



# Deep Ocean Medical Kit

**ROYAL CAPE YACHT CLUB; CAPE TO RIO RACE 2025**

**MEDICAL SUPPLIES SUGGESTED FOR A DEEP OCEAN (TRANSATLANTIC) VOYAGES**

**COMPILED BY DR JOHN ROOS**

**LAST REVIEWED: 8 NOVEMBER 2022**

Updated November 8<sup>th</sup> 2022

## **Pre-voyage departure:**

Crew or members with significant medical conditions, such as heart disease, high blood pressure, diabetes, or any other significant medical problem, should get a full medical check-up before departure, and must bring all medication aboard with them, and should ensure that the necessary monitoring equipment is aboard. The skipper of the vessel should be informed of all of the details relating to the crew member's health status, what to do in the case of an emergency, and who to contact.

## **Cape Town Radio – Medical Advice**

Cape Town Radio offer a radio medical advice service to all vessels at sea, in which any vessel may request radiotelephonic medical advice from one of the duty doctors of the Western Cape Government's Department of Health Emergency Medical Services.

## **Instruments and sundries:**

Stethoscope

Sphygmomanometer (blood pressure measuring apparatus) for doctor/paramedic.  
Or automated blood pressure measuring device (battery-operated).

Thermometer

Non-sterile rubber gloves

Bandage scissors (no sharp tips to avoid further injury to skin)

### Notes:

Stethoscopes are only required for doctors or Advanced Life Support paramedics.

Automated battery-operated blood pressure measuring devices may be of value in assisting accurate patient assessment, in the event of severe illness or injury, for if and when you require radio/telephone medical advice. It may also be useful to carry such as an automated blood pressure machine if you have a crew member who suffers from blood pressure problems (usually high blood pressure).

Thermometers are useful in deciding whether or not to start antibiotics. Localised pain and redness (if soft tissue infection), along with fever (temperature above 37.5°C) and high heart rate (above 100 beats/min), would more than likely indicate that antibiotic administration is appropriate. When in doubt, get radio medical advice.



Choice of thermometer is up to you – electronic thermometers are very convenient, but require batteries (small watch batteries). Glass and mercury thermometers do not require batteries, but are very fragile and break easily. These are not expensive devices – it is probably a good idea to carry one of each.

#### **Dressings:**

Steri-strips or equivalent (assorted) stick-on strips in lieu of sutures (stitches) to close deeper cuts before applying dressings.

Space blankets.

Burnshield (or equivalent) burns dressings; assorted sizes.

Multi-trauma (large) wound dressings.

100mm x 200mm wound dressings.

100mm x 100mm wound dressings.

Bandages (crepe or gauze) assorted sizes.

Roll of cling-wrap (to use as waterproof dressing).

Dressing plasters (for minor wounds) assorted sizes.

Cotton wool swabs.

Ear buds (not for use in ears!)

Disinfectant solution – chlorhexidine with alcohol (preferably) or Dettol/Savlon or equivalent.

Surgical spirits.

Betadine (or equivalent) antiseptic cream/ointment.

#### **Notes:**

**Steri-strips** may lose 'stickiness' over time, and may therefore need to be replaced every two or three years, even if not used.

**Space blankets** perish over time, and once perished tear very easily when trying to unfold them, rendering them useless. They therefore have a 'sell-by' date and must be replaced periodically. Additionally, space blankets do not conserve heat by themselves – they **MUST** be used in conjunction with normal blankets, sleeping bags or warm clothing, layered over the space blanket. If someone is significantly hypothermic, a space blanket will not rewarm them! Active warming methods will be required to rewarm a very cold patient, such as a hot water bottle filled with just more than lukewarm water.

**Burnshield** or equivalent is a very useful moist/wet burns dressing, which is **VERY** useful (and I would say essential) dressing to have aboard a yacht or in an overlanding vehicle. Linen savers or incontinence sheets have a soft lint-free lining on one side, and a plastic layer on the other side. These make excellent large dressings for burns or other injuries, and can be wrapped around an arm or leg, doubling up as dressing and bandage if necessary. Very good idea, and available from almost every pharmacy.

### **Splints (for immobilisation of sprains and fractures):**

There are a range of commercially-available splints on the market. The recommended splints are called SAM Splints (or generic equivalents). These are supplied as rolls of a fairly thick aluminium sheet sandwiched between foam padding (on both sides), and can be bent and moulded for application to arms and legs, according to need. These are available from Ysterplaat Medical Supplies or Be Safe Paramedical.

Splints can also be fashioned from cardboard boxes, which can be cut up and shaped according to need.

**Warning:** Be very cautious of inflatable 'blow-up' splints, as these can unwittingly exert high pressures on injured limbs, and can reduce or cut off the blood supply to soft tissues, the consequences of which are potentially catastrophic – the loss of the limb and potentially even of life.

### **Suture materials (for doctors and Advanced Life Support paramedics only):**

Steri-strips (assorted) stick-on strips in lieu of sutures (stitches) for deeper cuts

Suture material (assorted):

- Nylon 1, 2, 3, 4-0
- Silk 1, 2, 3, 4-0
- Chromic 1, 2, 3, 4-0

Scalpel blades

Kidney dish

Needle holder

Forceps

Mosquito clamps x 2

Sterile rubber gloves

Gauze swabs – sterile

Lignocaine

Bupivacaine

Syringes 10ml

Hypodermic needles 25g and 26g

Methylated spirits or chlorhexidine in alcohol

### **Intravenous fluid administration and injections (for doctors and ALS paramedics only):**

Ringers lactate, Balsol or Plasmalyte L 1000ml x 2

Colloid volume expander (Voluven) 500ml x 2

IV cannulae: 22g, 20g, 18g, 16g x 3 of each size

Alcohol swabs

IV film dressing (Opsite or Tegaderm)

Strapping (wide Elastoplast or equivalent)

Syringes:

2ml, 5ml, 10ml x 5 of each

Assorted hypodermic needles



Alcohol swabs  
Sterile water or saline vials

**Specifics for diabetics:**

Blood glucose measurement devices (if diabetics on board).  
Glucagon pack (if diabetics on board).  
Glucose 50% 50ml for intravenous administration (if diabetics on board).  
Glucogel or equivalent oral glucose paste (if diabetics on board).

Notes on blood sugar monitoring equipment and diabetes medication:

Glucose measurement devices are expensive, and the consumables have a short shelf-life. These items are not necessary if you do not have diabetics aboard.  
Glucose 50% intravenous solution can only be administered by a paramedic or doctor.  
Glucogel or equivalent is cheap and potentially very useful. It is to be smeared on the inside of the cheek (on the buccal mucosa) where it is well-absorbed into the bloodstream, and not on the lips, where it is not absorbed at all.

**Other quasi-medical items for consideration:**

Sunscreen  
Lip balm  
Skin moisturising creams and lotions  
Water purification tablets (more for overlanding expeditions than sailing voyages)

**Advanced Life Support Equipment Exclusions:**

This list excludes airway management devices, suction units, ventilation assist devices, oxygen administration devices, oxygen cylinders, cervical collars, splints and other immobilisation devices, stretchers and harnesses.

**Advanced Life Support Resuscitation Equipment (for doctors and ALS paramedics only):**

For a full list of Advanced Life Support equipment, Royal Cape Yacht Club members or Cape to Rio 2023 participants are welcome to contact Dr John Roos via the contact details supplied below.

**Recommended suppliers of First Aid equipment for maritime purposes:**

Ysterplaat Medical Supplies  
3 Twickenham Park  
5 Marconi Road  
Montague Gardens  
Website: [www.yms.co.za](http://www.yms.co.za)  
Tel: 021 551 0838

Be Safe Paramedical  
58 Promenade Road  
Muizenberg  
Website: [www.be-safe.co.za](http://www.be-safe.co.za)  
Tel: 021 788 4681



**First Aid and other Medical Advice:**

Members of Royal Cape Yacht Club and Cape to Rio 2023 participants are welcome to contact Dr John Roos for further information, via the contact details supplied below.

**DR JOHN ROOS**

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**Medication list :**

Recommended inventory for deep ocean or remote sailing listed below.

**Medication dosages provided in this document:**

Please note that all dosages provided in this document are referenced for the average adult patient. If dosages are required for children, please contact the document author for further advice and recommendations, or obtain radio medical advice.

**Storage advice for all medication:**

As a general rule, when it comes to storing any kind of medication, the cooler the ambient environment, the better. Heat permanently denatures medication, whereas cold environments are protective.

The colder the environment, the longer your medication will last – in many cases long after its expiry date – not suggesting that you should use expired medication as a routine; but you may need to in an emergency.

For the above reasons, do not store medication in the boot (trunk) of your car, where temperatures can rise well in excess of 50°C in summer.

Similarly, do not store medication on your boat through the South African summer – where temperatures can also be excessive.

If you store medicines on your boat, store them below the waterline if possible, where it is likely to be cooler – remember hot air rises and cold air sinks.

It is best to keep a standard basic first aid kit on your boat at all times, but store your Deep Ocean Medical Kit's medication at home, preferably in a



cool, dark location, as some forms of medication are also denatured by sunlight (hence dark brown medicine storage bottles).

Air-conditioned environments or refrigerated storage is best – but never freeze any medication.

Keep all medication out of the hands of children.



**Antibiotics:**

Category:	Antibiotics (broad-spectrum)		
Generic name:	<b>Co-Amoxyclav (Amoxicillin with clavulanic acid)</b>		
Trade names:	Augmentin, Adco-Amoclav, Augmaxil, Amoclan, Clamentin, etc.		
Schedule:	4	Doctor's prescription required:	Yes
Indications:	Any severe infection – throat, lungs (pneumonia), urinary bladder, sinuses, soft tissues (skin, muscle, underlying tissues), etc.		
Contra-indications	Penicillin-based, so do not give to patients with penicillin allergy. Consider non-penicillin based antibiotics.		
Main side-effects:	Gastrointestinal disturbances mostly at higher doses: diarrhoea, nausea, vomiting, abdominal discomfort, candida overgrowth (thrush). Helps to take with meals, consider Interflora and plain yoghurt – helps to restore normal gut flora.		
Dosage:	625mg three times per day for 5 days. OR 1000mg twice per day for five days.	Route:	Oral
Other notes:	It is often difficult, even for doctors, to decide when to commence antibiotics. Antibiotics do not work for viral infections such as uncomplicated sinusitis, colds and 'flu'. Patients requiring antibiotics will usually present with severe discomfort, pain, redness and swelling (if soft tissues), will have a fever. Chest infection (pneumonia) will usually present with severe 'fruity' cough, pain on coughing, and generalised pain in the chest. Productive cough will usually produce yellow or green sputum, indicating bacterial infection. Check temperature with a thermometer 4 hourly, and check pulse rate. If pulse rate above 100/min and/or if temperature rises above 38°C then consider antibiotic administration. If in doubt and the patient appears very unwell, rather start the antibiotic. This advice applies to all antibiotic administration. Advisable to carry at least 10 days (two 'courses') supply.		
Warnings:	Do not give to penicillin allergic patients. All antibiotics have the potential to inactivate the oral contraceptive pill. Use barrier methods if taking antibiotics.		



Category:	Antibiotics (narrow-spectrum)		
Generic name:	<b>Flucloxacillin</b>		
Trade names:	Flucloxacillin, Floxapen		
Trade name alt:	Flomox = combination flucloxacillin 500mg plus amoxicillin 500mg. See notes below on Flomox.		
Schedule:	4	Doctor's prescription required:	Yes
Indications:	Soft tissue infection known as cellulitis – usually lower legs or arms but can be anywhere on the body. <b>Cellulitis</b> presents as redness and flushing (erythema), localised warmth or heat, swelling of the soft tissue, pain and tenderness to touch. The patient may have a generalised fever and increased heart rate. Cellulitis is usually (in the majority of cases) caused by bacteria known as staphylococci – which are mostly very sensitive to flucloxacillin, but also to amoxicillin and co-amoxycylav, possibly to a lesser extent. Flucloxacillin is still the antibiotic of choice in soft tissue infection.		
Contra-indications	Penicillin-based, so do not give to patients with penicillin allergy. Consider non-penicillin based antibiotics.		
Main side-effects:	Gastrointestinal disturbances mostly at higher doses: diarrhoea, nausea, vomiting, abdominal discomfort, candida overgrowth (thrush). Helps to take with meals, consider Interflora and plain yoghurt – helps to restore normal gut flora.		
Dosage:	250mg four times per day (6-hourly) for 5 days. For severe infection 500mg 6 hourly. Absorption best when taken on an empty stomach. <b>Flomox</b> dosage: One capsule three times per day for five days.	Route:	Oral
Other notes:	As for other antibiotics above (co-amoxycylav, amoxicillin) in addition: Cellulitis can rapidly progress to severe and even potentially life-threatening infection, especially in elderly patients, or those with comorbidities such as diabetes and HIV infection. If a patient presents with symptoms of cellulitis, it is better to commence treatment early.  <b>Flomox</b> is a combination therapy – the rationale of which lies in the fact that it combines the narrow spectrum flucloxacillin (highly-active against staphylococci) with the broader spectrum amoxicillin – which thus throws a wider antibiotic net, in case the infection is caused by bacteria other than staphylococci. Flomox may therefore be a better choice to pack into your deep ocean medical kit.		
Warnings:	Do not give to penicillin allergic patients. All antibiotics have the potential to inactivate the oral contraceptive pill. Use barrier methods if taking antibiotics.		



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[www.cape2riorace.co.za](http://www.cape2riorace.co.za)  
[www.rcyc.co.za](http://www.rcyc.co.za)



Category:	Antibiotics (broad-spectrum)		
Generic name:	<b>Azithromycin</b>		
Trade names:	Zithromax, Binozyt, Azimax, Zithrogen, Ultreon, Zeemide		
Schedule:	4	Doctor's prescription required:	Yes
Indications:	Any severe infection – throat, lungs (pneumonia), urinary bladder, sinuses, soft tissues (skin, muscle, underlying tissues), etc. Very useful for patients with penicillin allergy.		
Contra-indications	Allergy to erythromycin-based antibiotics, patients with porphyria		
Main side-effects:	Gastrointestinal disturbances mostly at higher doses: diarrhoea, nausea, vomiting, abdominal discomfort, candida overgrowth (thrush). Helps to take with meals, consider Interflora and plain yoghurt – helps to restore normal gut flora. Skin rashes may rarely occur.		
Dosage:	500mg once daily for three days.	Route:	Oral
Other notes:	It is often difficult, even for doctors, to decide when to commence antibiotics. Antibiotics do not work for viral infections such as uncomplicated sinusitis, colds and 'flu'. Patients requiring antibiotics will usually present with severe discomfort, pain, redness and swelling (if soft tissues), will have a fever. Chest infection (pneumonia) will usually present with severe 'fruity' cough, pain on coughing, and generalised pain in the chest. Productive cough will usually produce yellow or green sputum, indicating bacterial infection. Check temperature with a thermometer 4 hourly, and check pulse rate. If pulse rate above 100/min and/or if temperature rises above 38°C then consider antibiotic administration. If in doubt and the patient appears very unwell, rather start the antibiotic. This advice applies to all antibiotic administration. The advantage of Azithromycin as a broad-spectrum antibiotic is the ease of administration – only one tablet per day for three days. Not necessary to carry if nobody in your crew is allergic to penicillin. Advisable to carry at least 6 days (two 'courses') supply.		
Warnings:	All antibiotics have the potential to inactivate the oral contraceptive pill. Use barrier methods if taking antibiotics.		
Important:	Only necessary if you have crew who are penicillin-allergic.		

Category:	Antibiotic (Anaerobic and amoebic infections)
Generic name:	<b>Metronidazole</b>



Trade names:	Flagyl, Acuzole, Betametrazole, Metazol, Trichazole		
Schedule:	4	Doctor's prescription required:	Yes
Indications:	Anaerobic infections, usually found in the mouth – gum and tooth infections (usually foul-smelling, faeculent odour). Also amoebic dysentery (not easy to diagnose) and some gynaecological and sexually transmitted infections (Trichomoniasis, Chlamydia).		
Contra-indications	None specific.		
Main side-effects:	Gastrointestinal disturbances mostly at higher doses: diarrhoea, nausea, vomiting, abdominal discomfort, candida overgrowth (thrush). Helps to take with meals, consider Interflora and plain yoghurt – helps to restore normal gut flora.		
Dosage:	For severe oral infections, 800mg three times per day for 2 days, then 400mg three times per day for three days.	Route:	Oral
Other notes:	Advisable to carry 5 days' supply.		
Warnings:	<b>Do not take alcohol at the same time!!</b> There may be serious, potentially life-threatening complications that could develop. All antibiotics have the potential to inactivate the oral contraceptive pill. Use barrier methods if taking antibiotics.		

Category:	Antibiotic (ophthalmological) eye ointment		
Generic name:	<b>Chloramphenicol</b>		
Trade names:	Chloromycetin, Chloramex, Chlorcol, Chlornicol, Chlorphen.		
Schedule:	4	Doctor's prescription required:	Yes
Indications:	Eye infections.		
Contra-indications	Known allergy to chloramphenicol (very rare).		
Main side-effects:	Nil specific.		
Dosage:	Ointment: three times per day for two to three days, until symptoms resolve.	Route:	Conjunctival – applied topically directly to the eye.
Other notes:	<p>Tip on applying topical ointments to the eye: pull the lower lid down by applying traction to the skin just below the lower lid. Place a line of ointment along the inside of the lower lid. On releasing the lower lid, simultaneously lift the upper lid (with a gentle pinch) and 'drop' the upper lid over the line of ointment on the lower lid. By applying the ointment on the inside of the lower lid, it prevents the discomfort and reflex blinking associated with trying to apply ointment onto the eye surface (conjunctiva) itself.</p> <p>The disadvantage of eye ointment (as opposed to drops) are that eye drops are more comfortable than the ointment, as the ointment tends to make the affected eye very "gooey", and the lids and lashes stick together. The disadvantage of the drops are that they need to be administered far more regularly.</p> <p>Please see below for antibiotic eye drops (Tobramycin).</p> <p>It may be a consideration to place an eye patch on the eye if the ointment is used.</p> <p>Chloramphenicol ointment may also be used on infected soft tissue wounds.</p> <p>Chloramphenicol eye drops have been discontinued. The ointment is very cheap, although uncomfortable and inconvenient as treatment.</p> <p>See below – Tobramycin eye drops are expensive, and so for the sake of having a topical eye antibiotic in your medical kit, the eye ointment may be a very worthwhile compromise.</p>		
Warnings:	None.		

Category:	Antibiotic (ophthalmological) eye drops		
Generic name:	<b>Tobramycin</b> (aminoglycoside antibiotic)		
Trade names:	Tobrex – without dexamethasone (steroid/cortisone) added. Tobradex – with dexamethasone (steroid/cortisone) added.		
Schedule:	4	Doctor's prescription required:	Yes
Indications:	Eye infections.		
Contra- indications	Tobrex – previous hypersensitivity to aminoglycoside antibiotics. Tobradex – as above, and any suspicion of Herpes Simplex eye infection or fungal eye infection (see below).		
Main side-effects:	May sting slightly on instillation into the eye.		
Dosage:	Drops: one to drops into the affected eye every four to six hours for two to three days, until symptoms resolve.	Route:	Conjunctival – applied topically directly to the eye.
Other notes:	<p>Tip on applying drops to the eye: angle head backwards, look upwards, pull the lower lid down by applying traction to the skin just below the lower lid. Place drops just onto inside of lower lid. By applying the drops on the inside of the lower lid, it prevents the discomfort and reflex blinking associated with trying to apply the drops onto the eye surface (conjunctiva) itself.</p> <p>The advantage of the drops is that they are more comfortable than ointment, as ointment tends to make the affected eye very “gooey”, and the lids and lashes stick together. The disadvantage of the drops is that they need to be administered far more regularly.</p> <p>It may be a safer option to purchase the Tobrex rather than Tobradex eye ointment, for the reasons indicated below under “Warnings”.</p>		
Warnings:	Be careful of applying any steroid (cortisone) to the eye if there is a suspicion of Herpes Simplex – as the dexamethasone will cause the cornea to perforate and scar, resulting in blindness. It is, for practical purposes, impossible to tell the difference between viral and bacterial eye infections. Herpes Simplex is the same virus that causes fever blisters or cold sores (same thing). Therefore, if a patient has a history of, or a fever blister/cold sore on the lips, and/or a sore on the nose, then avoid using Tobradex. Similarly, if the patient has a history of fungal eye infections, avoid using Tobradex. It is safe to use Tobrex (without dexamethasone) under both above circumstances.		

**Analgesics (pain-killers):**

Category:	Analgesics (pain-killers)		
Generic name:	<b>Paracetamol</b>		
Trade names:	Panado, Tylenol, Dolorol, Calpol, Prolief, Varipan, Painamol, Napamol, Painblok, Empaped, Perfalgen.		
Schedule:	1	Doctor's prescription required:	No
Indications:	Mild to moderate pain, also antipyretic (brings fever down)		
Contra-indications:	Severe liver or kidney disease. Use with caution in patients with high alcohol intake.		
Main side-effects:	Almost none with short-term usage at normal doses.		
Dosage:	1000mg (two tablets) very 4 to 6 hours with a maximum of 4g (8 tablets) in 24 hours.	Route:	Oral
Other notes:	Paracetamol is usually the first 'limb' of multi-modal analgesia. The other two limbs comprise non-steroidal anti-inflammatory drugs (NSAIDs), such as Voltaren, Brufen, Disprin and Indocid – see further. The last limb is opioid-based analgesia, such as morphine and its derivatives. Analgesic administration is escalated in a stepwise manner according to need. It is generally safe to use all three concomitantly, as long as the need exists. Entirely non-sedating.		
Warnings:	Very safe drug but potentially lethal if taken in overdose (more than 10g (or 20 tablets) taken at the same time. Be very careful of overdose!!		

Category:	Analgesics – Non-steroidal anti-inflammatory drugs (NSAIDs)		
Generic name:	<b>Ibuprofen</b>	<b>Diclofenac</b>	<b>Aspirin</b>
Trade names:	Ibuprofen = Brufen, Nurofen, Betagesic, Iboflam, Ibunate, Betagesic, Lenafen, Betaprofen, Inza, Ibugesic, Ranfen, Pedeia.		
	Diclofenac = Voltaren, Catafast, Cataflam, DicloHexal, Fortfen, Panamor, Veltex.		
	Aspirin = Disprin.		
Schedule:	2	Doctor's prescription required:	No
Indications:	Moderate to severe pain and inflammation (musculo-skeletal injuries with pain and swelling), amongst others.		



Contra-indications	Severe kidney or liver disease, peptic (stomach) ulceration, caution in high blood pressure, avoid if patient dehydrated, avoid in asthmatics. Aspirin not to be given to children under 10 years old.		
Main side-effects:	See contra-indications and warnings. Entirely non-sedating.		
Dosage:	Ibuprofen: 400mg three times per day Diclofenac: 25 to 50mg three times per day. Aspirin: 300 to 600mg six hourly. (Aspirin supplied in 300mg or 500mg tablets).	Route:	Oral
Other notes:	Non-steroidal anti-inflammatory drugs are a 'family' of drugs that all share the same mode of action, and therefore indications, contra-indications, and side-effects, although their dosages differ. You do not need to carry more than one type, as this results in needless duplication. There are a vast range of NSAIDs on the market, of which I have focused on three most commonly known ones. The common ones are Ibuprofen (Brufen), Diclofenac (Voltaren), Indocid (Indomethacin) and Aspirin (Disprin). I will focus on Ibuprofen and Aspirin, but you are welcome to carry one or more of the others. It is a good idea to use paracetamol in conjunction with these drugs. It is a GOOD idea to administer 150 to 300mg aspirin to someone who you suspect may be suffering from a heart attack. Aspirin has an anti-platelet effect which helps to break down the offending clot in the coronary (heart) arteries. Stomach ulcers can present similarly to heart attack (the stomach sits just under the diaphragm, very close to the heart, and so the pain can be confused. Giving aspirin to someone with stomach ulcers or gastric inflammation is a BAD idea. High dose aspirin (1000mg) is effective at breaking migraine if taken early during migraine onset. Include Ergotamine (Migril) in your medical kit if known migraine sufferers are included in the crew – Ergotamine is not covered here.		
Warnings:	Never administer more than one NSAID. Do not administer to patients taking steroid-based drugs. See contra-indications above – asthma, gastric ulcers or inflammation and kidney disease most important. Take with meals preferably – to reduce gastric irritation. Alcohol increases gastric irritation if consumed with NSAIDs.		

Category:	Analgesics - opioids		
Generic name:	<b>Tramadol</b>		
Trade names:	Tramal, Dolatram, Doladol, Nobligan, TramaHexal, Tramaspen, Tramgesic		
Schedule:	5	Doctor's prescription required:	Yes
Indications:	Moderate to moderately severe pain.		



Contra- indications	Caution in liver and kidney disease, respiratory disease.		
Main side- effects:	Respiratory depression (in overdose), increased incidence of nausea and vomiting (treat with anti-emetic), constipation (treat with laxative). Drowsiness exacerbated by alcohol. Beware sleepiness on night watches.		
Dosage:	50 to 100mg every 4 to 6 hours as required. (Supplied as 50mg tablets)	Route:	Oral
Other notes:	<p>Synthetic opioid “morphine-like” drug, with very low risk of dependence or addiction. Third limb in the multi-modal analgesia armamentarium, used in conjunction with paracetamol and NSAIDs.</p> <p>Also supplied as Tramacet = 37.5mg tramadol plus paracetamol 325mg, dosed at two tablets 6 hourly as required. I prefer to co-administer paracetamol and tramadol as separate medications, rather than using combination drugs, as dosage is better optimised.</p>		
Warnings:	See contra-indications and side-effects.		





Category:	Analgesics – combination therapy		
Generic name:	<b>Ibuprofen 200mg + Codeine phosphate 10mg + Paracetamol 250mg</b>		
Trade names:	Myprodol, Dentopayne Forte, Gen-Payne, Ibupain Forte, Mybulen		
Schedule:	3	Doctor's prescription required:	Yes
Indications:	As for NSAIDs, opioids and paracetamol.		
Contra-indications:	As for NSAIDs, opioids and paracetamol. Not advised in children under the age of 12 years.		
Main side-effects:	As for NSAIDs, opioids and paracetamol.		
Dosage:	One to two capsules four hourly and not more than twelve capsules per twenty four hours.	Route:	Oral
Other notes:	Combination (poly-component) therapy is convenient, but more expensive. Additionally, if one notes the individual dosages of the active ingredients, they are considerably below the optimal dosage. The manufacturer results on synergism – where the cumulative effect of each active ingredient adds up to more than the sum total of each individual ingredient. In other words, $2 + 2 = 6$ (and not 4). This is an inexact science and leads to under-dosing. I much prefer using individual agents in order to administer multi-modal analgesia.		
Warnings:	Codeine is an opioid (precursor of morphine, broken down to morphine in the liver), and is very constipating. Can also lead to respiratory depression in overdose.		

**Anti-emetics (anti-nausea agents):**

Category:	Anti-emetics (anti-nausea agents)		
Generic name:	<b>Cyclizine</b>		
Trade names:	Valoid, Aculoid, Nauzine, Medazine, Triazine		
Schedule:	2	Doctor's prescription required:	No
Indications:	Prevention and treatment of motion sickness and nausea and vomiting from other causes		
Contra-indications	Glaucoma (high intra-ocular pressure), urinary retention (any cause), asthma, other causes of shortness of breath.		
Main side-effects:	Dry mouth, blurred vision, drowsiness, urinary retention (enlarged prostate), constipation, low blood pressure. Drowsiness exacerbated by alcohol. Beware sleepiness on night watches.		
Dosage:	Oral: 50mg three times daily. Rectal: 100mg three times daily.	Route:	Oral or rectal (suppositories)
Other notes:	The rectal route of administration (for all drugs) is erratic and unpredictable, and hence the higher dose. If someone is vomiting constantly, they may not be able to keep tablets down (administered via the oral route) long enough for the medication to take effect. This is the rationale for rectal administration. I would advise that you keep both tablets and suppositories in stock. In very hot weather, suppositories may melt, and may therefore need to be kept in the fridge. You may need some sort of lubricant in order to insert suppositories (petroleum jelly or water based lubricant such as K-Y jelly). Ordinary soap can also be used. Bear in mind that phenytoin may be a far better agent for motion sickness (see elsewhere).		
Warnings:	None specific.		

Category:	Anti-emetics (anti-nausea agents)		
Generic name:	<b>Metoclopramide</b>		
Trade names:	Maxalon, Clopamon, Betaclopramide		
Schedule:	4	Doctor's prescription required:	Yes
		Route:	Oral
<b>Warning:</b>	This drug is only mentioned here because it is so commonly used, and therefore found in many household medicine cabinets. It is <b>not</b> effective against motion sickness, and can produce a severe side-effect in children called an 'Acute Dystonic Reaction', which reverses naturally over time, but is extremely distressing when they occur (and may require a specific antidote. This drug is therefore <b>not recommended</b> for sea-going crews.		

Category:	Anti-emetics (anti-nausea agents)	Antihistamine (anti-allergy agents)
Generic name:	Prochlorperazine (Stemetil)	Promethazine (Phenergan)
Trade names:	<b>Prochlorperazine:</b> <b>Promethazine: Phenergan, Lenazine, Prohist, Receptozine</b>	
Schedule:	5	Doctor's prescription required: Yes
Indications:	Prochlorperazine: Anti-emetic with cross-reactivity for anti-allergy (antihistamine). Promethazine: Severe allergic reactions with cross-reactivity for anti-nausea.	
Contra-indications	Caution in epilepsy, asthma, glaucoma, urinary retention (enlarged prostate).	
Main side-effects:	Drowsiness, dizziness, inco-ordination, nausea, vomiting, dry mouth, blurred vision, urinary retention. Drowsiness exacerbated by alcohol. Beware sleepiness on night watches.	
Dosage:	Prochlorperazine: Initially 20mg for nausea, followed by 5 to 10 mg three to four times per day. Promethazine: 10mg three times daily.	Route: Oral
Other notes:	These drugs fall into a family called phenothiazines and thus share their modus operandi, and therefore the cross-reactivity seen. Either one can be used for either nausea or antihistamine effects. It is better to choose one ant-nausea agent rather than carry a couple. The same can be said for antihistamines – it may be better to carry chlorphenamine (Allergex), as Allergex and Valoid can be purchased over the counter without a doctor's prescription.	
Warnings:	Severe drowsiness may occur. Caution in epilepsy.	
Important:	It is not necessary to carry both Prochlorperazine and Promethazine, and may not be necessary to carry either if you carry Cyclizine.	



Category:	Anti-emetics for motion sickness (“off-label” use)		
Generic name:	<b>Phenytoin</b>		
Trade names:	Epanutin		
Schedule:	3	Doctor’s prescription required:	Yes
Indications:	Anticonvulsant (anti-epilepsy); “off-label” use for prevention of motion (sea) sickness.		
Contra-indications	Heart conditions, porphyria, impaired liver or kidney function.		
Main side-effects:	Side-effects are related to dose. At the dosage suggested for the prevention of motion sickness (very much lower than that prescribed in epilepsy), side-effects are almost non-existent. The most common side-effects are (usually experienced at dosages 3 to 4 times that prescribed for sea sickness): nausea, vomiting, confusion, headache, dizziness, tremor, drowsiness.		
Dosage:	100mg once daily is usually sufficient, to a maximum of 100mg twice daily (or every 12 hours). For those with a known history of sea sickness, start taking 100mg twice daily for 24 hours before the start of the voyage, continuing into the first 24 hours of the voyage, then revert to once-daily dosing for a further day, then stop taking the medication if conditions allow.	Route:	Oral
Other notes:	The phenothiazine derivatives, which include the vast majority (if not all) the over-the-counter anti-nausea preparations, and which also include the antihistamines, are associated with significant drowsiness, and are not a very effective treatment for motion sickness. Phenytoin tends to work far better, and has a much lower side-effect profile (with almost no side-effects at the low dosage prescribed)		
Warnings:	None.		



**Antihistamines (anti-allergy agents):**

Category:	Antihistamines (anti-allergy agents):		
Generic name:	<b>Chlorphenamine</b>		
Trade names:	Allergex, Rhineton		
Schedule:	2	Doctor's prescription required:	No
Indications:	Allergic reactions.		
Contra-indications:	As for Promethazine (Phenergan).		
Main side-effects:	Less sedating than promethazine (Phenergan), but may still cause significant drowsiness. Beware sleepiness on night watches. Non-sedating antihistamines may be a better option. See below.		
Dosage:	4mg three to four times per day	Route:	Oral
Other notes:	For those with chronic allergies, such as hayfever, individual crew members would be better advised to carry their own supply of non-sedating antihistamines such as Loratidine or Cetirizine (generic names). Antihistamine cream is important to carry for insect bites, etc. See elsewhere – Mepyramine Maleate (Anthisan) or equivalent.		
Warnings:	Drowsiness, exacerbated by alcohol intake.		

**Non-sedating antihistamines:**

There are a variety of non-sedating antihistamines on the market, used for chronic allergy (hayfever/allergic rhinitis), not covered here. Consult with your doctor or pharmacist before embarking upon a voyage to ensure an adequate supply of an appropriate non-sedating antihistamine.

**Gastro-intestinal agents:**

Category:	Gastro-intestinal		
Generic name:	<b>Loperamide</b>		
Trade names:	Immodium, Betaperamide, Melts, Gastron, Norimode, Prodiium, Lopedium, Loperastat.		
Schedule:	2	Doctor's prescription required:	No
Indications:	Acute and chronic diarrhoea.		
Contra-indications	Inflammatory bowel disease (Crohn's disease and Ulcerative Colitis), diarrhoea of infective origin, pseudomembranous colitis (associated with certain antibiotic usage). Avoid in bloody diarrhoea.		
Main side-effects:	Can cause sedation, exacerbated by alcohol usage, but normal doses generally well tolerated.		
Dosage:	Supplied as 2mg tablets in blister packs of 6.  Take 4mg initially (two tablets), followed by 2mg (one tablet) after each loose stool, to a maximum of 16mg per 24 hours.	Route:	Oral
Other notes:	Fluid and electrolyte replacement are important. Ensure dehydration does not occur. Loperamide essentially paralyses the colon, "masking" or hiding the diarrhoea, as the fluids pool in the colon and are not excreted. So, whilst large volumes of fluids may pool in the colon, the rest of the body becomes paradoxically dehydrated. This is especially so in small children. It is better to avoid loperamide in small children for the reasons explained. Consider rehydration with products such as Rehydrat.		
Warnings:	See 'other notes' above.		

**Diarrhoeal disease and antibiotics:**

Antibiotics are usually unnecessary in the management of acute diarrhoea, as the condition is often self-limiting and of viral aetiology (in which case antibiotics won't be effective, as antibiotics are only effective for bacterial infections).

Antibiotics may aggravate diarrhoea by affecting normal gut flora – antibiotics inadvertently kill off the "good" bacteria in our gastrointestinal tracts, thereby causing an 'upset' in the balance of normal gut flora, which may cause or exacerbate diarrhoea in its own right.

Bacterial dysentery (bloody diarrhoea) may well require antibiotic therapy, but this is best guided by a doctor and laboratory analysis of stool samples if at all possible.

Antibiotics such as ciprofloxacin and ofloxacin may be best, and poorly-absorbed antibiotics such as neomycin and kanamycin (Kantrexil) should best be avoided.

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Category:	Gastro-intestinal		
Generic name:	<b>Hyoscine butylbromide</b>		
Trade names:	Buscopan, Hyospasmol, Scopex.		
Schedule:	2	Doctor's prescription required:	No
Indications:	Gastro-intestinal cramps as seen in Irritable Bowel Syndrome (IBS) or other, requiring an antispasmodic agent.		
Contra-indications	Glaucoma, Porphyria, gastro-intestinal obstruction.		
Main side-effects:	Rare at normal doses. Dry mouth, visual disturbances, drowsiness, fatigue.		
Dosage:	Supplied as 10mg tablets. Take 10 to 20mg 3 to 4 times daily as required.	Route:	Oral
Other notes:	If abdominal cramps severe, and hyoscine butylbromide appears not to be working, consider taking loperamide instead – a more potent antispasmodic (actually a paralytic agent).		
Warnings:	None specific.		





Category:	Gastro-intestinal (stimulant laxatives)		
Generic name:	<b>Bisacodyl</b> ↓	<b>Senna glycosides</b> ↓	
Trade names:	Bisacodyl = Dulcolax	Senokot, Depuran, Soflax	
Schedule:	None	Doctor's prescription required:	No
Indications:	Constipation		
Contra-indications:	Intestinal obstruction, undiagnosed abdominal pain.		
Main side-effects:	Abdominal cramps. Long-term use or overdosage may result in dehydration and/or electrolyte disturbances.		
Dosage:	Depuran: 1 to 2 tablets daily; may increase to three. Senokot: 2 to 4 tablets daily. Soflax: 1 to 2 tablets taken once daily. Dulcolax: Oral: 5 to 20mg as a single dose (1 to 4 tablets); Rectal: 10mg usually adequate, but can take 20mg if required [Supplied as 5mg tablets and 5mg suppositories].	Route:	Oral Rectal
Other notes:	Ensure adequate hydration – constipation on the open seas may often be due to inadequate fluid intake. Also ensure sufficient roughage in diet – aids regular bowel activity. Choose either one of the two agents – carrying both are unnecessary.		
Warnings:	Preferably avoid in children. Avoid senna in lactating mothers (excreted in breast milk).		

#### Other gastro-intestinal agents:

**Antacids** – proprietary medications such as Gaviscon tablets or liquids.

If members of your crew are prone to acid reflux, consider including an agent that reduces acid secretion such as an H<sub>2</sub>-receptor blocker such as Cimetidine or equivalent (Hexamet, Lenamet), or Ranitidine (Zantac, Austac, Hitak).

Or consider a proton-pump inhibitor (PPI) such as Lansoprazole (Lanzor, Lancap, Lansoloc) or Esomeprazole (Nexiam, Nexmezol).

The PPIs prevent gastric acid secretion, obviating the need for antacid medication.

These drugs are Schedule 2 for short-term use and available over the counter, and are Schedule 3 for long-term use (requiring a doctor's prescription).

**Rehydration solution** sachets – Rehydrat or equivalent:

It is always a good idea to have these on board, as persistent nausea, vomiting and/or diarrhoea may result in dehydration and electrolyte disturbances. These sachets, once mixed with water, will help to rehydrate and restore electrolyte balance.

**Respiratory – Asthma – Breathing Difficulty**

Category:	Respiratory – Asthma – Breathing Difficulty		
Generic name:	<b>Salbutamol aerosol metered-dose inhaler</b>		
Trade names:	Ventolin, Astavent, Venteze		
Schedule:	2	Doctor's prescription required:	No
Indications:	Bronchospasm – as in asthma attack or bronchospasm (breathing difficulty) associated with severe allergy (for example, to peanuts)		
Contra-indications:	Caution in patients with heart disease, uncontrolled high blood pressure, hyperthyroidism (over-active thyroid gland).		
Main side-effects:	Dose-related, usually at high doses only. Tremor, anxiety, headache, high heart rate with palpitations, nausea and vomiting.		
Dosage:	100 to 200mcg (one to two puffs) three to four times per day, as required. Higher or more frequent doses may be required with a severe attack.	Route:	Inhaled
Other notes:	Inhalation technique is very important. Patient must exhale fully, then while in the process of inhaling, the pump must be activated in order to squirt the aerosolised medication into the airways, whilst the patient continues to inhale, delivering the medication to the deepest parts of the lungs.		
Warnings:	None specific, if administered for the correct reasons.		

**Viral upper respiratory tract infections (colds and flu):**

It is best to treat the common cold with a combination of a normal or no-sedating antihistamine (which helps dry secretions), paracetamol (helps to reduce fever), a non-steroidal anti-inflammatory drug (NSAID) such as Ibuprofen (which helps to reduce generalised inflammation), and a systemic decongestant such as Sudafed. Nasal sprays such as oxymetazoline or xylometazoline (Drixine, Iliadin, Nasene, Otrivin, etc.) help to reduce the discomfort associated with nasal stuffiness.

Warning:

Bear in mind that the active ingredient in Sudafed (pseudoephedrine) is a stimulant which can result in anxiety, agitation, loss of sleep, high blood pressure and high pulse rate. The nasal sprays have similar stimulant active ingredients, which could be absorbed by the body (systemically) and could manifest similar side-effects. Avoid these drugs in patients with heart disease and uncontrolled high blood pressure.

**Other topical agents (dermatologicals – for use on skin):**

**Antihistamine cream** – Mepyramine Maleate, trade name Anthisan – for bites and stings, and allergic rashes (can be purchased over the counter).

**Quadri-derm cream:**

Contains a steroid agent to reduce inflammation, a topical antibiotic and bacterial growth inhibiting agent, and an antifungal agent ([betamethasone](#), Clioquinol, [Gentamicin](#) and Tolnaftate). It is a very good all-round general purpose cream for inflammatory skin rashes and skin irritations where the exact diagnosis (or causative agent) is in doubt. It is somewhat of a ‘shotgun therapy’, treating all possible causes at the same time, and is therefore very useful when in deep ocean or in the bush, where far away from medical advice. It is a Schedule 4 substance, and therefore requires a doctor’s prescription. It should be applied two to three times per day in the affected area, but should not be used for prolonged periods without medical consultation.

**Antifungal creams and powders:**

Yachtsmen are prone to developing fungal skin infections in the groin (Dhobi’s Itch), feet (Athlete’s Foot) and other areas, especially between skin folds. Fungi flourish in areas where it is dark and moist. Since yachtsmen live in very humid environments, and where sea and weather conditions sometimes prevent fastidious attention to personal hygiene, fungal skin infections are common. It is therefore a very good idea to use antifungal powders as prophylactic treatment for the prevention, and antifungal creams for the treatment, of fungal skin infections. There are a large variety of these which can be purchased over the counter at your local pharmacy.

**Dental:**

Temporary tooth filling kit.  
Oil of cloves (local anaesthetic for toothache) and ear buds (to dab onto affected tooth).

These tooth repair or temporary filling kits are available from Des-Chem at less than R85 per kit.



Clove oil has local anaesthetic properties, and can be dabbed onto a sore tooth with a cotton-wool ear bud, relieving toothache. Available from Dis-Chem for R45 per bottle.



#### **Ophthalmological (eyes):**

Chloramphenicol eye ointment or drops – see elsewhere (under antibiotics).  
See Tobramycin above.  
Eye drops (decongestant) Eyegene, Saphyr Bleu or equivalent.

#### **Otological (ears):**

In the case of infection of the outer ear canal, Quadriderm (see elsewhere) can be squeezed into the barrel of a clean 5ml syringe with the plunger pulled out all the way. The plunger is then re-inserted, and Quadriderm applied to the ear canal using the syringe. Do not insert the syringe too deeply.

2% acetic acid ear drops are commercially available over the counter. However in an emergency situation, you can manufacture your own 2.5% acetic acid ear drops by diluting common household vinegar (5% acetic acid) with ordinary boiled water that has cooled, mixing in a hygienically clean container. This can be administered to the affected ear three times per day with a clean 5ml syringe. It is preferable to dilute acetic acid with surgical spirits (if available), as water leaves a wet ear, and surgical spirits evaporates, leaving a dry ear. Dilute vinegar (acetic acid) with water or spirits in a ratio of 1: 1 volume for volume.

#### Warning:

Do not place any instruments in the ears, including ear buds!! This is very bad for the ears and can do harm. The only thing to ever insert in your ear is your elbow!! The ear is a self-cleaning organ and should never need to be cleaned with ear buds.

#### **Anti-malarial drugs:**

If and when voyaging into tropical or sub-tropical shores, advice should be sought from a local travel clinic as to which anti-malarials to take, as sensitivities are specific to local geography, and change over time. Get the latest advice just before departure.

The broad-spectrum antibiotic doxycycline may be used as a malarial prophylactic, but must be continued for a full 30 days after leaving a malaria area.

END