

THE DOCTOR'S SPORTS BAG

A well-prepared sports bag can make all the difference to the outcome of an injury at a sporting event.



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The sports physician and medical support personnel providing cover at a sports event must be prepared for any form of emergency. Preparation makes the unexpected less catastrophic and allows immediate, efficient medical care. Procedures and equipment relevant to the event, and possibly extra personnel, must be included in the planning.

POINTS TO CONSIDER

- Type of sport covered
- Age of participants and probable emergencies
- Infrastructure of the country in which the sports event will be held
- Type of medical bag
- Contents of the bag — equipment, paperwork, communication devices, and drugs
- Easy emergency access, avoid accidental use of banned substances
- How to obtain supplies at the venue, and consider foreign registration of your qualifications
- Product liability across borders — be in possession of the required customs documentation
- Controlled drugs — obey rules of country of sports event
- Insure the sports bag and keep it secure at all times.

Type of sport

You have to consider the type of sport and type of injury you will most likely be confronted with. Travelling with a swimming team or Tae-Kwondo team will certainly determine the content and amount of trauma treatment equipment needed. Covering an endurance event involves getting to check points, and preparing for thermal injuries or dehydration. Is it a single-code tour or a multicode tour, such as the Olympic Games you have to cover? Each sport has its own injury profile with which the travelling physician will have to familiarise him/herself, as well as medical procedures determined by the sport. For example, in boxing the competitors are pre-examined and an international hockey competition will not start before a doctor and the emergency personnel are available on the bench.

Participants' age and emergencies

One should know the average age, gender and physical ability of the participants and accompanying officials. One may have to handle a threatened abortion, myocardial contusion, myocardial infarction, kidney stones, a dislocated ankle or a spinal injury. Participants in veteran games may present with medical pathology, more chronic medication use and a specific injury profile. These are true scenarios from two previous Olympic Games.

Country

To which country is the team travelling? Whether one travels to Nigeria for the All African Games as opposed to Kuala Lumpur for the Commonwealth Games will influence the type of bag packed. What is the local medical support like? Will well-equipped ambulance and paramedical support be available? Remember that you have to be able to carry everything you pack! Consider the weight of your own luggage, as there is often little help.

How is the team travelling to the sporting event — by boat, by train or on a 16-hour flight from Johannesburg to Atlanta? Consider medically catering for 86 athletes, team officials and members of the press from your hand luggage.

Type of medical bag

The traditional briefcase-type medical bag is too small. One cannot carry it over one's shoulder and walk 4 - 5 km in a large stadium or during an endurance event. The case should have 'cut-outs' to protect glass medicine vials and small separate compartments to facilitate finding things in a hurry. 'See-through' compartments are recommended, as well as loose removable packets with zips. A 'tool-box' type suitcase or paramedic bag with shoulder straps is ideal, and must have a lock. It's not easy being stranded in a foreign country with no medical supplies and to have to try to replace sophisticated medical stock.

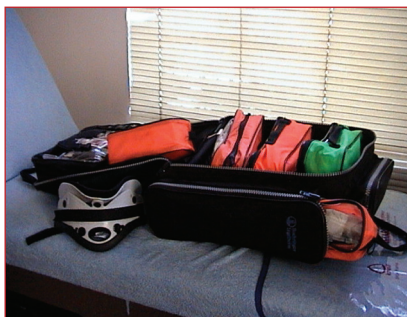


Fig. 1. A typical sports bag.

What equipment?

Checklists of equipment needed are given in Table I.

On-person panic kit

This separate grab pack, money-belt style, should include the following:

- oropharyngeal airway
- Laerdal pocket mask
- absorbent sponges/gauze
- examination gloves
- bandage/trauma scissors (multi-purpose tool)
- penlight
- pen and paper
- resuscitation shield
- stethoscope.

Emergency drugs

- Atropine sulphate 1 mg pre-filled syringe, or 0.6 mg/ml. Give 1 mg intravenous injection, maximum 0.04 mg/kg. Repeat every 5 minutes
- Adrenaline 1 mg/ml subcutaneously or intramuscular injection. Adults 0.2 - 0.5 ml, children 0.1 - 0.3 ml
- Epinephrine (1:10 000) pre-filled syringe, 1 mg/ml diluted to 10 ml intravenous injection, maximum 0.2 mg/kg. Epipen 0.3 ml intramuscular injection > 45 kg
- Glucagon 1 mg and solvent, 1 mg subcutaneous/intravenous/intramuscular
- Lignocaine 20 mg/ml, 20 mg vials
- Sodium bicarbonate 1 mg eq/kg bolus, 50 ml
- Naloxone hydrochloride 0.4 mg/1 ml, dose 0.4 - 2 mg
- Nitroglycerin spray — lasts longer than tablets, 1 second spray every 5 minutes
- Water for injections 10 × 10 ml
- Corticosteroids: dexamethasone shock pack 20 mg/ml, methylprednisolone 40 mg/ml
- Aminophylline 250 mg/10 ml
- Inhalers: salbutamol and steroid
- Buccal prochlorperazine
- Painkillers: pethidine 50 - 100 mg/1 ml, morphine 15 mg/1 ml
- Diazepam 10 mg/2 ml
- Chlorpromazine/haloperidol
- Furosemide/bumetamide ampoules (banned) 20 mg/2 ml
- Dopamine 400 mg in 250 ml saline: 1 - 5 mg/kg/min
- Mannitol 10 mg vial
- Magnesium sulphate 1 mg/1 ml, dose 2 - 4 mg intravenous injection
- Aspirin 160 mg/300 mg chew tablets
- Beta-blocker: atenolol 5 mg slow intravenous injection
- Adenosine 0.1 mg/kg - 6 mg, then 12 mg intravenously after 2 min or verapamil.

What to put in the bag

- Paperwork and cellular phone
- Book on banned substances (obtainable from the South African Institute of Drug-Free Sport —

Quick Guide to Drug-Free Sport).

- Book on emergencies/resuscitation algorithms: *Guide to the Management of Common Medical Emergencies in Adults*. 6th ed. University of the Witwatersrand 2002.
- List of telephone numbers (team officials/local medical support)
- Prescription pads
- Medical certificates
- Letterheads and envelopes
- Map of area/emergency network plan and contact numbers
- Dictating machine and tape
- Local pathology and X-ray forms
- Cellular phone model acceptable in the specific country with local sim card. Two-way radio system.

What else to include

Additional drugs

Check for expired drugs every 6 months. Store drugs at the correct temperature (4 - 25°C). Sufficient supplies or access to additional supplies is essential. Pack at least one medication from each pharmacological classification so that you are prepared for any medical problem. Find out if any of the team members are on chronic medication and ensure that they carry their own supplies. Athletes can also compile their own medical travel kit containing basic medication, braces and strapping. This will lighten the load on the stock carried by medical personnel, especially multi-coded sports teams. Ensure that they do not carry banned substances, and review their medical report forms where they have to declare all drugs they carry. They could pack the following medication: an anti-nauseant and anti-diarrhoeal, a simple painkiller, an anti-histamine, an antacid, a nasal spray, throat lozenges, brompheniramine or ephedrine tablets, a non-steroidal anti-inflammatory drug, one course of a broad-spectrum antibiotic, a topical antiseptic, and wound cover.

Some notes and tips on additional medication

- Antacid; H₂ blocker: Acute situations are common in competition. An injectable form of an H₂ antagonist is useful.

Travelling with a swimming team or Tae-Kwondo team will certainly determine the content and amount of trauma treatment equipment needed.

- Analgesia — soluble paracetamol, consider sublingual preparations.
- Antibiotics — include at least one antibiotic other than penicillin
- Antihistamine — sublingual prochlorperazine
- Oral rehydration powders and intravenous rehydration solutions
- Vitamins — intravenous vitamins and iron can be very useful as legal performance enhancers
- Wound covers — blisters/abrasions/open wounds, especially in the case of cyclists and hockey players
- Salbutamol/steroid inhalers
- Influenza A and B treatment (zanamivir) early in an infection can prevent progress of the disease and is of great importance to the competitor. Less training time will be lost and the risks of complications are reduced. At the Sydney Olympics the medical team used a similar product, with great success
- Steroid tablets (equivalent to a total of at least 100 mg prednisolone)
- Sleeping tablets for use during travel and before competitions
- Diuretics (banned). Do not be

Table 1. **Checklists of equipment needed**

Diagnostic equipment

Stethoscope
 Blood pressure meter — 2 cuff sizes
 Oto/ophthalmoscope
 Torch and blue filter
 Tongue depressor
 Peak flow meter
 Reflex hammer
 Pocket knife
 Trauma shears
 Tape measure
 Speculum
 Tourniquet
 Adjustable solid neck brace
 Glucometer
 Haemoglobin meter
 ECG ruler
 'Sharps' box
 Magnifying glass
 Ear syringe
 Instruments — needle holder, artery forceps, scalpel, blades, scissors, dental syringe, kidney bowl

Disposables

Absorbent sponges
 Oral airway
 Examination gloves
 Pen and paper
 Resuscitation shield
 Lubricating jelly
 Fluorescein eye strips and eye anaesthetic
 Urine dipsticks (specific gravity is handy for hydration status)
 Urine bottles
 Lignocaine 1% with and without adrenaline
 Stitching material — nylon 4/0 and 5/0, non-absorbable/absorbable
 Alcohol swabs

Wound closure strips, wound closure material
 Tube of Superglue for superficial cuts
 Syringes — 3 ml/10 ml/20 ml — with needles
 Butterfly
 Razors
 Bandages — crepe, triangular
 Foley's catheter (also used as under-water drain)

Advanced cardiac life support equipment

Laerdal face mask
 Ambubag — valve, mask, reservoir (varied masks)
 Laryngoscope blades and batteries
 Intubation tubes (nos 6.5/7.5/9) and inducer
 Portable suction
 Drip set, IV catheters, dextrose vaculiter (5%) 15 drops/min set. Normal saline or Ringer's lactate
 Military anti-shock trousers (nice to have)
 Oxygen tank, tubing, masks (if ambulance is not available)

Fantastic optional extras

AED (automated external defibrillator)/pulse oximeter
 ECG/lung function
 Scale (wrestling, boxing, judo)
 Portable sonar equipment

Neuro/orthopaedic equipment

Neck brace — solid and soft, various sizes. Spinal board
 Cast padding
 Crutches
 Elastic bandages
 Finger-sized aluminium foam splints
 Knee/ankle immobiliser
 Plaster/fibreglass splinting
 Sling shoulder/wrist brace
 Tape
 Thermal blankets

tempted to use a diuretic for swollen lower extremities after travelling. Pack them separately

- Anti-inflammatory/anti-gout treatment. Athletes often use high-protein drinks and gout can be found in a young population, in veterans and in officials.

Prescription forms

These are very valuable, and often get stolen to obtain extra medication for family and friends. Protect them well and control their authenticity.

Controlled drugs

Remember that you will be held responsible for the misuse of controlled drugs. In some countries, such as Singapore, even the carrying of illegal, addictive substances is punishable by the death penalty. Governments regulate medication supply, therefore possession, prescription, storage, record-keeping and disposal must be in line with local regulations. For example, a combination of paracetamol, caffeine, codeine phosphate and meprobamate is illegal in Australia and one should declare and clear it with customs.

Record-keeping

- Registers for schedule drugs (e.g. pethidine)
- Acquisition supply record
- Date on which transaction occurred
- Name and address of person/firm that supplied the drug(s)
- Quantity supplied
- Total stock on hand.

Insure your sports bag and its contents. It can be covered in travel insurance or alternatively as part of the travelling team's equipment. Also consider temporary medical insurance for your own or visiting athletes. An event such as the Olympic Games will have event insurance that can include all participants and officials. At the opening ceremony of the 1996 Olympics in Atlanta an official died of a heart attack. The hosting country was liable. With proper cover your team will have easy access to special investigations.

AIDS exposure pack

AIDS is a reality in sport, with exposure very possible, especially when athletes have to qualify for the

Olympic Games as citizens of an African country. Some contact sports, such as boxing, require a clearance certificate, but other contact sports carry risks. The social aspect of sport also exposes athletes as well as officials to possible infection. Carry the 3-day Retrovir/3TC Post-HIV Exposure pack and start treatment within 2 hours after exposure, if possible.

Vaccines

All athletes who travel regularly must have their immunisation schedule with them, and update their tetanus and hepatitis B vaccinations. Take care with adolescents. Not everyone will adhere to the instruction to immunise him/herself. Some countries require yellow fever and diphtheria immunisations. Pneumococcal immunisation can be done. Diphtheria and tetanus (2 types) vaccines must be carried; the latter should be stored in a refrigerator or cool space.

References available on request.

IN A NUTSHELL

Prepare your emergency bag according to the specific type of sport covered, the age of participants, probable emergencies and country in which the sports event will be held.

Choose the type of bag according to conditions of the field of play.

Consider what to pack — equipment, paperwork, communication devices and drugs.

Pack for easy emergency access and to avoid the accidental use of banned substances.

Know how to obtain supplies at the competition venue and make sure of your foreign registration.

Product liability across borders — prepare to clear customs with necessary documentation.

Controlled drugs — know the rules of the specific country where the event will take place.

Insure the sports bag and keep it secure.