

## First Aid Kits – What to take and why.

**First aid training** - Undoubtedly the most useful thing to have “in” your first aid kit is training in first aid and basic life support. *“A safe pair of hands with no kit can do far more good and much less harm than someone with all of the kit but no idea of what they are doing”.*

So, it’s important that you are up to date with your First aid training -

- First aid Remote Emergency Care REC course - geared to a mountain environment.
- Far from help FFH Courses – in-depth foundation course for non-medics for remote expeditions. FFH courses provide a solid grounding in illness & injury conditions including the use of selected POMs (prescription only medicines).

Members are encouraged to keep their outdoor first aid skills up to date every 3 years. See ESC First aid web page and Training pages for available courses.

The perennial question **“What to take in your First aid kit?”** invites the universal answer = **“It depends”**

It depends on

- Size of party
- Nature of activity and what injuries you might expect - e.g., climbing different from trekking etc.
- How long to Rescue and definitive care –
  - Isolated = medical help within hours.
  - Remote = medical help within a day or 2
  - Wilderness = medical help several days away or unreliable
- Limits of what you are trained/competent to use.
- How much you can carry – this is a key factor in ski touring.

Ideally, your first aid kit will be flexibly planned for each activity or trip depending on the above needs assessment.

**Organisation** - Modular approach and packaging

Many compartmentalized first aid kit bags are heavy and impractical for ski touring, so many prefer to organize and package their first aid equipment in labeled zip lock bags, all held in a suitably sized, easily recognisable, stuff sac. (a transparent sac might be especially useful.)

It is useful to have a modular approach to first aid kits, e.g., for an Expedition you might carry.

- a Field kit – A basic kit containing limited supplies of first aid equipment sufficient for immediate minor or major injury care, to be carried for a small group of people while away from base camp for the day.
- a Base camp kit – The main medical kit for the trip, with supplies of dressing and medications etc. for duration of trip and size of party

Even on a hut-to-hut ski touring trip you might consider a modular approach and carry.

- Personal Medical Kit including Blister kit.
- Group first aid kit
- Individual and group hypothermia kit

## Attempting a generic Ski touring First aid kit

The following suggested kit was brainstormed and discussed at Leaders meet 2022.

A schedule of contents suitable for a non-medical first aider, for a hut-to-hut ski tour of 6 members for 1 week, is outlined here and summarised in Appendix 1 – available for printing as needed.



### Personal Medical Kit

Even on hut-to-hut ski touring trips it is useful to encourage members to bring a simple Personal Medical kit e.g., preferred blister kit and simple OTC medications. It may be useful to carry this blister/minor first aid kit in the top pocket of rucksack to facilitate quick stops to sort out hot spots before they blister.

Each member should take some personal medical equipment, including:

- Sunscreen – a first aid essential!
- Elastoplast or some small dressings, Micropore if allergic
- Blister kit – e.g., Non adherent dressings; Compeed - multiple sizes etc. – quantity at your discretion
- Strapping – Zinc oxide tape (could use Duct tape but slight risk skin allergy) or Kinesio tape.
- Simple painkillers – Paracetamol or Ibuprofen - 20 tablets
- Personal medications – not just regular medications but also “rescue medications” if appropriate e.g., course of steroids if you are moderately severe asthmatic, strong analgesia if you suffer from recurrent backache etc.
- Antidiarrhoeal medications –
  - Loperamide "Immodium" 2mg – 2 tablets start then 1 tablet with each episode diarrhoea up to 8/day – 8 tablets.
  - Rehydration sachets (e.g., Dioralyte) – 2 sachets.
  - Alcohol gel – small bottle for hand hygiene
- Antihistamine –

- if previous allergic reaction to insect bites etc. Chlorphenamine "Piriton" 4mg – 1 tablet 4 times daily – 4 tablets
- if hay fever/sleeping bag, house dust allergy bring own non-sedating antihistamine e.g., Loratidine 10mg.

**Group First aid Kit** - suggested First aid kit for Hut-to-Hut ski touring 1 week for 6 people.

| <b>Dressing materials and equipment</b>   |         |
|---|---------|
| - Emergency Trauma bandage (Israeli dressing) 4in                                 | 1       |
| - Non-adherent dressing 10cm x 10cm (useful as can cut to size)                   | 1       |
| - Non-adherent dressing either 5cm x 5cm to cut to size or as an island dressing. | 2       |
| - Non-adherent antimicrobial dressing (e.g., Inadine) dressing                    | 1       |
| - Triangular bandage  | 1       |
| - Crepe bandage 10cm x 4.5m   | 1       |
| - Cohesive bandage 5cm x 4.5m   | 1 roll  |
| - Antiseptic swabs or wound cleansing swabs                                       | 20      |
| - Elastoplast – waterproof and fabric dressings (plasters)*                       | 4       |
| - Steri-strips 6mm x 100mm x 10 tapes   | 2 packs |
| - Adhesive tape 1.25cm x 5m - Micropore   | 1 roll  |
| - Disposable gloves   | 3 pairs |
| - Scissors (Tough cut trauma shears or smaller)                                   | 1       |
| - Forceps, (e.g. Tick forceps)  | 1       |
| - Safety pin  | 1       |
| - Micro Torch   | 1       |
| o +/- SAM Splint  |         |
| o +/- Tubigrip elastic tubular bandage - size D 1m                                |         |
| o +/- Clingfilm   |         |
| o +/- Resuscitation face mask   |         |

### **Discussion points on Dressings.**

- **Trauma dressing** – some have traditionally advocated for improvising with sanitary pads and clingfilm for major bleeding, but speed is critical here and modern trauma dressings are literally a lifesaver in major haemorrhage.
  - o link
- In addition, some would advocate for a **haemostatic gauze dressing** e.g., Celox gauze to help stop bleeding from emergency life-threatening injuries. They are expensive but might be a consideration for ski mountaineering trip where risk of fall is higher.
- **Non adherent dressings** are best for early blisters that have not deroofed. **Hydrocolloid dressings** are good for deroofed, ruptured blisters provided you can keep them in places for duration of the trip. A **non-adherent antimicrobial dressing** (e.g., Inadine) is useful for infected or heavily exudative wounds.
- **Triangular bandages** remain useful for general splinting and stabilization, and specifically for broad and high arm slings though you can improvise these.
- **Cling film or Cohesive bandage?** – self-adhesive bandages (e.g., VetWrap) are durable semi reusable bandages that are water repellent and stick only to themselves; very useful for dressings and sprained joints. Clingfilm is heavier and fiddly but can be used as universal dressing; directly on burns; or as final waterproof layer on other dressing. Can also be used in splinting and strapping.
- +/- **Tubigrips** – Useful for sprains and joint support but perhaps duplication as could use adhesive strapping.

Size D = Medium ankle; Small Knee

Size E = Large ankle; Medium knee

- Adhesive tape – a good quality adhesive that will stay in place is essential for blister care. Quality varies and best to stick with a brand that you know. Alternatively, good quality Kinesio tape is excellent if well applied (rounded off ends, correctly tensioned).
  - Wound closure – Steristrips are lightweight to carry and easy to use, though will be ineffective for large deep wounds where skilled suturing is required. Medical adhesives (e.g., Histoacryl) are also useful for clean, superficial minor wounds. Commercial adhesives (e.g., Superglue) can be used in extremis but are not medically recommended as they can cause further tissue damage.
  - Scissors - useful for trimming dressings, cutting tape etc. and if necessary, cutting away clothes. Trauma Shears
  - Forceps or Tweezers – useful for fine handling and removing debris from wounds. A metal Tick forceps has useful application below the snowline.
  - Micro torch – useful reserve item
  - Splinting – most REC courses cover improvised splinting using available materials, but a SAM Splint is a lightweight adaptable universal splint, easily carried down the back of a rucksack.
  - Resuscitation face mask – carry if wished, though in resuscitation time may be wasted finding it.
- **Medications**  
Subdivided into ziplock bags by indication, clearly labelled with dosages and expiry dates.

|   |    |
|---|----|
| <b>Painkillers</b>  |    |
| - Paracetamol tablets 500mg (2x4 daily max)                   | 16 |
| - Ibuprofen tablets 400mg (1x3 daily)                         | 30 |
| - Codeine* 30mg/Paracetamol 500mg (2 tablets x 4 times daily) | 16 |
| <b>Allergy and asthma medicines</b>                           |    |
| - Chlorpheniramine tablets 4mg (1x4/day for allergy)          | 9  |
| - Loratidine (1daily for allergy)                             | 4  |
| <b>Gastrointestinal medication</b>                            |    |
| - Buccastem 3mg (1 twice daily for vomiting)                  | 8  |
| - Loperamide capsules 2mg (up to 8/day for diarrhoea)         | 25 |
| - Oral Rehydration Sachets (Dioralyte)                        | 2  |
| <b>Cardiac</b>  |    |
| - Aspirin tablets 300mg (1 chewed suspected heart attack)     | 2  |
| <b>Exhaustion</b>   |    |
| - Energy Gel  | 1  |
| o +/- Local anaesthetic eye drops and Eye antibiotic?         |    |

### Discussion points on Medications.

- Administering or offering: - The principles of informed consent still apply with conscious casualties. Only a Dr or registered nurse/paramedic may administer medications, but a First aider can offer medications to a casualty especially in remote first aid.
- Contrary to popular belief it is entirely safe, legal and appropriate to provide people in your care with over-the-counter medications, as long as it is done diligently by asking appropriate questions, such as allergies or any known reactions and following the directions included on the packaging.

- OTC medicines: - The above medications are Over the counter (OTC) medication that can be bought without prescription from the pharmacy, except for Prescription only medications labelled with an asterisk\*
  - +/- Local anaesthetic eye drops and Eye antibiotic? – useful for snow blindness or contact lens wearers.
- **Paperwork**
    - ICE details – useful for all members of party to carry a laminated sheet with all the In Case of Emergency ICE details for the group.
    - CasEvac plan - an evacuation plan with emergency communication details
    - Instructions on use of drugs and dressings
    - List of contents of medical kits
    - Injury report sheet – very useful to document injuries of casualty and the care given, so as handover effectively to definitive medical care. Especially useful when the casualty is snatched away by helicopter with little time for direct handover. See example Casualty Report card in appendix – adapted from an original by Dr David Hillebrandt with casualty care aid memoires added in red.
    - Pen

### **Communication and Location Devices**



Appropriate to coverage of the area you will be touring in:

- **Mobile phone** – preloaded with Emergency Rescue contact details specific to the area you are in. Try to check coverage in advance. There are Apps e.g., ECHO SOS that automatically select emergency number and give your location. In the UK, you can contact the 999 emergency services using a text from your mobile only if you have already registered with the emergency SMS text service. Satellite based text communication from mobile phones is already in evolution and soon to come to market.
- **Text based satellite communicator** – e.g., Garmin InReach = 101g – palm sized 2-way global text communicator, with weather and location sharing. Emergency SOS button sends interactive SOS message to GEOS, the Garmin-powered International Emergency Response Coordination Centre (IERCC) with professional 24/7 global monitoring and response centre.
- **Satellite phone** – perhaps the gold standard if remote but there may be limitations in the coverage area as well as cost and battery life.
- **GPS** or accurate **Map+Compass with Rohmer** - Giving your exact location is crucial:

- By Grid reference – 6 figure from map or 10 figure from GPS – need to include National Grid letter in UK.
- Latitude and longitude references (in decimals) is a more accurate method of pinpointing the exact location of a very specific place on the earth's surface - more universally used in Search and Rescue.

### **Hypothermia first aid kit**



An immobilized ski touring casualty or group will rapidly become hypothermic in the mountain environment, so it is important for the individual and group to carry Hypothermia survival kit.

- Extra layers, down jacket, hat, mitts – both individual and spares for group
- Group shelter – an essential piece of group kit in the mountains, offering protection from extreme weather and a warm place for group communication. Group Shelter 6 -8 person = 461g.
- Blizzard bag - The use of multi-layered metallized plastic sheet (MPS) tightly wrapped around casualty gives the most effective casualty insulation; and is better than single foil/blankets/Polythene sheets/bubble wrap. A Blizzard bag (Reflexcell 2- or 3-layer MPS) = 225g is the most effective insulating vapour barrier, especially for wet casualties. Comes in blankets, bags or jackets. The sealed bag is a very effective vapour barrier component of the Hypothermia package (see Hypothermia article) and carrying one per group should be strongly considered.
- Plastic or foil bivvy bag – offers individual vapour barrier bivvy bag for emergency shelter use. +/- Optional carry for each member of group. e.g., SOL bivvy bag = 110g.

## +/- Emergency Stretchers.

Commercial emergency stretchers are not commonly carried in European ski touring but more often carried in North American touring or other remote wilderness trips. e.g., Brooks-Range Ultralite Rescue Sled.

There are many techniques to improvise emergency stretchers and is useful to be familiar with strategies that use equipment commonly carried by a ski touring group e.g.

- Rope stretcher
- Group shelter bag tow -
- Rucksack stretcher - <https://www.realfirstaid.co.uk/improvisedstretcher>

## **Bibliography**

***Pocket First Aid and Wilderness Medicine*** by Drs Jim Duff and Ross Anderson  
(published by Cicerone – Twelfth Edition, 2017 – third edition by Cicerone)

Excellent resource as it is very succinct, and pocket sized; and has a good Appendix 2 listing medications and quantities required for First aid kits:

- Large group =10-15 people away for 1month
- Small Group = 6 people on a 1-week trip
- 2 people traveling in developing country.
- Minimalist kit – e.g., for a mountaineer

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## Appendix 1

### Ski Touring Group First aid Kit

A schedule of contents suitable for a non-medical first aider, for a hut-to-hut ski tour of 6 members for 1 week – as discussed at ESC Leaders meet 2022.

| Description   | Quantity |
|---|----------|
| <b>Dressing materials and equipment</b>   |          |
| - Emergency Trauma bandage (Israeli dressing) 4in                                 | 1        |
| - Non-adherent dressing 10cm x 10cm (useful as can cut to size)                   | 1        |
| - Non-adherent dressing either 5cm x 5cm to cut to size or as an island dressing. | 2        |
| - Non-adherent antimicrobial dressing (e.g., Inadine) dressing                    | 1        |
| - Triangular bandage  | 1        |
| - Crepe bandage 10cm x 4.5m   | 1        |
| - Cohesive bandage 5cm x 4.5m   | 1 roll   |
| - Antiseptic swabs or wound cleansing swabs                                       | 20       |
| - Elastoplast – waterproof and fabric dressings (plasters)*                       | 4        |
| - Steri-strips 6mm x 100mm x 10 tapes   | 2 packs  |
| - Adhesive tape 1.25cm x 5m - Micropore   | 1 roll   |
| - Disposable gloves   | 3 pairs  |
| - Scissors (Tough cut trauma shears or smaller)                                   | 1        |
| - Forceps, (e.g. Tick forceps)  | 1        |
| - Safety pin  | 1        |
| - Micro Torch   | 1        |
| - +/- SAM Splint  |          |
| - +/- Tubigrip elastic tubular bandage - size D 1m                                |          |
| - +/- Clingfilm   |          |
| - +/- Resuscitation face mask   |          |
| <b>Medications</b>  |          |
| <b>Painkillers</b>  |          |
| - Paracetamol tablets 500mg (2x4 daily max)                                       | 16       |
| - Ibuprofen tablets 400mg (1x3 daily)   | 30       |
| - Codeine* 30mg/Paracetamol 500mg (2 tablets x 4 times daily)                     | 16       |
| <b>Allergy and asthma medicines</b>   |          |
| - Chlorpheniramine tablets 4mg (1x4/day for allergy)                              | 9        |
| - Loratidine (1daily for allergy)   | 4        |
| <b>Gastrointestinal medication</b>  |          |
| - Buccastem 3mg (1 twice daily for vomiting)                                      | 8        |
| - Loperamide capsules 2mg (up to 8/day for diarrhoea)                             | 25       |
| - Oral Rehydration Sachets (Dioralyte)  | 2        |
| <b>Cardiac</b>  |          |
| - Aspirin tablets 300mg (1 chewed suspected heart attack)                         | 2        |
| <b>Exhaustion</b>   |          |
| - Energy Gel  | 1        |
| o +/- Local anaesthetic eye drops and Eye antibiotic?                             |          |
|   |          |
|   |          |



|  |  |
|--|--|
|  |  |
| <b>Miscellaneous</b>   |  |
| - ICE details – laminated sheet with all the In Case of Emergency ICE details for the group. |  |
| - CasEvac plan - an evacuation plan with emergency communication details                     |  |
| - Injury report sheet  |  |
| - Pen  |  |
|  |  |
| <b>Communication and Location Devices</b>  |  |
| - <b>Mobile phone</b>  |  |
| - <b>GPS</b> or accurate <b>Map+Compass with Rohmer</b>                                      |  |
| ○ +/- Text based satellite communicator –Garmin Inreach                                      |  |
| ○ +/-Satellite phone   |  |
|  |  |
| <b>Hypothermia Survival Kit</b>  |  |
| - <b>Extra layers, down jacket, hat, mitts</b>   |  |
| - <b>Group shelter</b>   |  |
| - <b>Blizzard bag</b>  |  |
| ○ +/- Plastic or foil bivvy bag  |  |
|  |  |
|  |  |

## Appendix 2

Adapted from Casualty Handover Sheet by Dr. David Hillebrandt, with a few added casualty care aid memoirs in red. <http://medex.org.uk/diploma/resources.php>

### PATIENT REPORT FORM

NAME :

Date & Time :

Age :

ICE contact :

HISTORY OF INCIDENT :

#### **Safety - cABCDE**

catastrophic haemorrhage/cervical spine

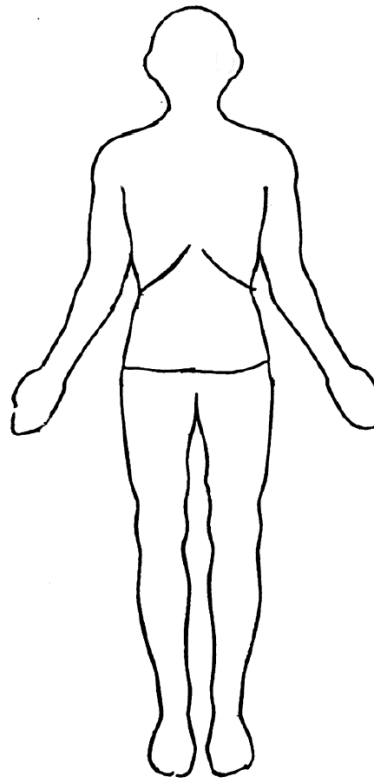
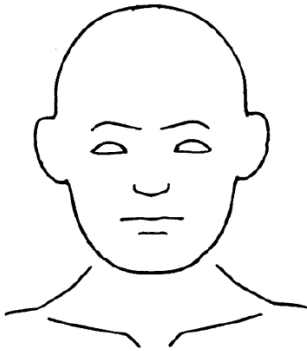
**Airway**

**Breathing**

**Circulation**

**Disability – AVPU**

**Exposure - ?hypothermia**



**Spine :**

#### **SAMPLE History**

**S** Symptoms (what patient says) & **S**igns (what you see)

**A** Allergies :

**M** Medication :

**P** Past medical history :

**L** Last food & drink :

**E** Event (what happened) :

