



# BOAT CREW HANDBOOK – First Aid



Revenue Cutter Bear



Relief Party Sighted Whaling Vessels

## The Overland Expedition



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## Bandages

### E.1. Types of Bandages

A bandage is a strip of woven material that holds a wound, dressing, or splint in place, helping to immobilize, support, and protect an injured part of the body. Preferably, sterile bandage material in standard first aid or EMT kits should be used. Otherwise, any large piece of clean cloth can be used as a bandage, binder, or sling.

Various types of bandages come in first aid kits. They are designed to be adaptable to many different situations. For example, some are for covering large areas but may be used as slings, and others are useful as a thick pad for applying pressure over a wound to control hemorrhaging. The following table describes the different types of bandages and their uses:

Bandage Type	Use
Pressure Dressing (Emergency Trauma Dressing)	A pressure dressing is made out of absorbent gauze. It is used for injuries to the chest or abdomen. It may be held in place with other bandages e.g., cravat bandages. Do not secure so tightly that it interferes with breathing.
Gauze Bandages	Gauze is useful as a bandage for almost any part of the body. Most common uses of gauze bandages are as circular bandages and spiral bandages.
Band-Aids®	Band-Aids® or substitutes are useful for small wounds that are clean.
Triangular Bandages	Triangular bandages are useful as an emergency cover for an entire scalp, hand, foot, or other large area. Also, use these bandages as a sling for a fracture or other injury to an arm or hand. A triangular bandage can be rolled into a cravat bandage (a long, narrow strip). It is also useful as a figure eight bandage, tie for a splint, constricting band, or tourniquet. A folded cravat bandage can serve as an emergency dressing for control of bleeding, or over another dressing, to provide protection and pressure.

### E.2. Bandage Application

There are two general principles for bandage application:

- (01) A bandage should be snug, but not so tight as to interfere with circulation either at the time of application or later if swelling occurs,
- (02) A bandage is useless if tied too loose.



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**E.3. Circulation** Interfering with circulation is prevented by:

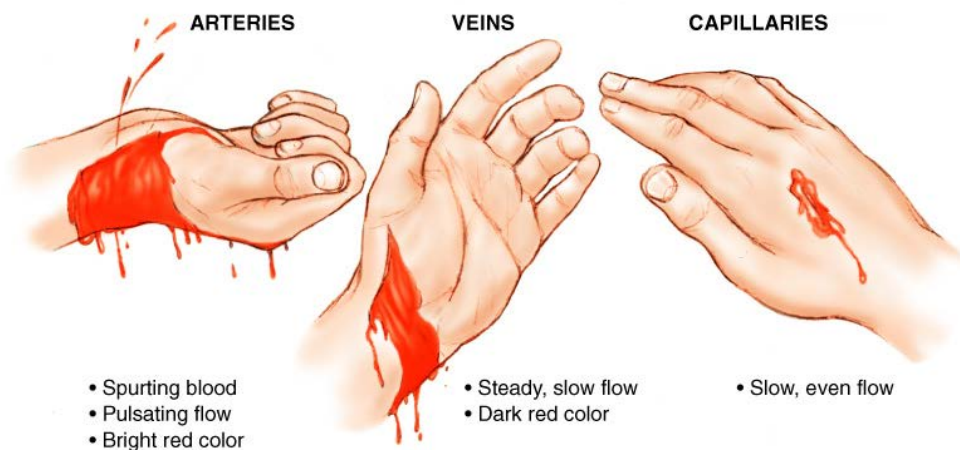
- (01) Leaving the person’s fingertips or toes exposed when applying a splint or bandage to arms or legs,
  - (02) Loosening bandages immediately if a victim complains of numbness, increased pain or a tingling sensation,
  - (03) Watching for swelling, color changes, loss of pulse and cold or cool tips of fingers or toes.
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**Bleeding**

**E.4. Types of Bleeding**

Hemorrhage, or bleeding, is the escape of blood from arteries, veins, or even capillaries because of a break in their walls. There are several different types of bleeding (**Figure 2-1**). Boat crewmembers must learn to recognize the basic types in order to know how to stop the hemorrhaging as quickly as possible. Types of bleeding include:

- (01) Arterial,
  - (02) Venous,
  - (03) Capillary.
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**Figure 2-1**  
**Types of Bleeding**

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**E.5. Prevention of Bloodborne Pathogens**

The risk of acquiring a blood-borne pathogen such as Hepatitis B or HIV should be evaluated. Risk may be managed by the use of appropriate PPE. Always use protective barriers, such as disposable gloves, to protect both you and the injured person. More extensive equipment may be required depending on the situation. If the crewmember is not trained or equipped to handle the situation, he/she should notify the unit or parent command so that appropriately trained and equipped personnel can be mobilized. The crewmember should not become involved if not adequately protected.

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## E.6. Universal Medical Precaution

In those instances where crewmembers may be exposed to bodily fluids (e.g., blood, seepage from burns, saliva, urine or feces), members should take appropriate precautions to prevent contamination by using protective gloves and goggles. Additional precautionary measures include the wearing of face masks and protective gowns or aprons. Under all circumstances, thorough washing of hands and any contaminated area should be done with soap and water. Even if gloves have been used, the crewmember should thoroughly wash hands with soap and water.

## E.7. Control of Bleeding

Control of a severe hemorrhage is always urgent. With only 10 pints of blood in the human body, arterial bleeding can cause death in a short time.

### WARNING

To avoid any contact with infectious fluids, including blood, always wear clean, disposable gloves when performing first aid.

### E.7.a. Direct Pressure

The best method to control hemorrhaging is by applying continuous, firm, direct pressure to the wound. To apply direct pressure, use a sterile gauze or absorbent pad, applying pressure directly over the point of bleeding. If gauze or absorbent pads are not available, the palm of a gloved hand should be placed over the wound. An un-gloved hand should never be placed onto an exposed wound. Wrap a roller gauze or elastic bandage around the gauze/absorbent pad to provide continuous pressure to the wound. The bandage should be wrapped with enough pressure to control the bleeding. Additional pressure may be created by twisting the bandage directly over the wound. Caution must be used to not wrap the limb so tight that the skin beyond the bandage becomes cool to touch, bluish in color, or numb to the patient. The rescuer should be able to slip a finger under the pressure bandage. Ensure the pressure bandage is re-evaluated during transport for potential swelling of the limb ([Figure 2-2](#)).



Figure 2-2  
Pressure Bandage



E.7.b.  
Tourniquets

If bleeding persists after applying direct pressure, Apply a second pressure dressing over the first. Do not remove the first dressing. When direct pressure is insufficient for controlling bleeding, apply a tourniquet. In the past, tourniquet application was thought to cause damage to the limb and was therefore used as a last resort. Tourniquets are most effective when applied prior to the patient going into shock as a result of blood loss.

**E.8. Treatment**

Refer to the following procedures for treating hemorrhages:

<b>Step</b>	<b>Procedure</b>
Bandage Application	Apply a sterile bandage, if available, or clean piece of gauze or cloth to the wound. Do not remove this dressing if it becomes blood soaked; instead reinforce the dressing with a second or third bandage on top of the original one. Elevating the extremity after applying direct pressure should control most bleeding.
Pressure Bandage	A pressure bandage can replace direct hand pressure on most parts of the body. Apply the pressure bandage by placing the center of the bandage or strip of cloth directly over the pad. Hold the pad in place by circling the bandage ends around the body part, twisting over the wound and tie it off with a knot directly over the pad ( <b>Figure 2-2</b> ).
Elevating Injured Area	If direct pressure does not control the bleeding, then elevate the injured area (if arm or leg), but only if there is no possibility of a spine injury.
Tourniquet	If severe bleeding cannot be controlled after trying all other means and the victim is in danger of bleeding to death, use a tourniquet. Remember that a tourniquet is useful only on arms and legs. A tourniquet is a constricting band placed around an extremity, then tightened until bleeding has stopped. When a tourniquet is required, if available use tourniquets from a first aid kit. Otherwise, use any wide gauge material such as a triangular bandage and a rigid object, such as a stick or screwdriver for tightening.