

The Trauma Scene

Being involved in a trauma means having an injury that requires prompt medical examination, testing, and treatment.

Trauma can be caused by many types of injury, whether intentional or unintentional, due to an emotionally distressing experience or physical injury. Firearm injuries, motor vehicle collisions, and falls are some of the most common types of trauma. Young children are more likely to be affected by drowning, while elderly patients are more likely to have ground-level falls (falls from sitting or standing). Trauma can be a frightening and overwhelming experience. This page specifically addresses physical trauma events, which can range from minor injuries to life-threatening conditions.

Emergency medical services (EMS) personnel (ground and aeromedical teams), paramedics, or a hospital emergency department determine if and when a trauma team is activated. A trauma activation summons a team of emergency department physicians, surgeons, nurses, and technicians to the trauma bay of the emergency room in anticipation of providing care to the injured patient immediately on arrival at the hospital. Injured patients are typically transported to the nearest appropriate trauma center.

The Role of Bystanders

In the early moments after traumatic injury, before a patient reaches the hospital, bystanders are often the first responders. The best initial step in helping is to call 911. If there is significant bleeding, direct pressure or a "pressure dressing" can be applied on the affected area until help arrives. If an extremity is bleeding, then a tourniquet can be placed.¹ Commercial tourniquets and training on their use are available through Stop the Bleed courses approved by the American College of Surgeons (www.stopthebleed.org). Bystanders who are trained in first aid, cardiopulmonary resuscitation (CPR), or advanced lifesupport can evaluate and assist the patient until EMS personnel arrive.

Evaluation and Treatment by Medical Personnel at the Scene

EMS personnel or paramedics evaluate the patient's pulse, blood pressure, respiratory rate, and severity of injuries and address any life-threatening conditions, such as inability to breathe or bleeding, at the scene before transport. An oxygen mask or a breathing tube may be necessary. Significant bleeding is usually controlled by direct pressure or a tourniquet. If the pelvis appears broken, then a pelvic binder can be wrapped around the hips to help reduce the amount of internal bleeding.

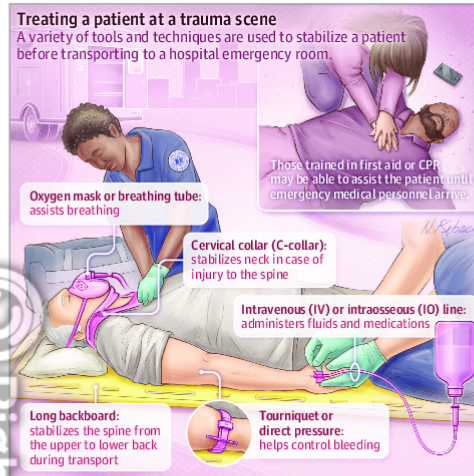
Authors: Ioana Baiu, MD, MPH; Lisa M. Knowlton, MD, MPH

Author Affiliations: Stanford Hospital, Stanford, California.

Conflict of Interest Disclosures: None reported.

The JAMA Patient Page is a public service of JAMA. The information and recommendations appearing on this page are appropriate in most instances, but they

1. Galante JM. Using tourniquets to stop bleeding. *JAMA*. 2017;317(14):1490. doi:10.1001/jama.2015.8581



Most patients have a cervical collar placed around their neck to stabilize the spine in case there is a fracture or ligamentous injury of the spine. Often, an **intravenous** (in the vein) or **intraosseous** (in the bone) line is placed so that fluids and/or pain medications can be administered as needed. EMS personnel will often strap the patient onto a hard-plastic long backboard for transport to the hospital to stabilize the spine until an injury is ruled out. Heart, oxygen, and blood pressure monitors are often connected to the patient during transport to the nearest trauma center.

It is helpful to keep an easily available list of medications and allergies or wear a medical alert bracelet or tag as well as have contact information for family, caregivers, or friends.

FOR MORE INFORMATION

Centers for Disease Control and Prevention
www.cdc.gov/injury/wisqars/LeadingCauses.html

are not a substitute for medical diagnosis. For specific information concerning your personal medical condition, JAMA suggests that you consult your physician. This page may be photocopied noncommercially by physicians and other health care professionals to share with patients. To purchase bulk reprints, email reprints@jamanetwork.com.