First aid on the water

By Adam Walton of Pike Pole Fishing Guide Services

Whether it's fishing, skiing, tubing, or taking a simple pleasure ride around the lake, we all venture out on the water with many things on our minds. Most boaters however don't expect or plan for things to take a turn for the worse. Unfortunately, each year many recreational boaters fall victim to injuries, and even worse, some of these injuries are fatal.

Over the years of working in the fire service, I've responded to numerous incidents on the Lake Koshkonong/Rock River system including falls from piers and boats, skiing and tubing mishaps, dive injuries, severe lacerations, and drowning recoveries.

Although we don't anticipate an accident occurring, they happen fairly often and some basic first aid knowledge, along with preplanning, can make a huge difference if things go bad. The following information is a brief overview of some basic first aid skills boaters can benefit from this season. However, this is not intended to take the place of an actual first aid course.

Prevention and planning

Prevention and planning ahead are the first places to start. In our fine state of Wisconsin, drinking alcohol is seemingly part of our culture. Unfortunately this also is a large contributing factor regarding water accidents. Poor decision making and inability to function in a normal manner due to intoxication are both easily preventable.

Go out and have fun, but try to keep it within the limits. Knowing the rules of the water and how to safely operate a boat are additional accident prevention steps one can take. Although Wisconsin law requires all individuals born after Jan. 1, 1989, to complete a boating safety course, it's not a bad idea to take it even if you don't fall under that age category. Knowing and following Wisconsin boating regulations will not only help prevent possible accidents, it will also save you from getting a ticket if stopped by law enforcement.

When it comes to planning ahead, carrying a first aid kit and understanding how to use it is imperative. Depending on the location, it may be several minutes before first responders reach the scene of the emergency. When an injury occurs and help isn't nearby, you may be the only person who can assist until first responders arrive.

Bleeding control

One of the most common injuries to occur includes lacerations and bleeding. Bleeding can be anywhere between a simple fix which only requires a band-aid to a severe case that requires a tourniquet.

The steps to control severe bleeding start with applying a dressing and direct pressure. If possible, the dressing should be clean and direct pressure over the wound should be firm and steady. If the bleeding slows or stops, do not remove the dressing to look at the wound. Removing the dressing will likely rip open any clotting that has occurred and cause the injury to start bleeding again.

If the bleeding doesn't slow or stop with the initial dressing and pressure application, the second step is to quickly apply additional dressing over the first dressing, followed by reapplying direct pressure. Depending on the injury location, you can also elevate the wound above the heart if possible to help slow blood flow.

In extreme circumstances or when the above tactics fail, quickly applying a tourniquet may be necessary to stop the bleeding occurring on an extremity. Tourniquets have been around as long as people have been bleeding. They are very effective, and now are known to be quite safe. In the past, many thought applying a tourniquet meant anything below the application site would be subject to amputation. However, there is a bulk of research that now states having a tourniquet on for up to 6-8 hours will not increase chances of an amputation. That is quite a bit of time and this procedure can truly save lives. There are a variety of types out there. The most widely accepted and endorsed are the CAT-T and the SOF-T.

Makeshift tourniquet application: Place high above the injury and use a rigid object to twist and tighten as shown above. Once bleeding stops, secure in place with a second knot. (Photo from Pike Pole Fishing Guide Service)

A makeshift tourniquet can also be made using tools at hand. The basic requirements for a makeshift tourniquet are:

1. A strong flexible material at least one inch wide and long enough to tie two knots.

2. A stick or rigid material that can be used to twist (this is called a windlass).

To apply a tourniquet, place the flexible material being used high on the injured extremity and wrap it tightly around the limb. Remember, you want to use material long enough to leave extra "tails" to use for tying two separate knots. Next, place the rigid windlass object being used to twist against the tourniquet and use the tails of the material to tie a knot around it. Once the first knot has secured the windlass object, begin twisting it. This will tighten the tourniquet and if done correctly, the bleeding will stop or slow significantly. Once the bleeding has stopped or slowed, the windlass object must be secured in place to maintain pressure.

For makeshift tourniquets, use the remaining tails to tie a second knot around the windlass object to prevent unraveling. If there's not enough material left over to tie a second knot, someone will have to hold the windlass object in place. If applying a CAT tourniquet, simply use the attached Velcro strap or locking devices included on the tourniquet strap to secure the windlass in place.

CAT tourniquet application: Place high above the injury, twist the rod (windlass) until bleeding stops, and secure in place as shown above. (Photo from Pike Pole Fishing Guide Service)

These tools do take practice to gain proficiency. On-line videos showing steps of tourniquet placement will do more justice than a written explanation or photos, but the concept can be seen in the accompanying photos. If you'd like more information, this video link on YouTube shows a good demonstration: www.youtube.com/watch?v=jTCaCJxTMgo.

Internal injuries

Traumatic injuries can not only cause the bleeding issues discussed above, they can also cause internal bleeding and other injuries we can't see.

Head injuries that occur are true medical emergencies and may not show themselves initially. Victims who may have been knocked unconscious for any period of time or who struck their head hard should always seek immediate medical care even if they regain consciousness or appear to be okay. Signs of a significant head injury obviously include bleeding, but they also include headache, confusion, sudden nausea/vomiting, and general abnormal behavior.

Neck and back injuries can also be very dangerous and require advanced medical care. When dealing with a victim with neck or back pain, it's important to remember to limit their movement and keep them calm until first responders arrive. Movement could cause further injury.

Chest and abdomen areas can take a hit and not show signs of external injuries, but, inside, things may be injured quite severely. Signs of internal injuries to the chest include pain or tenderness, shortness of breath, or difficulty taking a deep breath. Signs of internal injuries to the abdomen also include pain or tenderness, along with guarding of the injured area, swelling, and rigidity (hardness) of the belly. These are all an indication of possible internal bleeding or significant injury that needs immediate medical care.

Broken bones

Broken bones are painful, but they're typically not as life threatening as other injuries. Commonly, broken bones occur on extremities and can be treated with basic splinting skills.

To splint an injured limb, use a rigid object and find some type of material to secure it. A little ingenuity can go a long way, so don't be afraid to think outside the box. Examples of a few objects that can be made into splints include using an oar for a leg injury or planer board for a wrist injury. Examples of securing devices include using a rope or a belt, which should be applied above and below the injured area. Ensure they are tight enough to hold the splint in place, but not too tight that it decreases blood flow.

Drowning and CPR

Proper CPR instruction requires certification, but in desperate measures, chest compressions and breaths can be administered if a person pulled from the water is not breathing or if a person experiences sudden cardiac arrest caused by medical reasons.

Checking for a pulse is no longer a step taught in basic CPR, so if the person is unresponsive and not breathing, CPR should be started immediately. Compressions and breaths should be given in a 30:2 ratio. Place your hands on the breastbone and start compressions. Chest compressions should be given deep and fast at a rate of at least 100 per minute. After every 30 compressions, pause for no longer than 10 seconds, tilt the victims head back and administer two breaths. Once breaths are given, immediately go back to giving chest compressions. Repeat this 30:2 cycle until help arrives and ensure chest compressions are never interrupted for longer than 10 seconds.

For strictly cardiac-related incidents, it is also acceptable to only give chest compression and omit giving breaths. This is called "Hands Only CPR." If choosing to do chest compressions only, keep in mind they will be continuous and the rate still remains at least 100 per minute. Continuous chest compressions can be very tiring so it's recommended at least two people perform this and alternate every two minutes to maintain efficient technique.

Know medical problems

Lastly, each of us has our own medical history and even though we'd like to leave our medical issues behind when we head out to the water, they come along too. Some are allergic to bees; some have cardiac issues; and some have breathing problems, asthma, etc. All of us have a responsibility to ourselves and our loved ones to make sure we come home so make sure you bring your Epi-Pen, your inhaler, or your medications with you when heading out for a day on the water. Also take a few extra steps to ensure others know how to assist with any of your medical problems if needed.

Minutes can make the difference between life and death, so being prepared for a worst-case scenario event can go a long way, especially when help may be located back on shore.

Boater first aid kits can be purchased at a variety of stores or you can make one up yourself. CPR and first aid classes are also readily available through different community programs and through local hospital or fire department agencies.

Have fun this boating season and please stay safe!

Adam Walton, is the owner of Pike Pole Fishing Guide Service, which is located in Edgerton, Wis. He is also a certified firefighter paramedic and an American Heart Association CPR/First Aid instructor. For more info, visit www.pikepolefishing.com or Facebook @ pikepolefishingguideservice.