow, and fracture site
- 6 . What treatment is NOT indicated in the routine management of the patient with a head injury?
 - A. Administration of 100% oxygen
 - B. Fluid resuscitation to a BP of 110-120 systolic if the patient is hypotensive
 - C. Hyperventilating to obtain an EtCO₂ of less than 30
 - D. Stabilization of the cervical spine
- 7 . Which of the following sets of vital signs is most compatible with a diagnosis of isolated head injury with increasing intracranial pressure?
 - A. BP 170/100, pulse 50/min
 - B. BP 80/60, pulse 130/min
 - C. BP 80/60, pulse 50/min
 - D. BP 170/100, pulse 130/min
- 8 . Which of the following trauma situations would be considered "load and go"?
 - A. Awake and alert patient who has blood coming out of one ear
 - B. Patient who had brief loss of consciousness but is now awake
 - C. Patient with abdominal tenderness, clammy skin, blood pressure 100/70, and pulse 130/min
 - D. Patient with tender, deformed lower leg

- 9 . Which one of the following should be performed, at the scene of a "load and go", prior to moving the trauma patient to the ambulance?
- A. Apply traction splint for femur fracture
 - B. Decompress tension pneumothorax
 - C. Initiate intravenous line
 - D. Obtain vital signs
- 10 . Which one of the following is a reason to interrupt the initial assessment?
- A. Cardiac arrest
 - B. Multiple open (compound) fractures
 - C. Severe head injury with brain tissue visible
 - D. Severe shock
- 11 . A 24 year old woman is found lying on the sidewalk after jumping from a fourth story window. She is hypotensive, diaphoretic, tachycardic, and unconscious. Injuries include open skull fracture, pelvis fractures, and flail chest. What should be your goal for your time?
- A. 5 minutes or less
 - B. 5 to 10 minutes
 - C. 10 to 15 minutes
 - D. As long as necessary to assess and stabilize the patient
- 12 . Which of the following injuries would change an otherwise stable trauma patient's category from "stable" to "load and go"?
- A. Bilateral clavicle fractures
 - B. Bilateral femur fractures
 - C. Bilateral humerus fractures
 - D. Bilateral tibia fractures
- 13 . What is most commonly injured, during a fall from a height, of an infant?
- A. Head
 - B. Chest
 - C. Abdomen
 - D. Extremities
- 14 . What site is the first choice for intraosseous infusion?
- A. Proximal tibia
 - B. Distal humerus
 - C. Proximal femur
 - D. Distal fibula
- 15 . Which of the following will generally suffer the LEAST structural damage from a gunshot wound from a rifle?
- A. Spleen
 - B. Kidney
 - C. Liver
 - D. Lung
- 16 . A 34 year old man has a gunshot wound to the right groin area. Arterial bleeding, which cannot be controlled with direct pressure, is coming from the wound. The patient appears confused, diaphoretic, and has weak peripheral pulses. What is the appropriate fluid resuscitation for this patient?
- A. Intravenous fluid at a "keep open" rate
 - B. Apply a hemostatic agent and gain intravenous access given enough fluid to maintain peripheral pulses
 - C. Intravenous fluid at a wide open rate; give at least two liters, then reassess patient
 - D. No intravenous access should be established in this situation

- 17 . Which one of the following is typically associated with, post-traumatic hemorrhage, EARLY shock?
- A. Ventricular dysrhythmias
 - B. Hypotension
 - C. Loss of 30% to 45% of blood volume
 - D. Narrowed pulse pressure
- 18 . Among the following, what is the most common cause of preventable trauma death in the injured adult patient?
- A. Airway obstruction
 - B. Cardiac tamponade
 - C. Hemorrhagic shock
 - D. Spinal injury
- 19 . In which of the following situations should an emergency rescue be used?
- A. Leaking antifreeze from radiator
 - B. Paralyzed patient
 - C. Presence of toxic fumes
 - D. Pregnant patient
- 20 . Which of the following is most typical of early, neurogenic shock?
- A. Increased pulse, clammy skin
 - B. Increased pulse, warm and dry skin
 - C. Decreased pulse, clammy skin
 - D. Decreased pulse, warm and dry skin
- 21 . A 23 year old man is injured in a motorcycle collision. The patient appears disoriented and grossly intoxicated. There is a large laceration on his scalp, which is actively bleeding. The patient refuses treatment and threatens to call his lawyer if anyone touches him. What should you do?
- A. Allow the patient to phone his lawyer
 - B. Have the patient sign a release form, then let him go
 - C. Have the patient placed under protective custody then treat and transport the patient using restraints if necessary
 - D. Wait until the patient passes out from his head injury or bleeding then transport
- 22 . Which of the following is an acceptable location to insert a needle when decompressing a tension pneumothorax?
- A. Directly under the bottom of the second rib, midclavicular line
 - B. Directly under the bottom of the third rib, midclavicular line
 - C. Directly over the top of the fourth rib, midaxillary line
 - D. Directly over the top of the third rib, midclavicular line
- 23 . A 54 year old man is involved in a motor vehicle collision. The steering wheel is bent. During your initial assessment you note his skin is pale and his radial pulses are present. Breath sounds are clear, heart tones are not muffled. Which one of the following is most consistent with these findings?
- A. Cardiac contusion
 - B. Traumatic aortic rupture
 - C. Flail chest
 - D. Tension pneumothorax
- 24 . What is the most common cause of cardiopulmonary arrest in the trauma patient?
- A. Brain injury
 - B. Hypoxemia
 - C. Myocardial contusion

- D. Ventricular arrhythmia
- 25 . A 49 year old man is involved in a motor vehicle collision. First responders are doing CPR. Findings include a distended abdomen and obviously deformed pelvis and a quick look at the monitor shows asystole. Which of the following is the most appropriate act?
- A. Establish intravenous access and administer a 20mL/kg bolus
 - B. Establish intravenous access and administer a 1 liter bolus
 - C. Establish intravenous access and administer a 2-4 liter bolus
 - D. Resuscitative efforts should not be started and the patient pronounced dead
- 26 . Which of the following statements concerning treatment of shock in the pregnant, burn patient is TRUE?
- A. Oxygen should be used sparingly so as to avoid oxygen toxicity to the fetus
 - B. Pressor agents such as dopamine should be used to improve circulation to the fetus
 - C. Volume replacement should be given earlier and in larger amounts to the pregnant, burn patient
 - D. Volume replacement should be given more slowly so as to avoid fluid overloading the fetus
- 27 . Which area of the spine is most susceptible to injury in a rear-impact motor vehicle crash?
- A. Cervical
 - B. Thoracic
 - C. Lumbar
 - D. Sacral-coccygeal
- 28 . An unrestrained 18 year old male on the way to a post-graduation party leaves the road, bounces through a ditch and hits a tree. You find him behind the bent steering wheel, unconscious, cool, pale and clammy, blue around the lips with labored respirations of 30 and shallow, thready radial pulses of about 120, distended neck veins, tracheal deviation to the right, an asymmetrical chest with absent breath sounds on the left. You assume he has a
- A. Cardiac tamponade
 - B. Tension pneumothorax
 - C. Massive hemothorax
 - D. Simple pneumothorax
- 29 . Which one of the following may predict which patients might have difficult laryngoscopy and intubation?
- A. Patients with dentures
 - B. Patients with history of asthma
 - C. Patients with an overbite
 - D. Patients with beards
- 30 . An unrestrained 18 year old male on the way to a post-graduation party leaves the road, bounces through a ditch and hits a tree. You find him behind the bent steering wheel, unconscious, cool, pale and clammy, with labored respirations of 30 and shallow, thready radial pulses of about 120, flat neck veins, trachea midline, an asymmetrical chest with absent breath sounds on the left. You assume he has a
- A. Cardiac tamponade
 - B. Tension pneumothorax
 - C. Massive hemothorax
 - D. Simple pneumothorax

- 31 .** A 23 year old female has won the “Let’s-see-who-can-lean-the-farthest-backward-over-the-second-story-balcony-railing” contest. You arrive to find her boyfriend standing over her, holding two beers, as she lies on the grass under the balcony. She opens her eyes to voice, her skin is normal in color, respirations about 16 and unlabored, pulse 54 and a little weak at the wrist, with no external bleeding. She has flat neck veins, a normal chest and abdomen and a stable pelvis. First responders who arrived just before you tell you that her pulse ox reading is 94 and her BP is 74/30. If this is true,
- A.** Hypovolemic shock
 - B.** Relative hypovolemic (high-space) shock
 - C.** Mechanical (obstructive) shock
 - D.** Cardiogenic shock
- 32 .** A 23 year old female has won the “Let’s-see-who-can-lean-the-farthest-backward-over-the-second-story-balcony-railing contest. You arrive to find her boyfriend standing over her, holding two beers, as she lies on the grass under the balcony. She opens her eyes to voice, her skin is cool, clammy and ashen, respirations are rapid and shallow, radial pulses are too rapid to count and thready. There is no external bleeding. She has flat neck veins, a normal chest and abdomen and pelvis. Her boyfriend tells you that she has some kind of heart problem but he doesn’t know what. Placed on the monitor, she shows a wide-complex tachycardia of about 280. What kind of shock is she suffering?
- A.** Hypovolemic shock
 - B.** Relative hypovolemic (high-space) shock
 - C.** Mechanical (obstructive) shock
 - D.** Cardiogenic shock
- 33 .** Which of the following would be the most compelling reason to intubate a patient immediately?
- A.** Snoring respirations
 - B.** Gurgling respirations
 - C.** Inability to ventilate (achieve chest rise)
 - D.** Traumatic arrest
- 34 .** Which of the following may affect the reliability of a pulse oxymetry reading?
- A.** Cyanide poisoning
 - B.** High ambient light
 - C.** Carbon monoxide poisoning
 - D.** All of the above
- 35 .** During the Primary Survey you recognize your patient is in need of immediate ventilator support, you delegate this intervention to a team member and you continue the Primary Survey. This delegation of interventions is called:
- A.** the “Just Do It” process
 - B.** the “Treat It as You Find It” process
 - C.** the “Get It Done” process
 - D.** the “Fix It” process
- 36 .** Which of the following conditions is your FIRST priority in management of a trauma patient?
- A.** Open the airway and assess for breathing
 - B.** Provide ventilator support for your patient
 - C.** Control major external bleeding
 - D.** Begin chest compressions if pulses are absent

- 37 . In the absence of herniation syndrome, adult head injured patients should be:
- A. ventilated at a rate of 8-10 per minute
 - B. ventilated at a rate of 12-14 per minute
 - C. ventilated at a rate of 16-18 per minute
 - D. ventilated at a rate of 20 per minute
- 38 . Supine hypotension syndrome in the pregnant patient is caused by:
- A. uterine obstruction of venous blood flow
 - B. atelectasis (collapse of small airways) of the lungs
 - C. uterine pressure on the vagal nerve
 - D. gastric reflux
- 39 . Which of the following has a greater chance of surviving traumatic cardiopulmonary arrest?
- A. Patients who suffer blunt force trauma to the torso
 - B. Patients with non-dilated pupils
 - C. Patients with dilated unresponsive pupils
 - D. Patients with penetrating chest trauma who are hypothermic
- 40 . Tourniquet application should be limited to less than:
- A. 1 hour
 - B. 2 hours
 - C. 3 hours
 - D. 4 hours
- 41 . Hemostatic agents applied directly to the source of bleeding must be used in conjunction with:
- A. direct pressure to the wound
 - B. tourniquets proximal to the wound
 - C. pressure points to arteries proximal to the wound
 - D. elevation of the wound above the level of the heart
- 42 . Which assessment tool(s) may assist in predicting patient deterioration for someone who otherwise appears stable?
- A. Serum lactate levels
 - B. Blood sugar levels
 - C. Abdominal ultrasound
 - D. A & C
- 43 . Which of the following concerning blast injury is TRUE?
- A. Primary injury is caused by heat
 - B. Secondary injury is caused by materials propelled
 - C. Tertiary injury is caused by toxic fumes
 - D. Quaternary injury is caused by the displacement of the body
- 44 . What are the most important factors in determining injuries sustained in a fall?
- A. Distance, impact area on the body, surface struck
 - B. Distance, clothing worn, surface struck
 - C. Distance, movement during the fall, underlying medical conditions
 - D. Distance, underlying medical conditions, surface struck

- 45 .** You have a patient with an isolated stab wound to the lateral chest. According to recent studies, which of the following procedures should be avoided?
- A.** Assisting ventilations
 - B.** Supplemental oxygen
 - C.** Occlusive dressing
 - D.** Spinal motion restriction
- 46 .** The “Golden Period” begins:
- A.** at the time of injury
 - B.** at the time your unit is dispatched
 - C.** when your unit arrives on scene
 - D.** when your unit leave the scene for the hospital
- 47 .** Pulsus paradoxus is best described by which of the following?
- A.** The radial pulse disappears upon inspiration
 - B.** The radial pulse is absent
 - C.** The radial pulse is stronger than the carotid pulse
 - D.** There are unequal radial pulses
- 48 .** Which of the following is the correct orientation for inserting an intraosseous needle to the proximal tibia?
- A.** Medial to the midline, avoiding the growth plate
 - B.** Medial to the midline, pointing towards the growth plate
 - C.** Lateral to the midline, avoiding the growth plate
 - D.** Lateral to the midline, pointing towards the growth plate
- 49 .** A 35-year-old male is found at the scene of a motor vehicle collision. He is alert and oriented and complaining of knee pain. Your assessment reveals a respiratory rate of 16 per minute non-labored, pulse rate of 88 per minute strong, blood pressure 124/64, unequal pupils and swelling to the isolated knee injury. What is the most likely cause of the unequal pupils?
- A.** Pre-existing condition (anisocoria)
 - B.** Increased intracranial pressure
 - C.** Alcohol intoxication
 - D.** Hypotension
- 50 .** In the elderly which of the following findings is most likely caused by an acute injury?
- A.** Edema of the lower extremities
 - B.** Hypotension
 - C.** Loss of lung tissue elasticity
 - D.** Decreased peripheral vision