



MEDIC  
First Aid

AMERICAN SAFETY &  
HEALTH INSTITUTE



# STOP LIFE-THREATENING BLEEDING

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# DIRECT MANUAL PRESSURE

When life-threatening external bleeding is present, but a bleeding control kit is not readily available, apply direct manual pressure on the wound to stop bleeding. If a basic first aid kit is or becomes available, it should include trauma pads and sterile gauze pads to stop bleeding.

Introduce yourself and ask, “May I help you?” If the person consents, stop the bleeding. Consent is implied if the person is unresponsive or unable to respond, or when a child is severely injured and a parent or legal guardian is not readily available to provide consent.

Find the source of the bleeding. Open, lift away, or remove clothing covering the wound so you can clearly see it. Use direct manual pressure on the wound with sterile trauma dressings, compressed gauze, or a 10-pack of sterile 4x4 gauze sponges from a basic first aid kit, if available.<sup>14</sup>

Focus direct manual pressure on the bleeding vessel within the wound. Pressure stops bleeding by compressing the bleeding blood vessel. If sterile dressings are not available, use any clean material available such as clothing, a towel, or other absorbent materials. If there is no clean material available, apply direct pressure without a dressing.

Direct manual pressure on the bleeding vessel is critical to stop bleeding. Use the heel of one hand with the other hand stacked on top of the first, or use the pads of 3 fingers of each of hand stacked on top of each other. Push straight down, with the shoulders directly over the hands and elbows locked. Push down hard onto the wound, even if it is painful to the injured person. Use continuous pressure. If blood soaks through the gauze or other material, press harder. Keep pressing hard until the bleeding stops. Don’t remove pressure to add more gauze and don’t remove blood-soaked materials. Be aware that fatigue may occur and can affect the quality of direct manual pressure.<sup>15</sup> Keep pressing hard until the bleeding stops, a tourniquet is applied to an arm or a leg, someone takes over for you, or the scene becomes unsafe.

<sup>14</sup> Charlton, N. et al. Pressure Methods for Primary Hemorrhage Control: A Randomized Crossover Trial <https://oaks.kent.edu/ijfae/vol2/iss1/pressure-methods-primary-hemorrhage-control-randomized-crossover-trial> [Retrieved 6.4.21]

<sup>15</sup> Charlton N, Schuler K, Ho C H, et al. (August 27, 2021) Provider Fatigue During Direct Manual Compression for Life-Threatening Bleeding. *Cureus* 13(8): e17487. doi:10.7759/cureus.17487 [Retrieved 10/24/22]



When life-threatening bleeding from a wound on an arm or leg is present, use the commercially manufactured, ready-made tourniquet from the bleeding control kit as soon as possible to stop the bleeding.

A commercially manufactured, ready-made tourniquet is a tight, wide band placed around an arm or a leg and tightened to compress blood vessels and to stop bleeding. They may be used on persons approximately 2 years of age and older.<sup>16,17</sup>

Introduce yourself and ask, “May I help you?” If the person consents or consent is implied, open or cut away clothing over the wound so you can clearly see it. Follow the tourniquet manufacturer’s instructions.

The basic steps are place the tourniquet, turn the windlass, secure the windlass, and document.

Once you have applied a tourniquet, do not loosen or remove it.

Open, lift away, or remove clothing covering the wound so you can clearly see it.

Place the tourniquet at least 2-3 (5-7 cm) inches above the wound, between the torso and the wound. It may be applied over bare skin or clothing. Do not place the tourniquet over the wound or over a joint. Pull the free end of the tourniquet strap through the buckle. Pull the strap tight around the limb and fasten it.

Turn the windlass, rod, or knob (or operate the ratchet) and keep turning it until the bleeding stops. Tell the person to expect pain. Getting the tourniquet right means getting the tourniquet tight.<sup>18</sup> A tourniquet will cause pain, but it is necessary to stop life-threatening bleeding.

18 Wall PL, Buising CM, Sahr SM. Review: Getting Tourniquets Right = Getting Tourniquets Tight. *J Spec Oper Med*. 2019; Fall;19(3): 62-63. doi: 10.55460/RYU9-YZSV. PMID: 31539434. [Retrieved 10/13/22]

Secure the windlass to the tourniquet so it does not untwist.

Document the time that the tourniquet was applied. Some tourniquets have a white space on the strap where you can write the time. If not, record the time on a conspicuous location on the injured person, such as their skin near the tourniquet or other exposed area, like the forehead or cheek.

16 American Red Cross Scientific Advisory Council Pediatric Tourniquet Use Scientific Review. June 2019. Available: <https://www.redcross.org/content/dam/redcross/docs/Pediatric%20Tourniquet%20Use%E2%80%994ADVISORY.pdf> [Retrieved 7/9/2021]

17 Charlton N P, Goolsby C A, Zideman D A, et al. (April 13, 2021) Appropriate Tourniquet Types in the Pediatric Population: A Systematic Review. *Cureus* 13(4): e14474. doi:10.7759/cureus.14474 [Retrieved 7/9/2021]



# PROCEDURE TO STOP LIFE-THREATENING BLEEDING

IMMEDIATE RESPONDER

## PERFORM AN ASSESSMENT

**Assess**  
Scene  
Safety

**Take**  
Standard  
Precautions\*

**Assess for**  
Life-Threatening  
Bleeding†

**Activate**  
EMS and/or  
EAP‡

**Send Someone to**  
Get a Bleeding  
Control Kit  
(unless readily available to you)

IS A BLEEDING CONTROL KIT READILY AVAILABLE?

NO

**STOP THE BLEEDING!**

- ✓ Obtain consent.§ Introduce yourself and ask, “May I help you?”
- ✓ If the person consents and life-threatening bleeding is present, stop the bleeding.
- ✓ Find the bleeding source. Open, lift away, or remove clothing covering the wound so you can clearly see it.
- ✓ Use direct manual pressure on the wound with any clean material. If there is no material available, apply direct pressure without a dressing.
- ✓ Use the heel of one hand with the other hand stacked on top of the first or use the pads of 3 fingers of each of hand stacked on top of each other.
- ✓ Push down hard on the wound. Use continuous pressure.
- ✓ Keep pressing hard until the bleeding stops, a tourniquet is applied (to an arm or a leg), someone takes over for you, or the scene becomes unsafe.

\* When readily available, use appropriate personal protective equipment (PPE). PPE may include gloves, goggles, or face shields. Wash your hands immediately after removing gloves.

† Call 911 to activate Emergency Medical Services (EMS) using a mobile device and/or activate your emergency action plan (EAP). Listen to the dispatcher's instructions.

‡ Consider bleeding to be severe and life-threatening if blood is gushing, spurting, or flowing continuously, or when there is about a half can of soda's worth of blood on the ground or pooling on a surface.

§ Consent is implied when the person is unresponsive, or when a child is severely injured and a parent or legal guardian is not readily available to provide consent

YES

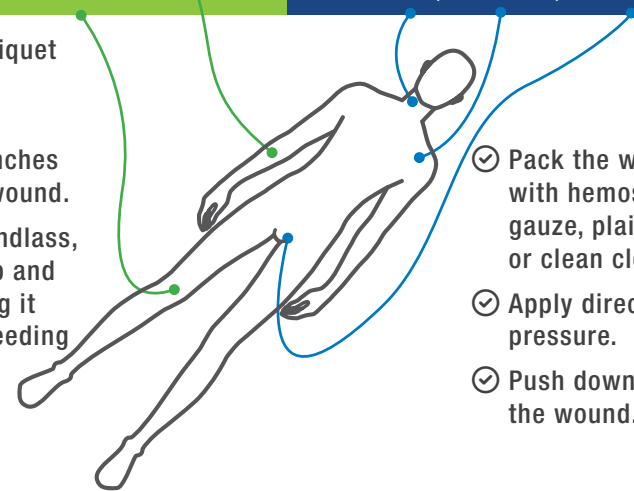
**STOP THE BLEEDING!**

- ✓ Obtain consent.§ Introduce yourself and ask, “May I help you?”
- ✓ If the person consents and life-threatening bleeding is present, stop the bleeding.
- ✓ Find the bleeding source. Open, lift away, or remove clothing covering the wound so you can clearly see it.

ARM OR LEG?

NECK, SHOULDER, OR GROIN?

- ✓ Use a tourniquet as soon as possible.
- ✓ Place 2-3 inches above the wound.
- ✓ Turn the windlass, rod, or knob and keep turning it until the bleeding stops.
- ✓ Pack the wound with hemostatic gauze, plain gauze, or clean cloth.
- ✓ Apply direct manual pressure.
- ✓ Push down hard on the wound.



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