Trauma and Bleeding Control
By Layne Hilton

Encountering injuries in any traumatic situation can be difficult, but by following a few simple tips the process can be made easier for the rescuer and the best possible outcomes can be achieved.

#1. Protect yourself: Nothing is worse in a traumatic environment than when a would be rescuer becomes a victim. You should always evaluate the situation your patient is in prior to making entry. Bottom line: if the scene is not safe, don't go in! If after evaluation you feel the scene is safe you should only provide aid after you have taken necessary and essential body substance isolation precautions. This includes but is not limited to: Protective gloves (latex or nitrile), eye protection, a protective mask, and a protective gown. These items should be stocked in your personal first aid kit. If you don't have these items, understand that you take a tremendous risk in contracting blood borne pathogens if your patient is infected and you decide to treat and you do so at your own risk!

#2. Stay calm: The sight of blood, especially in large quantities, can cause feelings of distress in even seasoned rescuers. When you find yourself in a situation where there appears to be a large amount of blood loss, take a deep breath, and force yourself to focus on the patient and your assessment. By doing this you will be able to provide aid for the patient and allow yourself the ability to cope.

#3. Understand that it probably isn't as bad as it looks: The human body contains approximately 10 pints or about 4,700 cc of blood. When a person donates blood they give 1 pint or 473ccs. That being said, try this experiment. Take a 1 cup measuring cup (half a pint), fill it full of dishwashing soap, and pour it so it spreads out on the ground or down a wall. As the soap spreads over the surface there appears to be quite a bit more than there actually is. We do this exercise often in training paramedics and ask them to estimate the amount of soap that is on the ground/wall and almost always we get answers that are up to 3 times as much as there actually is. If you couple this with the fact that when we see blood it naturally causes distress, it is no wonder that blood loss estimation tends to be grossly exaggerated.

#4. Evaluate the type of bleeding you are seeing: Blood flows through the body via various vessels. Arteries carry blood away from the heart and veins carry blood toward the heart. Because arteries carry greater pressure and because the blood they contain has oxygen in it, when an artery is severed it will present with bright red, spurting/squirting blood. When a vein is severed the blood will tend to be darker in color and tend to ooze or flow. When an artery is severed, the individual is in grave danger and very aggressive measures should be taken in order to prevent drastic blood loss. When a vein is severed the

method of bleeding control does not require the amount of aggressiveness or rapid sequence methodology. If you are treating an arterial bleed you should employ as many methods of bleeding control as possible (outside of a tourniquet) venous control can usually be managed through simple and single methods.

Methods of Bleeding Control

#1. Direct Pressure: Direct pressure will stop most bleeding injuries. To apply direct pressure take a sterile (if possible) or at least clean dressing and press it firmly against the open wound. The mistakes that most people make in applying direct pressure is that they fail to press hard enough and/or for a long enough period of time. Apply even pressure on the wound but push down hard. Do not worry about hurting the patient, bleeding control takes precedent over slight discomfort. Additionally, it is important to remember that bleeding can take several minutes to stop, and the more you stop to check if the bleeding has stopped, the longer it will take to actually stop the bleeding. Therefore, a good rule of thumb is to apply consistent and direct pressure for 5 minutes before evaluating. If the patient soaks through a dressing, do not peel it off and replace it. Rather, place a fresh dressing over the old dressing and continue direct pressure. Direct pressure is usually sufficient to control venous blood loss.

#2. Elevation: Elevation is one of the most simple but most often overlooked methods of bleeding control. Barring complications of a spinal injury or broken limb on the effected side (in these instances, elevation should not be attempted) by simply elevating the wound over the level of the heart, bleeding control can be accomplished at a much faster rate.

#3. Pressure points: Pressure points are an excellent method of bleeding control but can be difficult to find and utilize. The axillary pressure point (located in the armpit), the brachial pressure point (located on the inside of the arm between the bicep and tricep) and the femoral pressure point (located in the crevice between the groin and the leg) are all pressure points used to help control bleeding below their respective sites (so for example the brachial pressure point could be used to help control arterial bleeding in the lower arm). When using a pressure point, firm, direct and even pressure must be applied. This method works best with two people as it is used primarily in arterial bleeding with one person holding direct pressure and elevating the site while the other applies pressure at a pressure point.

#4. Tourniquets: Tourniquets are very effective at treating blood loss; however, the application of a tourniquet is an advanced technique that should only be attempted by those with specific training. The reason for this is that when a tourniquet is applied correctly, all blood flow is stopped below the tourniquet and oxygen cannot reach the effected tissues. Because of this, the area below the site of the tourniquet runs a very high risk for amputation. Additionally, if the tourniquet is not applied correctly, or if it is taken off outside of a hospital setting

the patient runs the risk of having acidotic blood returned to their heart which can result in cardiac arrest. Fortunately, the need for a tourniquet is very rare as using steps 1, 2 and 3 will stop blood loss in most circumstances.

While these are some quick steps that you can use in an emergency situation, they do not take the place of formal training. Taking a first aid course or attending an E.M.T. school will help you become more proficient in treating blood loss as well as other emergencies. If you are interested in these types of courses you can contact your local chapter of the American Red Cross for more information.

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