

MEDICAL ASPECTS OF SEA KAYAKING



Ann Hurst - foot puncture



Andy Dunne 'enjoys' a foot cut re-dressing!

by Rowland Woollven



Cath Tanner's hands after Castlemartin Ranges during the Round Britain '08 expedition



Innocent danger...!

Isn't medical stuff for doctors? Most of us don't go on extended sea kayak expeditions, so we don't need to think about what might go wrong (in medical terms) on a long trip... or do we? Consider the differences between a medical or first aid emergency on a coast-following day trip and what happens in an urban setting. At sea (or in a cove inaccessible from the coast path) there is an immediate lack of 'professional' assistance. Even a Mayday will not necessarily bring a doctor or paramedic to the scene. The emergency services have to be stood-to and then find you, leading to a possible need for extended care in what has now become a remote setting. The difficulties of this are compounded by a scarcity of resources – that small first aid kit and a rusty memory of a 4 hr first aid course might now seem to be a little inadequate for the task in hand.

Perhaps, after all, every trip has the potential to exercise your medical skills in a way that is not initially apparent.

PREPARATION

There are two aspects to preparing for that inevitable moment when you realise that things aren't actually going to plan: (1) the preparation and training of yourself (because it could be you who is suddenly faced with handling the situation) and (2) the preparation of any kit and equipment you decide you need to carry with you.

TRAINING

Training comes in many shapes and forms, both for 'casual' first aiders and those preparing for a semi-formal role as an expedition medic or advanced first aider/first responder. There is a vast array of courses available at each level, so a degree of pre-course research is advisable.

Is the course recognised by a reputable national body?

Are the staff 'active' professionals in the outdoors with the experience you need to take on?

Is the course classroom based, or are there ample opportunities to get hands-on experience in realistic environments?

Is there a process in place to enable your qualification to be revalidated at sensible intervals (you want to devote most of your spare time to paddling instead of being on more courses)?

Whatever your priorities, there will be a course out there to suit you (some suggestions are listed at the end of this article).

KIT PREPARATION

In terms of kit preparation, you need to think about the kit itself, how it is carried and where it is carried. For example, does it really need to be in a waterproof container or pack, or will an ordinary bag inside your (dry) hatch suffice? Talking of hatches – a key thought is that 'if you can't reach it, you don't have it!' You may find that your injured paddling partner cannot get at something stowed away in your boat.

Whatever kit you carry, you need to consider your own safety. Infection-control measures such as gloves and resuscitation masks should be in every kit, however small and compact.

Ideally, every item of medical kit and equipment you decide to carry should be capable of filling at least two functions; you do not have the luxury of unlimited space, and you do not want to weigh the boat down with additional kit. If an item has only one purpose, does the likelihood of an incident arising needing that item indicate that you really need to carry it regardless of its specific utility? And lastly, if you don't know how to use it, don't carry it! Some exotic medical instruments are easily available from online medical suppliers but could be rather dangerous in untrained hands.

DRUGS

On the higher levels of medical training courses, first responder and emergency medical technician for example, you

will be introduced to the use of drugs as part of a treatment plan. It is worth remembering that the humble aspirin and ibuprofen fall into this category. Obtaining some of the more advanced medications (those normally requiring an individual prescription) will require an understanding GP. If you are lucky enough to have one, keep them onside. Carrying drugs across international borders is fraught with complications at best and with danger for you at worst. Carrying a 'get-out-of-jail-free' letter stating the purpose of the drugs and signed and stamped by a competent medical authority is essential. The drugs themselves should be in their original unopened containers and packaging. Wait until you are at the start point before packing them for the expedition.

Also advisable is carrying proof of your own medical competence and training. Remember to remain within the remit of your training – a remote beach is not the place to experiment at something you vaguely remember from a DVD on a course!

PREPARING MEDICAL KITS

There are a variety of ways in which to prepare medical kits, and it may be useful to think of three ascending levels.

The 'Ouch Pouch' (a term I first heard being used by Fiona Whitehead): stored in either your buoyancy aid or deck bag. This holds the bits and pieces you might need to repair small holes in people while still afloat and without having to break open a larger pack e.g. a nappy pin in your pocket works well for supporting a casualty's injured arm – pin the cuff to a buoyancy aid strap!

The paddling-specific first aid kit: stowed in a hatch. You usually need to land somewhere to make best use of this first aid kit e.g. a pair of shoulder dislocation reduction straps (do not attempt this technique without specific training).

The expedition medical pack: this only comes out for major trips in wilderness areas and enables the trained medic to ►



Above: Paddling First Aid Kit and Contents

Above: Ouch Pouch and Contents



Above: Exped Med Pack and Contents

provide extended care (a week or more) with very little access to other resources. A BP cuff, stethoscope, airway equipment and IV access are just a few of the items that might be included here.

What this article does not do is list the contents of each level of kit (although some items will be clearly identifiable from the pictures) because you need to tailor what you carry to your training and to the incidents that you are possibly going to face.

THE NEED FOR RESEARCH

Some common causes of injury are listed later, but what may not be immediately obvious is the number of people now enjoying the outdoors who are managing, to a greater or lesser degree, chronic (long term) conditions. Conditions such as asthma and diabetes are no longer stopping people from enjoying an active lifestyle, and your paddling partner may be one such person. Many people now take controlled doses of medication at specific intervals – is someone in your party in this category? If so, have they taken their medication today, and are they carrying spare meds in case of an unplanned night out on a small islet? In some cases, missing a dose of meds may trigger the onset of a condition which then necessitates the calling in of a helicopter or lifeboat evacuation to hospital. Knowing about such things in advance means you can at least plan for contingencies. If you are travelling abroad then research about the area is clearly sensible, if not essential. Are there endemic infections which require prophylactic injections or medications? Are there specific health threats which mean that certain preventative measures are required? Sadly, the Scottish midge both falls into (and defies) both those categories!

When and where do most incidents occur?

There are four categories of 'when and where':

- travelling to the expedition area (e.g. an RTA on a remote Highland road);**
- on land e.g. on the beach;**
- at sea;**
- as a result of pre-existing but undeclared conditions.**

This article does not cover the first and last of those categories as their implications should be obvious. However, having survived the trip to the end of the road or the day at sea, we also have to survive the beach! Just a few of the possibilities include the following.

Seaweed gymnastics: to quote the TV show, 'people do the most amazing things'! Unfortunately, however highly the style judges score the event, the subsequent impact with Mother Earth usually hurts (and sometimes badly). My personal least-favourite seaweeds go by the names of 'green death' and 'brown death'. No matter my type of footwear, I can just about guarantee slipping and sliding on the stuff.

Trips, tumbles and falls: just about anything can become damaged e.g. heads, arms, wrists, backs and lower limbs. If you are lucky, strapping and an anti-inflammatory will control the situation; if not, Channel 16 may be the answer. I would recommend that any period of unconsciousness – however transient - should trigger an evacuation to definitive medical care.

Lifting, carrying and dropping loaded boats: backs are particularly at risk here, so getting people to carry things properly will save a lot of pain and aggravation in the long term.

Barnacles and sharp rocks: cuts and grazes will not heal in a saltwater environment. People with relatively minor nicks will require ongoing medical attention until you can get to a 'normal' environment. Until then, the wound remains an entry point for more exotic and troublesome infections.

Even when we are at rest on the beach e.g. around the campfire at the end of a good day, we may not be safe from items such as fish hooks and sharp knives or even the campfire itself. Fish hooks, especially the triple barbed types, can be painful both on the way in and on the way out; prevention is much better than cure.

Knives, by their very purpose, are good at cutting things including people if they are not sensible in their use. I won't forget the time I used my hand as the cutting board

under a potato. On another occasion, a naval officer was whittling a bear tooth as an ornament. When the knife slipped, I had a long spiral finger cut to stitch on a remote beach in SE Alaska; the video clearly shows that the procedure hurt him rather more than it did me. Incidentally, it is better that knives are sharp – they leave a much neater cut than blunt blades which produce more ragged edges. Getting a cut to close in a wet environment can be problematic – steristrips often don't stick and sutures work less well than usual. Electrical tape from the Ouch Pouch does a decent job in most cases. If it's bad, control the bleeding and get help.

Campfires are a very real risk to health and people need to be careful around them. Sadly, campfires and alcohol are not a terribly sensible mix (clingfilm makes a good improvised burn dressing).

The shallows area can conceal dangers such as weeverfish and sea urchins. Prevention is again better than cure – sensible footwear can go a long way to protect you from the sharper edges of sea dwellers. Weeverfish stings can be relieved by immersing the affected part in as hot water as the casualty can bear for 30-90 minutes, followed by the topical application of an anaesthetic ointment.

On the sea, the things that seem to get hurt most are fingers (blisters and dislocations), wrists (tendonitis), elbows ('tennis elbow'), shoulders (fatigue and over-gripping the paddle), backs and heads. Electrical tape is very effective at blister management as it sticks to itself and not to the paddle, and works in the wet. (Use it early on hot spots to stop blisters developing in the first place.) Interestingly (or alarmingly, depending on your viewpoint), there are no rescues that we carry out that do not put backs and heads at risk of injury. Practice and fitness are key to minimising the impact of rescues. Other factors which cause problems at sea include pre-existing medical conditions, the onset of 'new' medical conditions (appendicitis, anyone?) and those created by the environment.

ENVIRONMENTAL CONCERNS

I'm not referring to green issues here but to but problems such as hypo- and hyperthermia, dehydration, ►



Nigel Dennis head wound



Awkward landing in the Queen Charlotte Islands

sunburn /windburn and, last but not least, sunstroke and glare-induced headaches. All of these can be debilitating. Controlling the onset of the problem is usually only the first stage in a long process of incident management including rafted tows and potentially landing the casualty through surf. Remember that these conditions can go on to create bigger and more serious problems e.g. dehydration can give rise to serious cramps in legs and stomach, so early intervention is in everyone's interest.

It is worth repeating that every casualty or patient in a wilderness (or quasi-wilderness) setting is likely to be suffering from 'the 3 Hippos'.

Hypothermia: even in what seems like warm water, the body will lose heat quickly. Add wind to the situation and the casualty will soon have a real problem. People being towed in a raft are open to the elements and are doing nothing to generate body heat.

Hypo-hydration (aka dehydration): this is a common state for paddlers to be in, given the practicalities of dealing with the outflow!

Hypoglycaemia: the formal name for lack of sustenance! The old wives' tale that patients likely to be anaesthetised should

not be fed or watered should be ignored. If an anaesthetist subsequently has a problem with a vomiting patient, at least the patient is still alive.

To summarise, if an injury requires you to wait for help then attending to the basics of keeping the casualty fed, watered and warm will go a long way to alleviating more serious problems. Did you ever consider that a group shelter (or both) is probably an integral part of your first aid resources?

NOW WHAT?

If this article hasn't put you off so far, here are four final thoughts.

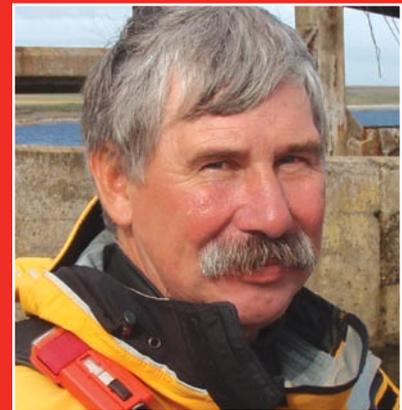
Whatever your training and however good your intentions, don't make matters worse than before you intervened at the scene.

Don't add yourself to the casualty list at an incident – that helps no-one, least of all the original casualty.

Watch out for the things that might cause other people injuries and remember you are not invulnerable. Moreover, if you can head off an accident or injury, you save yourself a great deal of trouble.

Finally: if you go down, who looks after you? ■

About the Author



Rowland Woollven has been a sea kayaker for many years and has been on several expeditions to remote areas including SE Alaska and the NW coast of British Columbia.

He is a member of the Teaching Faculty of the Wilderness Emergency Medical Services Institute, Europe (WEMSI-Europe) and works on the annual WFR and WEMT courses run at Glenmore Lodge, the Scottish National Outdoor Training Centre.

Photo: Barry Bramley

RECOMMENDED BOOKS

Pocket First Aid and Wilderness Medicine
Duff and Gormley, Cicerone Press

Oxford Handbook of Expedition and Wilderness Medicine
Oxford University Press

Field Guide to Wilderness Medicine
Auerbach, Donner and Weiss, Mosby

RECOMMENDED COURSES

Remote Emergency Care: various levels and providers (see the training-expertise web link to the right for one specialist provider)

Wilderness First Responder: a week-long course run by WEMSI-Europe at Glenmore Lodge

Wilderness Emergency Medical Technician: a higher level week-long course run by WEMSI-Europe at Glenmore Lodge

RECOMMENDED WEBSITES

www.wildmedic.org

www.wemsi-europe.org

www.training-expertise.co.uk

www.glenmorelodge.org.uk