STROKE is prevalent and life-threatening

- 780,000 strokes are estimated to occur annually in the United States¹
- Stroke is the 3rd leading cause of death and a leading cause of disability¹
- The longer a stroke goes untreated, the greater the chance of permanent neurologic damage²
- Rapid intervention is crucial in the treatment of stroke²

EMS management of suspected stroke³

Clinical assessments and actions

- Support ABCs: airway, breathing, circulation – give oxygen if needed
- Perform prehospital stroke assessment
  - Cincinnati Prehospital Stroke Scale
  - Los Angeles Prehospital Stroke Screen (LAPSS)
- Establish time when patient last known normal
- Transport (consider triage to a center with a stroke unit if appropriate; consider bringing a witness, family member, or caregiver)
- Alert receiving hospital stroke center
- Check glucose level if possible
Prehospital stroke assessment scales

Cincinnati Prehospital Stroke Scale\(^4\)

**Facial Droop** (have patient smile)
- Normal: Both sides of face move equally
- Abnormal: One side of face does not move as well

**Arm Drift** (have patient hold arms out for 10 seconds)
- Normal: Both arms move equally or not at all
- Abnormal: One arm drifts compared to the other, or does not move at all

**Speech** (have patient speak a simple sentence)
- Normal: Patient uses correct words with no slurring
- Abnormal: Slurred or inappropriate words, or mute


Los Angeles Prehospital Stroke Screen\(^5\)

**Screening Criteria**
- Age >45 years
- History of seizures or epilepsy absent
- Symptom duration <24 hours
- At baseline, patient is not wheelchair bound or bedridden
- Blood glucose between 60 and 400 mg/dL
- Obvious asymmetry (right vs left) in any of the following 3 exam categories:
  - Facial smile/grimace (equal, droop)
  - Grip (equal, weak grip, no grip)
  - Arm strength (equal, drifts down, falls rapidly)


Take the patient to the nearest certified stroke center.

To find certified primary stroke centers in your area, go to

- [www.jointcommission.org/CertificationPrograms/PrimaryStrokeCenters](http://www.jointcommission.org/CertificationPrograms/PrimaryStrokeCenters)
  - Select “Open link in new browser window” when prompted
  - Select the “Search for a Joint Commission Disease-Certified Organization” option
  - Enter your state and indicate “Primary Stroke Center” from certified option list
Time equals brain

AHA/ASA recommendations stress urgency of response

- Call 9-1-1 for rapid emergency response and timely treatment of stroke
- Dispatchers should make stroke a priority dispatch
- More initial management of stroke in the field
- Rapid transport of patients to the nearest stroke center

Window for IV t-PA treatment limited to within 3 hours of stroke onset

- t-PA therapy remains the only FDA-approved treatment for stroke
- Patient eligibility must first be established to reduce associated risks
- Designated stroke centers are equipped to quickly evaluate and treat stroke with IV t-PA

National Institutes of Health (NIH) recommends time intervals that enable eligible stroke patients to receive t-PA treatment within 60 minutes of hospital arrival.


- EMS bypass of hospital without stroke resources supported by guidelines if stroke center within reasonable transport range

**Indication:** Activase (Alteplase) is indicated for the management of acute ischemic stroke in adults for improving neurological recovery and reducing the incidence of disability. Treatment should only be initiated within 3 hours after the onset of stroke symptoms, and after exclusion of intracranial hemorrhage by a cranial computerized tomography (CT) scan or other diagnostic imaging method sensitive for the presence of hemorrhage (see CONTRAINDICATIONS in the full prescribing information).

Please see important safety information on next page.


www.gene.com
Important Safety Information

Safety Information: All thrombolytic agents increase the risk of bleeding, including intracranial bleeding, and should be used only in appropriate patients. Not all patients with acute ischemic stroke will be eligible for Activase therapy, including patients with evidence of recent or active bleeding; recent (within 3 months) intracranial or intraspinal surgery, serious head trauma, or previous stroke; uncontrolled high blood pressure; or impaired blood clotting.

For full prescribing information, click here.

References


TIIDE PROJECT

Terrorism Injuries: Information, Dissemination and Exchange

Blast injuries present unique triage, diagnostic, and management challenges as a consequence of the blast wave from high explosive detonations. Few civilian health care providers in the United States have experience treating patients with injuries from these kinds of blasts. Currently, there exists an urgent and ongoing need to develop, disseminate and exchange information about injuries from terrorism. The Terrorism Injuries: Information, Dissemination and Exchange (TIIDE) Project was established through a cooperative agreement between the Centers for Disease Control and Prevention (CDC), Division of Injury Response, National Center for Prevention and Control and seven (7) grantees.

The seven grantees are:

- American College of Emergency Physicians
- American Medical Association
- American Trauma Society
- National Association of EMS Physicians (NAEMSP)
- National Association of EMT's (NAEMT)
- National Association of State EMS Officials (NASEMSO)
- National Native American EMS Association

The American College of Surgeons – Committee on Trauma (ACS-COT) and the State and Territorial Injury Prevention Directors Association (STIPDA) were added to the TIIDE project in 2005.

SCOPE OF WORK

The American College of Emergency Physicians (ACEP) led the process which included:

- Conducting a literature review and web-based research to identify existing training courses
- Developing core competencies for traumatic injuries from terrorism training
- Reviewing terrorism training courses currently being presented on a national level for gaps in the training on traumatic injury care
- Developing a matrix of gaps in training on traumatic injuries
- Developing knowledge objectives for each core topic

Representatives from the seven (7) grantee groups as well as the American Academy of Pediatrics (AAP), American College of Surgeons-Committee on Trauma (ATS-COT), American Nurses Association (ANA), Emergency Nurses Association (ENA), Society of Critical Care Medicine (SCCM) and the University of Texas Southwestern Medical Center at Dallas (UTSW) formed a task force to narrow the list of core topics for courses on blast injuries. A peer review work group was established to serve as content experts and review the overall work of the task force.

Authors were selected from content experts in the fields of emergency nursing, emergency medical services and emergency medicine to write about the following topics in the blast curriculum:

- System Issues
- Scene Safety
- Triage
- Blast Injuries
- Crush Injuries and Compartment Syndrome
- Military Experience in Blast Injury Care
- Special Considerations
- Psychological Issues

Four educational products have been developed through the TIIDE partnership. The Bombings: Injury Patterns and Care products are designed to be the minimum content that should be included in any all-hazards disaster response training program. This content is designed to update the student with the latest clinical information regarding blast related injuries from terrorism.

The one-hour curriculum was designed to be integrated into existing all-hazards disaster courses.
The three-hour curriculum was designed as a stand-alone seminar. Both courses are available for download at the American College of Emergency Physicians website, www.acep.org/blastinjury. The title, “Bombings: Injury Patterns and Care” is used for both the one and three-hour courses as well as the interactive CD-ROM/Web based course.

Development of a one-hour, self-paced, interactive CD-ROM/Web-based program began in April 2006. The one-hour PowerPoint and curriculum guide was used as the starting point for development. The course begins with an overview of blast physics, morbidity and mortality, scene safety, Personal Protective Equipment (PPE), patterns of injury, pathophysiology of blast injury and categories of blast injury. A terrorist bombing at a train station sets the scene, and four patients are followed from initial triage to on-scene care through hospital care.

The one-hour and three-hour blast PowerPoint presentations and curriculum guides with teaching points may be downloaded at www.acep.org/blastinjury. The one-hour module can be inserted into already existing disaster preparedness courses that need information on blast injuries. The three-hour seminar can be taught as a stand-alone course for those first responders who only want blast injury training. A copy of the CD may also be ordered.

The “Bombings: Injury Patterns and Care” Interactive Scenario-based Training CD-ROM is an interactive training program including sixty minutes of instruction addressing the assessment and treatment of four patients from a simulated terrorist bombing event. The interactive scenario-based training course may be downloaded or viewed on-line at www.acep.org/blastinjury. A copy of the CD may also be ordered.

A quick reference pocket guide on blast injuries and a poster were the final products developed under the TIIDE grant. To order a free copy of either of these products, contact a staff member. A pdf of the pocket guide for download is available at www.acep.org/blastinjury.

Additional information on terrorism and mass casualties can be found on the Centers for Disease Control (CDC) website at: http://www.bt.cdc.gov/masscasualties/.

For more information on “Bombings: Injury Patterns and Care” courses, contact the ACEP EMS and Disaster Preparedness Department at 1-800-798-1822.
GET YOUR HEAD IN THE GAME

As many as 3.8 million sports- and recreation-related concussions are estimated to occur in the United States each year.

A concussion is a brain injury caused by a bump or blow to the head that can change the way your brain normally works. Even what seems to be a mild bump or blow to the head can be serious. As a coach or youth sports administrator, you play a vital role in sharing this information with athletes and parents. You are on the front line in the effort to identify and respond to concussions in young athletes.

Order your free “Heads Up: Concussion in Youth Sports” tool kits today. The kits include a clipboard with essential and easy-to-use information about recognizing and responding to concussions.

The tool kit also contains:
• A fact sheet for coaches on concussion;
• A fact sheet for athletes on concussion;
• A fact sheet for parents on concussion;
• A magnet with concussion facts for coaches and parents;
• A poster with concussion facts for coaches and sports administrators; and
• A quiz for coaches, athletes, and parents to test their concussion knowledge.

For more information and to order additional materials free of charge, visit: www.cdc.gov/ConcussionInYouthSports

For more detailed information on concussion and traumatic brain injury, visit: www.cdc.gov/injury

It’s better to miss one game than the whole season.
WHAT IS A CONCUSSION?
A concussion is a brain injury. Concussions are caused by a bump or blow to the head. Even a "ding," "getting your bell rung," or what seems to be a mild bump or blow to the head can be serious.

You can't see a concussion. Signs and symptoms of concussion can show up right after the injury or may not appear or be noticed until days or weeks after the injury. If your child reports any symptoms of concussion, or if you notice the symptoms yourself, seek medical attention right away.

WHAT ARE THE SIGNS AND SYMPTOMS OF A CONCUSSION?

Signs Observed by Parents or Guardians
If your child has experienced a bump or blow to the head during a game or practice, look for any of the following signs and symptoms of a concussion:

• Appears dazed or stunned
• Is confused about assignment or position
• Forgets an instruction
• Is unsure of game, score, or opponent
• Moves clumsily
• Answers questions slowly
• Loses consciousness (even briefly)
• Shows behavior or personality changes
• Can’t recall events prior to hit or fall
• Can’t recall events after hit or fall

Symptoms Reported by Athlete

• Headache or "pressure" in head
• Nausea or vomiting
• Balance problems or dizziness
• Double or blurry vision
• Sensitivity to light
• Sensitivity to noise
• Feeling sluggish, hazy, foggy, or groggy
• Concentration or memory problems
• Confusion
• Does not "feel right"

HOW CAN YOU HELP YOUR CHILD PREVENT A CONCUSSION?
Every sport is different, but there are steps your children can take to protect themselves from concussion.

• Ensure that they follow their coach’s rules for safety and the rules of the sport.
• Encourage them to practice good sportsmanship at all times.
• Make sure they wear the right protective equipment for their activity (such as helmets, padding, shin guards, and eye and mouth guards). Protective equipment should fit properly, be well maintained, and be worn consistently and correctly.
• Learn the signs and symptoms of a concussion.

WHAT SHOULD YOU DO IF YOU THINK YOUR CHILD HAS A CONCUSSION?

1. Seek medical attention right away. A health care professional will be able to decide how serious the concussion is and when it is safe for your child to return to sports.

2. Keep your child out of play. Concussions take time to heal. Don’t let your child return to play until a health care professional says it’s OK. Children who return to play too soon—while the brain is still healing—risk a greater chance of having a second concussion. Second or later concussions can be very serious. They can cause permanent brain damage, affecting your child for a lifetime.

3. Tell your child’s coach about any recent concussion. Coaches should know if your child had a recent concussion in ANY sport. Your child’s coach may not know about a concussion your child received in another sport or activity unless you tell the coach.

It’s better to miss one game than the whole season.

For more information and to order additional materials free-of-charge, visit: www.cdc.gov/ConcussionInYouthSports

For more detailed information on concussion and traumatic brain injury, visit: www.cdc.gov/injury
WHAT IS A CONCUSSION?
A concussion is a brain injury that:
• Is caused by a bump or blow to the head
• Can change the way your brain normally works
• Can occur during practices or games in any sport
• Can happen even if you haven’t been knocked out
• Can be serious even if you’ve just been “dinged”

WHAT ARE THE SYMPTOMS OF A CONCUSSION?
• Headache or “pressure” in head
• Nausea or vomiting
• Balance problems or dizziness
• Double or blurry vision
• Bothered by light
• Bothered by noise
• Feeling sluggish, hazy, foggy, or groggy
• Difficulty paying attention
• Memory problems
• Confusion
• Does not “feel right”

WHAT SHOULD I DO IF I THINK I HAVE A CONCUSSION?
• Tell your coaches and your parents. Never ignore a bump or blow to the head even if you feel fine. Also, tell your coach if one of your teammates might have a concussion.

• Get a medical check up. A doctor or health care professional can tell you if you have a concussion and when you are OK to return to play.

• Give yourself time to get better. If you have had a concussion, your brain needs time to heal. While your brain is still healing, you are much more likely to have a second concussion. Second or later concussions can cause damage to your brain. It is important to rest until you get approval from a doctor or health care professional to return to play.

HOW CAN I PREVENT A CONCUSSION?
Every sport is different, but there are steps you can take to protect yourself.
• Follow your coach’s rules for safety and the rules of the sport.
• Practice good sportsmanship at all times.
• Use the proper sports equipment, including personal protective equipment (such as helmets, padding, shin guards, and eye and mouth guards). In order for equipment to protect you, it must be:

  > The right equipment for the game, position, or activity
  > Worn correctly and fit well
  > Used every time you play

It's better to miss one game than the whole season.
A QUIZ FOR COACHES, ATHLETES, AND PARENTS

Review the “Heads Up: Concussion in Youth Sports” materials and test your knowledge of concussion.

Mark each of the following statements as True (T) or False (F)

1. A concussion is a brain injury.

2. Concussions can occur in any organized or unorganized recreational sport or activity.

3. You can’t see a concussion and some athletes may not experience and/or report symptoms until hours or days after the injury.

4. Following a coach’s rules for safety and the rules of the sport, practicing good sportsmanship at all times, and using the proper sports equipment are all ways that athletes can prevent a concussion.

5. Concussions can be caused by a fall or by a bump or blow to the head or body.

6. Concussion can happen even if the athlete hasn’t been knocked out or lost consciousness.

7. Nausea, headaches, sensitivity to light or noise, and difficulty concentrating are some of the symptoms of a concussion.

8. Athletes who have a concussion should not return to play until they are symptom-free and have received approval from a doctor or health care professional.

9. A repeat concussion that occurs before the brain recovers from the first can slow recovery or increase the likelihood of having long-term problems.


It's better to miss one game than the whole season.

For more information and to order additional materials free-of-charge, visit: www.cdc.gov/ConcussionInYouthSports
ACROSS

3. What a driver should do when an ambulance approaches with lights and siren
6. Perpetual patients
9. Ambulance safety feature
11. Transports patients to the hospital
12. Emergency Medical Services, briefly
14. A common cause of breathing difficulty
15. Lifesaving procedure (abbr.)
16. Headgear for bicycle riders
17. Rescue extrication tool

DOWN

1. Protective and handy
2. Used to carry patients up and down
4. Paramedics often carry these on their belts
5. Someone who witnesses a medical emergency
7. A man or woman trained in advanced life support
8. International EMS symbol
10. Spinal immobilization tool
13. Important information for 911
Copy this page and distribute to your EMS staff. Then collect the responses and score. Persons with the highest scores can be made eligible for a drawing for EMS Week prizes.

1. In what year was the first official EMS Week held?

____________________________________________________________________________

2. Who designed the Star of Life?

____________________________________________________________________________

3. What are the names of the three resuscitation researchers who are considered the fathers of modern CPR?

____________________________________________________________________________

4. Who proposed the first two-tiered EMS response system?

____________________________________________________________________________

5. The white paper that led to the creation of EMS, Accidental Death and Disability: The Neglected Disease of Modern Society, was published under which President?

____________________________________________________________________________

6. What does EMTALA stand for?

____________________________________________________________________________

7. What branch of the federal government houses the Emergency Medical Services for Children office?

____________________________________________________________________________

Name: _____________________________________________________________________

Answers on Page 47
Introducing Automatic Crash Response. Now, OnStar Advisors can immediately relay crash details, such as direction of impact, which air bags deployed, and whether the vehicle rolled over. This information can help you predict the severity of injuries so you can dispatch the right people and the right equipment. It can also help you determine the medical facility best suited to treat injured passengers, because every second counts. Automatic Crash Response is available on most GM® models. To learn more about this and other services OnStar provides, visit us at onstar.com or e-mail us at emergencyservices@onstar.com.
Dear Readers,

On behalf of the American College of Emergency Physician’s (ACEP) EMS Committee, I would like to extend best wishes for a successful 2008 EMS Week. A central goal of the EMS Committee is to be a resource for medical directors, paramedics and EMTs, promoting the advancement of EMS in the 21st century. The 2008 EMS Week Planning Guide contains a number of outstanding ideas to enhance your EMS Week activities.

Even though EMS Week only occurs once per year, the ACEP EMS Department staff is providing support for the EMS Committee and members of the college with an interest in EMS year-round. The EMS department regularly attends national EMS meetings, supports ongoing projects and makes available educational and policy resources.

The EMS Committee provides the ACEP Board of Directors with advice on EMS topics, develops policy statements as directed by the Board and collaborates with many other national organizations with an interest in EMS. Some of the national issues that the Committee has recently addressed include:

- EMS as an essential public safety service
- Model practices for ambulance diversion
- Institute of Medicine (IOM) EMS report
- EMS medical director liability and reimbursement
- Lead federal agency for EMS
- Monitoring new federal and state EMS legislation and regulations
- Review of new guidelines, standards and technologies in EMS

Each community’s emergency medical system is an invaluable asset. Celebrating EMS Week allows us to recognize our local heroes and highlights the importance of a robust and sophisticated system of emergency medical care. Please join us in making the 2008 EMS Week a tremendous success!

Sincerely,
Eric W. Ossmann, MD, FACEP
Chair, ACEP Emergency Medical Services Committee

EMS WEEK TRIVIA ANSWERS:
1. 1974
2. Leo Schwartz
3. William Kouwenhoven, Jim Jude and Guy Knickerbocker
4. Seattle physician Leonard Cobb, MD, and Seattle Fire Chief Gordon Vickery
5. Lyndon Johnson
6. The Emergency Medical Treatment and Active Labor Act
7. The Department of Health and Human Services