

# DEPLOYING THE SAFETY CHUTE

## FIRST AID AWARENESS

I'm looking at one of my mates and he's in trouble. He's come off a drop and the minute he's landed, I know we have a problem. He gasps for breath, and we're in a canyon. What do I do? My mind races along. It's like somebody has erased my brain from all normal function. Why can't he breathe? His face says it all; he needs help and fast. Please somebody else take over and sort this problem out – Jezus, it's down to me. I don't even have a first aid kit with me. Aaaaarrrrrrggggggg!

Article by Dave Carroll, images by Dave Carroll, Sam Hughes and Simon Westgarth

The coach says, "Relax, let's take it slowly." It was just a role-play scenario on an emergency care course and yet I completely lost it. When he went through the simple steps about what to do again, it all seemed so easy. What if it was real? Would I fall apart?

Well, for the next bunch of scenarios it did fall apart. I stood on the patient. I put a traction splint on a person who wasn't breathing. I never stabilised and monitored the patient. I tried to fix one dead guy instead of the two that could have been saved. What a clown show.

After participating in some good scenarios, all of

which might happen most days kayaking home or abroad, it began to click into place. I had practiced and developed a framework to fall back on if things didn't go to plan and people needed medical help.

A few years ago, I heard a story of a climber who had fallen in the Alps and was hurt badly. His friend went to assist and placed him on his side. The climber died due to a punctured lung. The inquiry into the accident said the main reason for death was the climber was put lying with the good lung down so it filled with fluid; cardiac arrest followed. Not because of a crap first

aid kit, not because he fell too far and was killed on impact - just lack of knowledge, pure and simple.

I am not saying his friend killed him. Of course not, he did his best to help save his friend's life. It just got me thinking hard. On the river we are often in a high-risk environment and nearly always a long way from help. What if it's one of your mates and you have no idea what to do? People die and get injured doing things way less adventurous than paddling. I just want to be OK with myself if someday we are put in that position. If doing just a little training on a wilderness emergency

care course or working through scenarios with my mates provides a safety net to help prepare for one of those unfortunate days, it seems a small price to pay for peace of mind, which isn't for sale in the gear shop!

The beauty is you don't have to be a doctor or paramedic to really make a difference, especially in the third world or on wilderness trips away from an urban setting, where the nearest emergency room is probably about 15-minutes away. You just need a plan that, when it's all going wrong, turns on the automatic pilot and makes things happen. If you have that, along with some common sense, you can solve most problems that get thrown your way. You could be lucky and one of your paddling team might be a doctor. If so, cool! But then, who looks after the doc?

## MITIGATION

Everybody's done things where they think afterwards, 'we got away pretty lightly there.' Just being a kayaker usually means that you're more adventurous than many folks down at the local badminton club. (Not always, of course, what with car key clubs etc!) They also say that to be old and wise, you must first be young and stupid.

Minimise the risks. If you feel on fire, of course, paddle the clean line of the big rapid. If you feel crap that day or hung over, maybe walk around and do safety for anybody feeling they have the heart of a lion. There's nothing worse than picking up an injury or having all your mates run around on slippery rocks and clean up your yard sale\* because you weren't that honest about your capabilities on a given day, or your mind wasn't on the job as you were feeling sketched out about the remoteness or exposure of a rapid and went and ran it anyway.

## AQUATIC FIRST RESPONSE

Everybody that kayaks has a responsibility to know how to do CPR. Most people are aware that CPR in our environment is unfortunately not very successful when done at best. Nonetheless, why not give somebody a chance?

Often knowing how to get two successful breaths into somebody is the key to saving a life. When somebody stops breathing, you have probably a good four minutes before tissue damage to the brain happens and four to six minutes before they go into cardiac arrest and big physiological problems arise. After that happens, the statistics become heavily stacked against a positive outcome, especially in the outdoors.

If you can open an airway (head tilt, chin lift and pinch their nose) and get two good breaths into somebody, this can often be enough to get them back to breathing on their own or keep them alive before cardiac arrest happens. If you are in the middle of a big river this may include having to give rescue breaths whilst in the water. How? Practice! The current recommended ratio for CPR is two breaths to thirty chest compressions.

Recently I spoke to Team Riot paddler Steve Fisher about an incident he had on a trip to California. One of



his group went backwards into a siphon in their boat and was completely submerged. Thinking and acting fast, Steve gave rescue breaths to the kayaker under water for over six minutes before the rest of the party could get the paddler out of the siphon. The kayaker survived with no side effects. If he had not received those breaths, the paddler would have died! Steve now carries a piece of hosepipe with a one-way valve on the end when he goes creeking.

## TOP THINGS I LIKE TO HAVE IN THE FIRST AID KIT, HOME AND ABROAD

### GOOD RIVER SHOES

These help you act fast and stop many problems arising. They are your transport out.

### CPR MASK AND GLOVES

If you have the bad luck to have to give rescue breaths to a paddler, a rescue mask provides a substance barrier between you and the casualty.

### DENTAL FLOSS AND SEWING NEEDLE

This stuff is the business, and not just for having a 'Hollywood smile'! I carry about ten metres of it. You can use it for everything; it weighs nothing and takes up little space. I also carry a sewing needle with it. If you rip your spray-deck in any way badly, you are walking out of the river; not now because you can use the dental floss and needle to sew it up. The same goes for a ripped bag, it

won't be super-dry but it could be the difference between hypothermia or just being a little wet on your arm.

Many people paddle wearing rings these days. Smashing your hand on a rock is easily done and the swelling makes it impossible to get the family heirloom off. More importantly, if you're a long way from a hacksaw you could have a big problem for your hand as swelling increases.

Thread the dental floss through the ring towards the casualty and then make a wrap with the long end tight from the ring all the way to the end of the finger. This compresses the knuckle joint and gives a smooth path for the ring to come off. Now just unwind the piece of floss closest to the casualty's body and it pulls the ring off. Even paragliders carry a pack of the stuff, so if they crash in a tree they can lower down the dental floss to get the rope up to them to escape.

### SANITARY PADS

Perfect for stopping bleeding, cheap to buy, multi purpose. Also doubles as a great fire lighter.

### TIN-FOIL

Great for teeth! If the front teeth are avulsed (knocked out), you have about 15-20 minutes before the cells on the top of the tooth change and make re-implanting more ambitious for a functional tooth. When the tooth has been pressed gently back in, splint it to a good one



with the tinfoil by matching the form of the teeth and pushing the foil into place till you find a dentist. If you need to clean the tooth before it goes back in, just use water, or if there's a cow close by, use milk! Don't let the tinfoil near any fillings or the casualty will hate you.

**Note: don't use alcohol swabs or similar to clean a knocked out tooth as it destroys the cells on top and makes saving the tooth unlikely.**

**PERMANENT MARKER**

This is also the perfect storage space for about five metres of duck-tape. If somebody has to walk out, mark their boat with their mobile number, date, name etc. It stops other kayakers getting the fear and other outdoor folks calling mountain rescue when they think somebody is stuck in the river.

I use it also for writing river notes on my boat and it's great for taking a medical history from somebody sick or injured. Permanent marker comes off your boat with an alcohol swab or spray deodorant.

**DUCK-TAPE**

Don't leave home without it. It fixes everything from people to gear. If you can't fix them with duck-tape... Shoot them!

**CLING FILM**

It comes sterile and is perfect for covering open wounds, to stop bleeding and to keep infection away. It also doesn't stick to the wound!

**HAND SANTISING GEL**

If you don't want diarrhoea on a trip, use it. Two drops are enough to kill 99% of bacteria on your hands. It helps prevent dysentery and bacterial infections, which most often happen when you touch the food you eat.

It is also excellent for places at risk of Weils disease, where rats urine could be, such as UK whitewater courses, or riverbanks. Keep it in the car or in your dry bag.

**MOBILE PHONE**

Tibet, India, Africa, and the deepest canyons in Norway all have cell coverage nowadays, greatly reducing the need for satellite phones. Bring it with you even on your local play run and make sure some key numbers are already in there. If you are abroad, have a number for a good online physician you can call.

Local rafting companies can be a real advantage to call if you have some big action on the river. Often they are quicker getting to you than the emergency services. Pre-program the numbers of other 'useful' river people and, of course, the local emergency services.

If somebody's walking out of a river and it looks like a mission, give them a phone and it makes life much easier when

you're at the take out looking for them or just checking on their progress. You can buy a dry mobile phone case that works for as little as £8..

**GLOW STICK/CHEMICAL LIGHT**

Handy, cheap to buy and takes up little space. Great for comfort lighting if you're in a group shelter in the dark with an injured or sick person. If somebody has to walk out of the river, it generally doesn't happen at 8.30 in the morning. Duck-tape it to their helmet and when you're at the take out in the dark, you will be able to see them on the side of the valley, across the river, wherever. Rescue heli's can see these with infrared from miles away. Good also for marking spots, to show where you left a boat or gear if you need to find it in the dark.

**DRUG KITS**

A good drug kit is both a big problem solver and a big creator. If possible, try to talk to somebody other than your GP about it – a pharmacist or anaesthetist is ideal. They must understand the environment you enter and

you must understand absolutely what the drug does, side effects and if any of the group is allergic to the med's prescribed. Standing over your broken friend trying to remember what the drug does and whether they need it is not a good scenario.

**DOES IT WORK?**

After participating in a number of emergency care courses (the most mind blowing being the wilderness EMT) do I feel more comfortable dealing with friends who get into trouble on the river? Most definitely! Over the past three years, I've had to deal with a broken back, broken legs, ankles, and dislocated shoulders.

After all of these incidents, our team went home feeling we did the best we could for the casualty. Why? Common sense and a few days training in emergency care, without which it could have been a very different story.

A few weeks ago, I spent an inspiring three days on a whitewater rescue course in Norway with Jan Gjeterud from Rescue 3 Norge. It just drove it home again that there's no replacement for training, practice and most



importantly not letting a situation develop in the first place! You never 'arrive' at the top; the environment is too dynamic. The minute you get cocky is the time when you get a big wake up call. Keep progressing and share your ideas. Better to have a plan and not need it than need a plan and not have it.

As whitewater kayakers it's an amazing thing we get to do, full of incredible adventures and experiences, whether you're at the top of the Himalayas or on your local play run. Keep the risks down by pre-planning and remember, when life deals you lemons, make lemonade - it's not that hard to make!

**Have fun and safe paddling,  
Dave**

\*'yard sale' is an American term for selling all your stuff in front of your house on a Saturday morning. Similar to taking a swim kayaking or crashing on skis where your equipment ends up sprawled all over the place.

**HOW COOL IS THAT!**

The body cools about 25 times faster in the water than in the air. This is in static water! Bear in mind: if somebody is pinned or standing in the water with about a 5-8 km flow their body will cool about 250 times faster. This cuts down the amount of time you have to solve a problem and the amount of time the paddler can assist in their own rescue or if they can wait for assistance.

**OUTLINE RESOURCES.**

Rescue emergency care 1 and 2 available from most outdoor centres:  
R.E.C advanced: [www.glenmorelodge.org.uk/contact.asp](http://www.glenmorelodge.org.uk/contact.asp) or [www.pyb.co.uk/information/contact.php](http://www.pyb.co.uk/information/contact.php)  
Wilderness first responder: WFR available in the UK and world wide from many operators  
Wilderness Emergency Medical Technician: [www.Wemsi.org](http://www.Wemsi.org) or [www.glenmorelodge.org.uk/contact.asp](http://www.glenmorelodge.org.uk/contact.asp)

**HYPOTHERMIA**

If somebody is very hypothermic (nearly or completely unconscious), treat them very, very gently. Their physiology is very unstable to any hard shaking or jarring, particularly their heart, so if you have to move them do it in a very smooth and controlled manner. Try and keep them flat or with their legs slightly elevated. These people need an emergency room! If you suspect hypothermia, it's important the casualty goes to hospital and gets checked out as soon as possible, even if they think it's too much trouble and that 'probably' they're fine.

**SPINAL INJURY**

Spinal injury is usually not as serious as first thought, because kayakers generally fracture or compress their vertebrae on the bottom half of their spine. These are often quite stable fractures. The reason for so much fear around back injuries is the huge risk of paralysis or even death if it's an unusually complicated compression or fracture.

For spinal trauma, it is important to be able to rule out certain things before you can get it X-rayed and see what the real damage is. It is therefore paramount that suspected spinal trauma is handled in the correct way, to minimise the risk of creating further damage. Most importantly, the spine must be kept in line. Imagine drawing a line straight through the nose, Adam's apple, centre of sternum (breastbone), belly button and hips.

If somebody in your party has suspected spinal injury (quite common nowadays as people run bigger waterfalls and take more hits) before you do anything give them a chance to catch their breath. Then stabilise and immobilise. For dealing with a scenario like this alone, going on a wilderness first aid course will give you huge peace of mind.

**SHOULDERS**

These are one thing that give kayakers the fear. A kayaker with a shoulder out is pretty much useless to you in a group situation. They can hardly carry their boat and need considerable minding and TLC. With a shoulder in, they are 500 times happier and are an active member of the group again.

There are different techniques to successfully reduce a shoulder joint. If it is an anterior (forward) dislocation, as tends to be common with kayakers doing the big air brace, they go back in quite easily from my experience and the pain nearly always goes away immediately. Be careful though: there is a lot going on in the shoulder joint regarding nerves. If you put a shoulder back in, the kayaker should go to hospital to get it checked out.

If you are in the wilderness or on a big trip you should be well informed and practiced in relocations and types of injury - the problems with a limb that are left out in the outback are very big compared to the ease of relocation before swelling in the joint happens.

**WATER**

How many of you bring water on the river? Honestly? Christians baptize with it, the United Nations predicts future wars will be fought over it. And without it, you'd die in less than a week. Water - it's the business!

So what affect does that water loss have on your performance? Even minimal changes in your body's water content can impair endurance performance. Without adequate fluid replacement, a person's exercise tolerance shows a pronounced decrease during long-term activity because of water loss through sweating.

Our bodies are about 66% water. As kayakers we sweat a lot, and in both hot and cold climates we urinate a lot. Particularly in the cold, your capillaries get smaller on your extremities such as your hands and feet, to keep your core warm. All that fluid has to go somewhere, so you need the bathroom or a tree.

If you are just 5% dehydrated, you have a muscle output loss of around 10%. Going to the pub, drinking beer and being hung-over the next day\* you will exceed that number. Big deal? What about if you're chasing a swimmer, running down the bank with a throw bag or need to make a line on a rapid? Ever had a cold day on the river and the next day you're shattered? Water is the key.

Eat something as well for essential salts, so your body can absorb the water. Some athletes consider it more important than food as it's hard to tell when you're dehydrated until it's too late. Bright yellow urine? Drink something.

*\* I wouldn't suggest not going out to the pub or disco inferno and dancing all night. It's just something to bear in mind that we get dehydrated easily. Life should be fun.*

**BIG SWIMS**

If somebody takes a big swim in a hole or through a rapid so big they need a hug at the end of it:

**THEY GO TO HOSPITAL BEFORE THEY GO HOME!**

This is for at least two reasons. One is that the chance of aspirating some water into the lungs during the swim can lead to pulmonary oedema (fluid on the lungs or secondary drowning) and not just in salt water as people often think. The other reason is that if somebody is fighting really hard in a hole or swimming, his heart, like any muscle when it gets exhausted, builds up lactic acid. As a result, the chance of cardiac arrest is a very present danger.

A kayaker's life was saved on the Little White Salmon in Oregon a few years back when after a big swim in a hole he had to walk out of the river. This helped move the lactic acid away from the heart. He went to hospital and when they hooked him up to the electro cardiogram (ECG), it was clear if he had waited around or hadn't gone straight to the emergency room afterwards, he most likely would have had a cardiac arrest. It had been a precautionary measure going into the E.R. and he had felt fine. An ECG will give you a much clearer picture of what's going on.