

# **THE**

# **TRAVEL DOCTOR**

# **MANUAL**

## **WARNING**

**It cannot be overstated that the main risk of self-diagnosis and self-medication is that it may lead to a failure to seek medical help until it is too late. Throughout the manual we have tried to point out as many of the warning signs of potentially life threatening conditions as possible. It must be emphasised that if any of your party appear to be seriously ill, or rapidly deteriorating, every effort to find local medical help must be made, even if it means disrupting or abandoning your itinerary. If, however, medical help is only a few days away, some of the medications we recommend for your kit may prove invaluable during this time.**

# Introduction

Even for experienced doctors it is often impossible to accurately diagnose many illnesses without laboratory investigations. Yet the reality of the situation is that most travellers will carry some sort of medication if they are heading for remote corners of the world where medical care is scarce or non-existent. However, the dangers of giving the wrong treatment can be greater than the original condition. This manual has been written specifically for the lay person with little or no prior knowledge of medicine to understand and follow.

There are three main purposes to this manual:-

1. To help you put together and use the medical kit you may need of if travelling abroad to remote areas where medical help and treatments may be difficult or impossible to come by. We have included different sections that you can use or discard depending on the composition of your medical kit and the type of activity undertaken. Carrying irrelevant medication is pointless, and so is information that you have no need of.
2. We have, wherever possible, included information to try to prevent you from becoming ill, on the basis that it is better to avoid disease than to have to attempt to cure it. In addition to the whole section on “Helpful Hints to stay Healthy” we have included snippets in each of the other chapters where relevant, so it is worth at least one member of your party reading through the whole manual before you depart in order to share these gems of wisdom with the others.
3. Illness of some sort occurs in 40% of all travellers. In the tropics this can rise to 80% for some countries. In a group of 3 or more travellers, it is therefore almost inevitable that at least one of you will develop something or other. This manual is not meant to an exhaustive handbook of all the rare tropical diseases that lurk waiting for the unwary traveller. Neither is it a comprehensive formulary of all the myriad of potential medications available. What we have attempted, from our combined experience is to select the conditions we suspect you are most likely to come across and be able to diagnose and treat yourself. Under each section there is a general introduction to help you recognise the illness and select the appropriate medication for it. There then follows a description of each individual medication and what it is used for. Some of the information is replicated each time, so that the manual can be used either as a simplified medical textbook to look up the illnesses, or as a simplified formulary to look up information on a particular medication.

**N.B. THE LIST OF REASONS NOT TO TAKE THE MEDICATION SIMPLY POINTS OUT THE COMMON OR MAJOR CONTRA-INDICATIONS AND COMPLICATIONS. IT IS ESSENTIAL THAT BEFORE USING A PARTICULAR MEDICATION YOU READ THE FULL DATA SHEET SUPPLIED WITH IT.**

# **Helpful Hints on staying Healthy**

## **Jet lag & sleep problems**

Jet lag arises from travelling to parts of the world with different time zones. Therefore travelling any distance North or South is not a problem. Only travelling East or West will take you into a different time zone. Of these, travelling West is not so bad because you either end up with a good nights sleep on the aeroplane - which means you'll arrive fresh to start the new day, or you'll end up with a long day on the aeroplane , which means you'll be more than ready for a good nights sleep at your destination.

However, travelling East means you either have a short day , in which case you are not ready to go to sleep when night comes, or a short night, so you have not had much chance to sleep.

Some people cope with this much better than others. If you suspect you may have problems - or if you have suffered before, a mild sleeping tablet , such as DIPHENHYDRAMINE can help you to nod off and make the most of whatever night time you have available. You may also need to take them for a few days if you cannot bring yourself to go to sleep at night because your body clock is still set for midday.

Jet lag usually becomes a problem when you fly to destinations with a time difference of plus or minus five hours or more.

Other times when diphenhydramine may be helpful are if you cannot sleep because of the heat, if travelling on a bus, or if it is very noisy, etc. However beware of taking them unnecessarily, or you may begin to find it difficult to sleep without them.

## **Diphenhydramine Capsules 50mg (Nytol)**

### **Reasons to take it.**

If for any good reason you are unable to sleep

### **Reasons not to take it**

If you can manage to sleep naturally without it.  
If sleepiness may cause a danger- e.g. diving, climbing, cycling.

### **How to use it**

Take one capsule 20 to 30 minutes before sleep.

# **Economy Class Syndrome**

## **Deep Vein Thrombosis (DVT)**

Much about this condition has been reported recently in the media. Sitting still for long periods of time in cramped conditions can lead to swollen ankles and occasionally venous thrombosis in the legs or even pulmonary emboli.

This of course is not unique to air travel but the cramped conditions often found in economy class seats especially on long haul flights has given rise to the name "Economy Class Syndrome".

Similar advice is appropriate for travellers by bus or train who spend many hours immobile in cramped conditions.

Dehydration can often put travellers at higher risk. The circulating air in aircraft cabins is kept dry and this can lead to passengers becoming significantly dehydrated. Consumption of alcohol before or during the flight will worsen this. Some passengers may be flying from areas that have a hot and arid climate and may be dehydrated on boarding the plane. Others may be dehydrated as a result of contracting a bout of travellers diarrhoea.

Other risk factors include; age (over 60), previous DVT, varicose veins, recent surgery or injury, pregnancy, oral contraception, hormone replacement medication, cardio-respiratory disease and other chronic illnesses including malignancy. Those persons with three or more of the above risk factors should discuss additional protective measures with their doctors.

Preventative measures include:-

- Regular stretching and mobility exercises and if possible walking around the cabin during the flight.
- Drinking sufficient fluids to keep the urine pale.
- Taking a low dose aspirin tablet (75mg) for its anti-adhesive effects on blood platelets.
- The use of graded compression stockings. These are available at most pharmacies and are marketed specifically for use during long haul flights.

## **Avoiding blocked ears on the plane**

As the aeroplane rises the pressure inside is allowed to drop a little. If you have a block in your Eustachian tube this can cause the eardrum to bulge out. To prevent this try pinching your nose and keeping your mouth shut try hard to suck in through your nose. As the plane descends, the opposite happens, so again pinch your nose and try blowing out as hard as you can against it. Sucking boiled sweets during take-off and landing may be of use.

## **Acclimatising to the heat abroad**

It hardly needs pointing out that tropical countries are usually hot! Yet it is amazing how many travellers are caught out by this. If, as is most likely, you've flown in from a temperate zone, this may well come as a shock to you, even to a degree that if you haven't planned for it you could end up with serious problems. Some simple tips will help you avoid this:-

1. Always wear a hat and make sure it covers the tops of your ears and the back of your neck. If not place a handkerchief or a cloth under it.
2. Wear a white hat and white shirts since white reflects the heat away from your body. Avoid black at all costs since this does the opposite.
3. Wear long sleeve shirts to keep the sun off- do not rely on suntan creams alone for the first few days.
4. When sunbathing gradually expose yourself to the sun for only a short time each day. When lying or sitting in the sun (e.g. on a motorbike) for any length of time, wear long trousers.
5. Drink plenty- you should keep drinking enough until you pass clear urine about every four hours. For most people this will mean 3 or 4 litres per day (7 to 9 pints), but if cycling or trekking, it can require 10 litres or more. Avoid alcohol during the day, since this has the effect of dehydrating you.
6. Avoid strenuous activity for the first few days, to give your body a chance to acclimatise.
7. Add salt to everything you can palate when eating. You may also want to add a little to your drinks.

Exhaustion, agitation, confusion, concentrated dark urine and cessation of sweating can herald the onset of HEAT STROKE. This can be life threatening. Treatment includes pushing fluids till the urine becomes clear, adding salt to drinks ( half a teaspoon per litre), avoiding going out in the sun, cooling the body down with wet wraps ( towels or sheets ) and fan if possible. If condition deteriorates despite all this, you should seek medical help.

## **Unexplained fevers**

If fever is accompanied by other symptoms, such as sore throat, earache or pain on passing urine, the cause is usually obvious. However if a high fever develops on its own, or perhaps with other generalised symptoms such as headache, tiredness and aching all over, it may be difficult to diagnose even for a doctor. Many serious illnesses such as malaria, typhoid and other such nasties can cause this. Investigations with laboratory tests are therefore required to come up with the correct diagnosis, so medical help must be sought for such cases.

## **Avoiding HIV and HEPATITIS B.**

Avoid sexual encounters with strangers - especially the local prostitutes who in some countries are very likely to be affected. You should also avoid if possible, any needles that may have been in contact with someone else's blood including tattooing, ear and body piercing, acupuncture and sharing razors. It also includes accepting blood transfusions of unknown origin, and any dentistry of dubious standard.

# Animal bites etc:-

## Mosquitoes

Apart from the obvious revulsion of a little creature sucking your blood, mosquitoes and other insects can spread many serious diseases such as Malaria, Yellow Fever, Dengue, etc. There is no guaranteed way to avoid them altogether, but the following hints will greatly decrease the number bites:-

1. Wear long sleeve shirts and long trousers, especially at dusk and dawn.
2. Spray or rub an insect repellent containing DEET on to any skin left exposed.
3. Unless you can afford the luxury of an impenetrable air-conditioned room, always sleep under a mosquito net if possible.
4. If there is no net available, light a slow burning mosquito coil in the room.
5. As a last resort, sleep under a fan, since this will decrease their chances of landing on you.

**Remember, even if you are taking anti-malarial tablets, it is still possible to contract it.**

**Ticks**- these can also spread some rather nasty diseases, so if you are trekking through long grass or scrub, wear long trousers tucked into your socks, and spray the joint with DEET repellent. At the end of each day do a visual check of legs and feet and if you are unlucky enough to find a mite burrowing into you, **do not attempt to pull it out**, rather persuade it to abandon its meal by incinerating its rear end with a hot ember. Then if you develop fever and joint pains within the next few weeks, remember to tell the doctor all about your tiny assailant.

**Bed bugs**- if these are suspected (usually by blood stained spots on the sheets), try sleeping with the light on, since they have a definite preference for taking their meals in the dark! Then the following day find yourself somewhere else to stay. A certain type of bug in South America can carry a particularly nasty disease called CHAGAS, so be extra vigilant and remember to tell your doctor when you get home if you suspect you were bitten.

**Scorpion Stings and Spider Bites**. These are rare in travellers, but far more likely to occur in the locals who farm the land. Once again if you are unlucky enough to be a victim, try to take the varmint with you, dead or alive, to the nearest medical help you can find.

**Snakebite** Despite the popular image that Hollywood is responsible for, snakes will usually do everything in their power to avoid you so snakebite amongst travellers is most rare, and very few are actually deadly poisonous. If you are unfortunate enough to prove to be the exception to this rule, seek medical help as soon as possible. Avoid the Hollywood treatment of cutting the wound open and sucking it out, since this is far more likely to do harm than good. It is better to immobilise the bitten limb with a splint. If possible take the offending creature along with you, but only if it can be safely killed without any further risk to anyone else- otherwise an accurate description will have to do as a minimum, since each type of snake has its own specific anti-venom.

## **Other animal injuries**

Any mammal that bites is a potential source of rabies. Most wild animals will do their utmost to avoid you, so if you come across one that does not run away, remember it is probably ill, possibly with rabies. If you are bitten (or even licked) wash the wound well, with antiseptics if possible, and seek medical help at the earliest possible opportunity, since the sooner you have the rabies jabs, the more chance they will be effective. If you are able to take the animal with you, so much the better, but only if there is absolutely no risk of you, or other members of your party being repeatedly bitten by it!

If you are going abroad to work with animals, or intend to stay for long periods out in the sticks where attacks are more likely, you can ask your GP to organise anti-rabies vaccination before you go.

**Freshwater ponds, lakes and streams.** This is not generally to be recommended in the tropics because of the risk of conditions like SCHISTOSOMIASIS, GUINEA WORM and HOOKWORM. If you really feel you have to take a plunge, it is probably safer to go for faster flowing streams, but then of course you still have to be wary of snakes, leeches, or even the odd alligator! Even walking around in bare feet is to be discouraged, since many types of parasites have larvae waiting in the soil to catch a lift.

**Sea Creatures.** This is usually a far safer bet than fresh water but even here there are a few creatures living on tropical shores you need to be aware of:-

1. Never walk across a coral reef without shoes, because of the risk of stepping on a stone fish which can prove fatal.
2. Avoid touching live cone shells (shaped a bit like a pine cone)- these can also give you a fatal sting!
3. Do not tease or play with anything looking like an eel - it could turn out to be a deadly sea snake.
4. If you are snorkelling or diving, do not handle or play with the Lion fish - these may look very
5. pretty, but their frills carry a nasty poison which is why they can swim slowly without fear of being eaten by other fish.
6. Jellyfish and coral stings can be greatly eased with vinegar- so save up those little sachets when you are next in a restaurant.
7. Sharks are greatly misunderstood creatures. Only a few people each year are shark attack victims. A few sensible precautions include:- do not swim alone off headlands, or far out to sea in areas where sharks are known to inhabit, avoid swimming at dusk and at night and be extra cautious in the water if you are bleeding from a cut, or if menstruating.

# Skin problems and allergies.

## Broken skin (sores and ulcers)

The warm moist skin of tropical travellers provides an ideal environment for germs of different kinds to breed. This may either occur on cuts and scratches or areas of skin exposed to rubbing, such as groins, toes and under breasts. There are two main types of germs which can affect the skin, each requiring a different treatment -

**Bacteria** - These cause redness, swelling or pus in existing scratches or grazes. They can also cause pimples to form on unbroken skin, which after a few days leak watery pus which forms a golden crust on the surface resembling a corn flake. This is called impetigo. If the infection is limited to only one spot it can be treated by applying CICATRIN POWDER. If it breaks out in two or more places it is better to give an antibiotic tablet by mouth such as ERYTHROMYCIN TABLETS.

**Fungi** - These can also cause sores to develop especially in areas kept moist by skin against skin. Such areas include between the toes (athlete's foot), in the groin (jock strap itch), or under the breasts. Another type causes ringworm (which has nothing whatsoever to do with worms). This gives dry flat itchy patch or rough skin with a slowly advancing edge. Unlike bacteria it does not cause swelling, pus or scabs. Applying CANESTEN H.C. CREAM will treat all fungal skin infections

**Other types of skin sores:** Many other conditions can cause sores on the skin. Some, such as ECZEMA or PSORIASIS usually have occurred in the patient previously, so can be easily recognised by the patient again. These conditions often, but not always, improve in tropical sunshine. Other sores can occur in longer term illnesses or rare tropical diseases, so if the skin sores are not healing after using CICATRIN POWDER or CANESTEN H.C. CREAM for a few days medical opinion should be sought.

## Unbroken skin - (rashes and weals)

Many conditions can present with rashes causing red blotches on the skin. Even for a doctor getting the right diagnosis can be difficult. Many skin rashes are caused by viruses, and are self limiting. If there is a slight temperature PARACETEMOL TABLETS may be all that is required. If the patient appears to be quite ill as well as having a rash, medical help should be sought.

Most other problems affecting the skin can be quite easily recognised and treated.-

**Allergic rashes and weals** Allergies are common amongst travellers, either due to eating new foods (especially shellfish, nuts and spices), coming into contact with new plants or being eaten by new insects! They may take the form of widespread flat red patches on the skin, itchy raised bumps (weals) or several itchy red spots around insect bites. Antihistamine tablets such as CETIRIZINE are effective for this.

If following on from an allergic rash, severe swelling of the face and neck or wheezing and tightness of the chest develop, medical help should be sought urgently in case of the rare possibility of a severe allergic reaction.

## **Abscesses & boils**

These often occur in sweaty regions of the body. Especially common is an abscess between the buttocks or in the armpits. They are recognised by a single painful swelling developing over a few days. The skin above becomes red and tender. If they are small and near the surface, they may come to a head and burst (they are then known as boils). If small these need no treatment. If they are larger and deeper, they are called abscesses. these are best treated with antibiotics like ERYTHROMYCIN TABLETS.

## **CANESTEN H.C. CREAM**

### **Reasons to use it**

This contains an anti-fungal agent (clotrimazole), along with a healing agent (hydrocortisone ). It is applied to skin affected by patches of fungal infections. These may form raw red areas where skin rubs against itself (intertrigo), or dry round itchy patches with a well defined edge on the limbs or the body (ringworm).

### **Reasons not to use it**

- If there is pus and swelling around the sore - consider antibiotics instead.
- If the sores get bigger and more widespread after using it for a few days.

## **CICATRIN POWDER**

### **Reasons to use it**

This is an antibiotic powder for treating areas of broken skin infected by bacteria. this can be recognised by surrounding redness, swelling and pus seeping through the wound causing mucky scabs.

### **Reasons not to use it**

- If the skin is not broken
- If the patient is allergic to NEOMYCIN
- If the wound is not healing after one week
- If the wound suddenly gets bigger and more irritating on using it
- If extensive or multiple areas are affected (use ERYTHROMYCIN by mouth)

### **How to use it**

- Lightly sprinkle the powder over the broken skin 3 times each day.
- If possible leave wound open to air to dry (but watch out for flies!).
- If wound is in an area likely to get rubbed or dirty, you will need to dress it.

## **Cetirizine tablets (e.g. Zirtek)**

### **Reasons to use it**

Cetirizine is an antihistamine which is of help against allergies of all kinds. These may include reactions to eating new foods or contact with new plants or insects. They may lead to various skin reactions such as itchy bumps (weals), flat red blotches or itchy red rings around insect bites. They may also cause more general symptoms such as runny nose and runny eyes (like hay fever) or itching all over, along with diarrhoea and a feeling of sickness after eating something unusual. Cetirizine tablets are helpful for any of these conditions. If, however, more severe symptoms such as wheeziness, difficulty breathing, widespread puffiness of the face, lips and throat develop, expert medical help must be sought immediately.

### **Reasons not to use it**

- It can sometimes cause drowsiness and should not be taken if the person concerned could be placed in danger e.g. driving, climbing, biking, scuba diving etc.
- It should not be taken together with erythromycin antibiotics.
- Do not take it if you are pregnant or breast feeding.

### **How to take it**

Adults (and children over 6 Years) - one tablet daily, as required.

## **Chloramphenicol eye ointment.**

### **Reasons to use it.**

This is an antibiotic effective in treating bacterial infections of the surface of the eye (conjunctivitis) or eyelids (blepharitis). These are more common in the tropics and can easily be spread around the group if towels, etc. are shared. Conjunctivitis can also be caused by a virus which usually occurs with a cold and affects both eyes or an allergy (which again affects both eyes and occurs in people prone to allergies, asthma or hay fever. Bacterial infections are distinguished by mostly being one sided (although it may spread to the other side a few days later) and cause pus or “matter” to well from the eye resulting in a nasty redness of the blood vessels in the white of the eye.

### **Reasons not to use it.**

- If you are allergic to Chloramphenicol
- If allergic conjunctivitis is suspected (on both sides equally and patient previously known to have had allergies), consider using Loratadine instead. if virus suspected (mild redness and irritation of both eyes equally in someone with a cold /cough / sore throat).
- If the eye becomes very painful (as opposed to irritating)
- If the pupil becomes misshapen compared to the other when light is shone into it.
- If the vision becomes blurred.

### **How to use it**

Squeeze a little ointment onto tip of index finger and gently place it between the lower eyelid and the eyeball, four times each day.

# Gut Problems

It is an unfortunate fact of life that many travellers suffer from some form of what is commonly described as “GUT ROT”. A bad dose of this amongst your party may not only spoil your whole day, but disrupt your whole itinerary. It is therefore useful to know and recognise what can and should be done to treat it and, even better, how to avoid it.

## Diarrhoea and Vomiting

This condition is the single most common ailment to affect travellers. Whether it be Delhi Belly in India, Kathmandu Quickstep in Nepal, Mummy Tummy in Egypt, Montezuma’s Revenge in Mexico or Safari Squirts in Africa, the symptoms are the same the world over. Although most episodes of D & V are due to infections, not all are treated in the same way. Most are self limiting and need no treatment at all. Remember, any case of diarrhoea may render oral contraceptives ineffective, so unwanted pregnancy can result.

1. **MILD CASES** - recognised by occasional diarrhoea ( 2-6 episodes of loose motions per day) with little or no vomiting, no fever, no pains, no blood in motions and feeling relatively well. **It is best not to give any medication** on the basis that you should not try to stop the body from getting rid of the unwanted germs in its own natural way. A lot of these milder cases are due to encountering new natural strains of bacteria found in other countries or even due to new foods (especially spices). If possible it’s best to let things inside you readjust naturally. Simply taking extra fluids and adding salt to your food to prevent dehydration is usually sufficient.

However, if the D & V may lead to difficult and embarrassing situations, such as a long bus journey with no toilet available, the diarrhoea can be eased by taking LOPERAMIDE and the nausea or vomiting can be eased by taking PROCHLORPERAZINE . If you are out in the sticks and find yourself having to use convenient rocks and bushes, **please make sure it’s not near a stream** to run into somebody’s drinking water and **please cover it well** after you or you may find the very germs you thought you left behind coming back to haunt you (and others) on the feet of the local flies!!

2. **SEVERE D&V** - recognised by frequent diarrhoea and / or vomiting (more than 6 times each day) or by feeling very ill with weakness, high temperature, aching all over and / or blood in the motions. This is probably due to one of the nastier bacteria. Most of these can be effectively treated by taking a course of an antibiotic called CIPROFLOXACIN.

Again, if the D & V happen at an inconvenient time, LOPERAMIDE (for the diarrhoea) and PROCHLORPERAZINE (for the vomiting) can help prevent embarrassing spills and squirts, but at other times it is best to let the body get rid of the unwanted contents as quickly as possible. If severe D & V continues for two to three days or more, the patient can become very weak and ill, and medical help must be sought . In addition to giving tablets, it is essential to replace both fluid and salts. This can best be achieved by giving ORAL REHYDRATION SOLUTION after every bout of diarrhoea or vomiting.. If you have run out of this, a fizzy drink (such as lemonade or cola) with 2 teaspoons of sugar and a pinch of salt per glassful can be a simple substitute.

**3. PROLONGED DIARRHOEA** Vomiting rarely lasts more than two or three days, but with certain infections the diarrhoea can drag on for weeks ( or even months after returning home). If this is mild, with just the occasional loose motion, it may not require any treatment other than the extra fluids to prevent dehydration. However, if there is blood in the motions, if there is a lot of wind and abdominal cramps or if there is a degree of weight loss and exhaustion it may be due to a certain type of organism called PROTOZOA ( which includes amoeba and giardia). These are best treated with a special antibiotic called METRONIDAZOLE. If it occurs after you get home, it is best to get your doctor to arrange stool tests to see exactly what “holiday souvenirs” you’ve brought home with you.

## **Preventing Tummy Bugs**

It is helpful to keep a sense of perspective about this. On the one hand, even the most paranoid traveller cannot possibly hope to avoid all the nasty bugs (unless they plan to avoid eating and drinking altogether on their trip). On the other hand, the more cavalier you are about what you eat and drink, the greater your chances of picking up a real nasty illness.

Some useful guidelines include:-

- Avoid salads and fruits unless you are confident that they have been properly cleaned.
- Eat only fruit you can peel yourself -such as bananas, oranges, etc.
- Avoid drinking tap water- unless you are convinced it is safe.
- Avoid drinking from streams, ponds, lakes, etc.
- Wherever possible, drink only bottled water and check the bottle seals to make sure they have not been refilled.
- If there is no alternative to the local water supply, carry tincture of iodine to sterilise your own water (plus some flavouring to hide the taste).
- Avoid locally made ice cream and ice cubes.
- Avoid shellfish, especially mussels and clams.
- Make sure meat and fish is fresh and has been well cooked.
- Avoid cooked foods which have been allowed to cool.

We have all been taught to wash our hands before eating with a knife and fork, but usually don’t bother before eating finger food such as crisps, fruit, cakes etc. Yet this is the time we are most likely to benefit from washing all those germs away - but make sure the water in which you wash is sterile, or you may be adding germs instead of removing them!

Despite all this advice, it is realistic to recognise that some of the tastiest and most interesting foods and drinks are those produced by street vendors in the open air . If your portion is freshly cooked for you from fresh ingredients, it probably is o.k. But at the end of the day you pay your money and take your chance along with the rest of us.

## **Loperamide Capsules 2 mg (Imodium)**

### **Reasons for using it**

Loperamide is a powerful drug for stopping diarrhoea. In most cases the best option is to let nature take its' course by allowing the diarrhoea to wash all the bugs out of you. If however this proves to be a great embarrassment( e.g. a long bus trip) then Loperamide can help by slowing the process down considerably. Be careful not to go too far the other way by taking too many, or you may end up with constipation!

### **Reasons for not using it**

- If the diarrhoea is mild, and a toilet is readily available.
- If the diarrhoea is severe, with abdominal cramps or blood mixed with it.
- If constipation, abdominal distension or pain develops on taking it.
- If allergy develops ( rashes, itching, swellings).

### **How to take it**

ADULTS - One capsule after each loose stool up to a maximum of 8 in any day  
Do not take for more than 5 days.  
Not recommended for children under 12

## **Prochlorperazine tablets 3 mg (Buccastem)**

### **Reasons for using it**

Prochlorperazine is a drug used for relieving nausea and vomiting. It has quite a lot of potential side effects, so is best reserved for cases where vomiting would cause major inconvenience (e.g. a long bus journey). In most cases, it is better to let the tummy empty itself naturally. It is also be used for the prevention and treatment of travel sickness.

### **Reasons for not using it**

- Previous history of epilepsy, heart, liver, kidney or chest problems.
- If pregnant or breast feeding.
- If odd jerking or twitching movements develop on taking it
- If marked drowsiness or agitation develops on taking it
- If allergies develop (rashes, itching, swelling, wheezing).

### **How to take it**

Buccastem has been designed to dissolve when placed between the upper lip and gum. This allows it to be quickly absorbed even if the patient is vomiting.

ADULTS - one tablet as needed, up to a maximum of five in any day.  
NOT RECOMMENDED IN CHILDREN UNDER 18 YRS

## **Oral Rehydration Solution (Dioralyte)**

### **Reasons for using it**

The solution is made by mixing a sachet of powder with a specific quantity of water to make up the solution. It replaces body fluids and salts that are lost during illness and thereby avoids dehydration which is especially important in a hot climate.

### **How to take it**

Adults: one or two sachets after every loose motion.

Children: one sachet after every loose motion.

## **Stomach & Abdominal Cramps**

Exposure to new and exotic foods may excite the palate, but it can also play havoc with your intestines. This is especially true in those already known to suffer from irritable bowel. If it causes cramps and spasms slowly moving all around the abdomen, it is worth trying DOMPERIDONE which often helps relieve the pains. If the pain becomes fixed in one spot (especially the bottom right corner of the abdomen), or if it becomes more intense, it may signify a serious condition such as appendicitis, in which case medical help must be sought urgently.

## **Domperidone tablets 10mg (Motilium)**

### **Reasons for using it**

This is an antispasmodic that can help relieve stomach griping and colic (slowly moving abdominal cramps). This occurs in travellers due to spicy foods, irregular eating habits, anxiety, or as a reaction to a tummy bug. It is also useful in treating nausea, vomiting and bloating of the stomach following a bout over eating and drinking. If Domperidone does not quickly relieve the symptoms medical help should be sought to exclude other more serious causes such as appendicitis, pancreatitis etc.

### **Reasons for not using it**

- If the pain becomes fixed in one spot and steadily worsens.
- If you are pregnant or breast feeding.

### **How to take it**

ADULTS - one tablet up to 3 times per day, as required.

# **Indigestion & Gastritis**

A burning feeling in the area between the belly button and the rib cage can be due to too much acid in the stomach. This is common in travellers, due to or unusual especially spicy foods, irregular mealtimes, and excess alcohol. This is simply and quickly treated by antacid tablets to neutralise the acid, examples are SETTLERS or ANDREWS ANTACID.

If the burning feeling continues for a few days, or gets worse despite using antacids, it may be the beginning of a stomach ulcer. In such cases it may prove necessary to take CIMETIDINE TABLETS (see below). If despite this the pain becomes severe, or if vomiting blood or passing black motions develop, medical help must be sought urgently in case it perforates.

## **Antacid Tablets**

### **Reasons for taking them**

Antacid tablets work by neutralising the acid in the stomach and are therefore helpful in treating gastritis. They can also be used for treating acid indigestion (where stomach acid refluxes into the chest where it causes heartburn).

If symptoms persist despite using antacids, you may need to give Cimetidine.

### **Reasons for not using them**

- Do not take them at the same time as other tablets (since they prevent absorption).
- If there is a history of kidney disease.

### **How to take them**

Chew one or two tablets when required up to a maximum of 8 in any day

## **Cimetidine tablets 100 mg**

### **Reasons for using it**

These tablets work by blocking the production of acid by the stomach. They are used for treating severe cases of gastritis or indigestion / heartburn where antacids alone are not effective. They are also used for the treatment of established stomach ulcers.

### **Reasons for not using it**

- Milder cases of gastritis - use antacids instead.
- If there is a history of kidney disease.
- If you are pregnant.
- If allergies develop (rashes, itching, swellings, wheeze).
- Stop if jaundice, joint pains, confusion develops.
- Seek medical advice if using other medications for asthma, epilepsy etc.

### **How to take it**

ADULTS - two tablets (2x 100 mg ) twice a day, if symptoms have not improved within a few days, seek medical advice to exclude a stomach ulcer.

## **Ciprofloxacin Tablets 250 mg (Ciproxin)**

### **Reasons for using it**

This powerful and expensive antibiotic is used to treat one of the nastier bugs which cause travellers' diarrhoea. It should not be used for milder cases, otherwise you will quickly exhaust your limited supply. Use it if very frequent diarrhoea (more than 6 times per day) is accompanied by fever, if blood is mixed in with the diarrhoea, if there are aches and pains all over, or if the patient feels very weak and ill.

It can also be used as an emergency standby for other infections such as chest infections or bladder/kidney infections where the patient appears to be seriously ill and hasn't responded to other antibiotics like amoxicillin. (don't let this delay you in seeking medical help if possible).

### **Reasons for not using it**

- For milder cases of diarrhoea and vomiting
- If patient is known to be allergic to it or develops allergy to it (rash, itching, etc.)
- If patient is dehydrated- adequate fluid intake is essential to prevent crystals forming
- If history of kidney failure or epilepsy
- If patient is pregnant
- If patient is taking anti inflammatories (e.g. ibuprofen) or alcohol
- If extreme sensitivity to sunlight develops whilst taking it
- If pain or swelling develops in tendons on taking it
- If vomiting and diarrhoea get worse on taking it
- It may make some people drowsy, so take care if driving, climbing etc.

### **How to take it**

ADULTS -two tablets (2x 250 mg) twice daily for 3 to 5 days. Not Recommended For Children

## **Metronidazole tablets 400mg (Flagyl)**

### **Reasons for taking it**

This type of antibiotic is especially helpful in treating protozoal infections (such as Amoeba and Giardia). These are suspected if travellers' diarrhoea lasts for more than 5 days. Milder cases usually need no treatment, but Metronidazole is indicated if there is blood in the motions, or if there is excessive wind and abdominal cramps, or if there is weight loss and general exhaustion. It is most helpful to have a stool specimen taken before starting the treatment if possible so that the bugs can be positively identified.

Metronidazole is also used for certain types of women's infections (see under womens problems)

### **Reasons for not taking it**

- It is essential not to partake of any alcohol whilst taking it.
- If there is a history of liver damage.
- If you are pregnant or breast feeding.
- If you have a known allergy to it or if an allergy develops on taking it.

## **How to take it**

ADULTS - two tablets (2x 400mg) three times a day for 5 days.

CHILDREN six years and over - one tablet (400mg) three times a day for 5 days

**N.B. IF METRONIDAZOLE IS USED BY WOMEN FOR VAGINAL INFECTIONS, IT CAN BE GIVEN AS A SINGLE DOSE OF FIVE TABLETS (5 X 400 MG).**

## **CONSTIPATION**

Although for most travellers loose motions are the norm, occasionally the opposite problem can occur. This may be as a result of dehydration due to the heat or having too little food rich in fibre. Recognising constipation is usually not difficult. If you feel bloated and have not opened your bowels for a few days, or if you are finding it painful or difficult to open the bowels, a dose of laxative such as BISACODYL TABLETS can save the day.

If, despite taking a laxative, the pain gets worse and worse, it may indicate intestinal obstruction, so medical help must be sought.

## **Bisacodyl Tablets 5mg (Dulcolax)**

### **Reasons for using it**

Bisacodyl is a moderately strong laxative. The only reason to take it is for constipation. This is recognised by a failure to open the bowels for a few days, abdominal bloating, or pain and difficulty on opening the bowels.

### **Reasons for not using it**

If needing to open the bowels urgently may cause embarrassment (e.g. on a long bus journey)

If abdominal pain occurs on taking it, and the bowels do not open (this may indicate an obstructed bowel - so urgent medical help must be sought).

### **How to use it**

ADULTS ONLY - two tablets at bedtime to get a result the following morning - repeat as necessary.

# PAIN RELIEF

Pain happens to all of us from time to time, whether we travel or not. Some pains, such as headaches, period pains, toothache, backache or aches in an old injury are easily recognised because they are familiar to the patient. These can be easily and safely treated with mild to moderate pain killers such as PARACETEMOL, or if bones and joints are involved, IBUPROFEN.

Other pains may occur as a direct result of travelling, e.g. headache due to jet lag, or earache due to the aeroplane flight. These can also be safely treated with PARACETEMOL.

Groups taking part in adventure activities such as trekking, biking, canoeing, climbing, etc. are going to be prone to backaches, bumps, bruises, sprains and pulled muscles. IBUPROFEN is best for these. If the pain is very severe, CO-CODAMOL can be taken in addition to, or instead of, IBUPROFEN. If the pain is confined to a particular muscle or a single joint, rubbing on a heat cream such as BALMOSA can provide good relief.

If there has been a serious injury resulting in a possible fracture, and medical help is several days away, Rofecoxib tablets can provide strong pain relief, allowing the patient to be transported to a medical centre. Again if the pain is very severe CO-CODAMOL can be taken (by mouth) in addition to the Rofecoxib tablet.

Knowing when not to give pain killers is the tricky bit, since in some circumstances they may make things worse by hiding the underlying condition, lead to a delay in seeking a medical opinion, or even sometimes make the pain worse. The following are a few examples of when NOT to give pain killers blindly:-

1. Pain occurring in a calf muscle after a long flight, bus or train journey- may be due to a clot in the veins (D.V.T.)- medical help must be sought.
2. Pains in the stomach region between the belly button and the rib cage- may be due to gastritis, or even a stomach ulcer. Such pain is made worse by Ibuprofen and Rofecoxib, and giving these can lead to a life threatening perforation of the stomach. Instead of pain killers try either ANTACID TABLETS or CIMETIDINE (see under Gut Problems).
3. Abdominal pains due to constipation will be worsened by Co-codamol since this increases the constipation. Try BISACODYL TABLETS instead. (see under Gut Problems)
4. Pains in the lower right hand corner of the abdomen may well indicate appendicitis- medical help must be sought urgently. Pain killers may have a place only if they allow the patient in severe pain to be transported to safety.
5. If headache is due to being at high altitude - it is essential to descend to a lower altitude as soon as possible to avoid acute mountain sickness.
6. Unusually severe headaches associate with a fever may be due to potentially serious illnesses such as malaria, meningitis etc. If in doubt seek medical help urgently.

## **Paracetamol tablets 500 mg**

### **Reasons to use it**

Paracetamol is a mild to moderate pain killer which can also help to lower the temperature in feverish patients. Examples of the sorts of pain it is useful for include:-

- Ordinary headaches due to stress, tiredness, jet lag etc. Earache due to flying, Toothache
- General aches, pains and fever due to viral illnesses.
- Along with an antibiotic for throat, sinus, ear, & kidney infections, abscesses etc.
- Period pains.

### **Reasons not to use it**

- previous history of allergy or if allergic reactions develop (rashes, itching, swellings, wheeze).
- previous history of liver disease- especially if due to alcohol.
- previous kidney damage.

N.B. it must not become a substitute for seeking medical help in potentially serious conditions. (see under PAIN RELIEF)

### **How to take it**

ADULTS - one or two tablets (1 or 2x 500mg) as required up to maximum of 8 per day.

CHILDREN - 13 to 16yrs - 1 tablet (500 mg) as required up to maximum 4 in any one day.  
6 to 12 yrs - half tab.(250 mg) as required up to maximum of every 6 hours.  
Under 6yrs use paracetamol suspension e.g. Calpol.

## **Co-codamol tablets**

### **Reasons to use it**

Co-codamol is a mixture of Paracetamol with a stronger pain killer called Codeine. It should therefore be reserved for moderate to stronger pains where Paracetamol has not worked. It can be taken for all the same reasons as Paracetamol but must NOT be taken at the same time as Paracetamol. It can however be taken at the same time as Ibuprofen for extra pain relief in severe aches and strains and also at the same time as Rofecoxib tablets for mobilising patients with severe injuries.

### **Reasons for not using it**

- It must not become a substitute for seeking urgent medical help.
- If known allergy to Codeine or if allergy develops on taking it (rash, itching, swelling etc.)
- If patient is already constipated, or if constipation develops on taking it.
- It must not be taken with alcohol.

### **How to take it**

ADULTS- one or two tablets as required, up to a maximum of 8 per day.

# **Ibuprofen tablets 200 mg**

## **Reasons to use it**

Ibuprofen is an anti-inflammatory pain killer. This means that in addition to relieving pain it also decreases the swelling around the painful spot. This makes it the painkiller of choice for aches, sprains, injuries and other problems affecting muscles and joints. It can be effective for period pains and headaches as an alternative to Paracetamol. In high activity sports - such as long distance trekking or biking, some people find it helpful to take before exercise to prevent the inevitable aches and stiff joints developing.

## **Reasons not to use it**

- Always take it with food or milk, never on an empty stomach.
- Avoid if history of allergy to Ibuprofen, aspirin or other anti-inflammatory.
- Avoid if previous kidney damage, liver damage or heart failure.
- Be extremely careful if history of asthma- stop if asthma appears or worsens.
- If history of stomach or duodenal ulcers.
- If the stools turn black or dark red (which may indicate bleeding from the stomach).

N.B. The main drawback with all anti-inflammatories is that they can irritate the stomach lining. It is essential that they are NOT used if there is a history of stomach or duodenal ulcers or hiatus hernia, or if there has been recent severe indigestion. Furthermore they must be stopped if pains develop in the stomach region or else they may lead to a life threatening perforation of the stomach.

## **How to use it**

ADULTS - one or two tablets (200 to 400mg) up to four times per day (max 8 tabs perday).

CHILDREN 6 to 12 yrs- one tab.(200mg ) up to four times per day.

# **Balmosa cream**

## **When to use it**

This is a pain killing cream which contains an aspirin type pain killer. When rubbed into the skin it makes the area underneath feel warm and relaxed. It is good at relieving tight muscles and aching joints due to strenuous activity or minor injuries. For more severe injuries it is probably better to give Ibuprofen or Rofecoxib.

## **When not to use it**

- If known allergy to aspirin or other anti-inflammatories.
- With caution if there is a history of stomach or duodenal ulcer.
- With caution if there is a history of asthma.
- If the skin has been broken (cuts and grazes).

## **How to use it**

Squirt a blob onto the painful area and rub it in well.

## **Rofecoxib 50 mg (Vioxx Acute)**

### **Reasons to use it**

Rofecoxib is an anti-inflammatory pain killer similar to Ibuprofen. However, it is somewhat stronger than ibuprofen in its pain killing effect and should be kept in reserve for cases of very severe pain such as accidents where fractured bones are suspected and the patient needs to be transported to medical care.

### **Reasons not to use it**

- If patient has history of stomach or duodenal ulcers, or hiatus hernia
- If there is known allergy to rofecoxib, aspirin, or other anti-inflammatories
- If there is a history of kidney or liver problems or heart failure
- If there is a history of anti-inflammatory induced asthma
- If you are pregnant or breast feeding

### **How to use it**

**ADULTS ONLY** – Take one 50mg tablet every 24 hours during the acute symptomatic period only.

## **AN ALTERNATIVE OPTION**

If you don't like the idea of using a non steroidal anti-inflammatory for pain relief, strong pain killers such as DIHYDROCODEINE are an effective alternative. However the supply of these tablets is strictly controlled due to possible abuse, so you will need to discuss this with your own doctor.

## **Dihydrocodeine Tablets 30mg**

### **Reasons to take it**

These are very powerful painkillers and should therefore only be used for severe pain relief.

### **Reasons not to take it**

They should not be taken by anyone with low blood pressure or asthma and they should definitely be avoided at high altitude. The main side effects are respiratory depression and constipation.

### **How to take it**

**ADULTS:** Take one tablet every four to six hours up to a maximum of six in 24 hours.  
**CHILDREN:** Not recommended

# **INFECTIONS**

## **when or not to give antibiotics**

Antibiotics are specifically designed to kill bacteria. However not all infections are due to bacteria. Other common organisms invading the human body include viruses and fungal infections. Antibiotics are of no use against these. Even doctors in all their wisdom have a hard time deciding with some types of infections whether it is bacterial, fungal or viral. With some infections such as those in the throat or of the vagina, it can prove almost impossible to be certain without swabs and microscopes, however there are some pointers to help you decide whether to give an antibiotic, and which ones to choose.

**PLEASE NOTE: Women who take oral contraceptives should always use alternative methods of contraception while taking antibiotics.**

### **Throat infections**

These are common amongst travellers because of exposure to new strains. Bacterial throat infections usually cause tonsillitis. This typically causes mucky white patches of pus to develop on the tonsils, along with a high temperature and furring of the tongue. This is best treated with ERYTHROMYCIN.

Viral throat infections are more common by far. They cause a raw dry red throat without pus on the tonsils, and are often followed by a runny nose or a throaty cough. They are best treated by PARACETEMOL, steam inhalation (with a local aromatic oil if desired) and hot fruit drinks. Antibiotics are of no help in viral infections, and the potential side effects may well make the patient worse.

Although viral infections do not require antibiotics, they may be complicated by secondary bacterial infections which require treating. These include :-

### **Sinus infections**

These cause pain and fullness over the forehead, cheeks and upper nose. They are best treated with either AMOXYCILLIN or ERYTHROMYCIN.

### **Ear infections**

These cause earache as the eardrum is stretched, followed by a smelly discharge when it bursts. It is best treated by AMOXYCILLIN.

### **Chest infections**

These are recognised by a tight feeling on breathing and thick green or yellow catarrh coming up off the chest. It is best treated by AMOXYCILLIN or ERYTHROMYCIN. N.B. if these symptoms are accompanied by a high fever, rapid breathing, and/or pain on breathing, they may suggest a developing pneumonia, so medical help must be sought.

## **Bladder infections (cystitis)**

Characterised by increased frequency and pain on passing urine. Best treated by TRIMETHOPRIM (or AMOXYCILLIN) for three days

## **Kidney infections**

These also cause increased frequency and pain on passing urine, but in addition they cause pain in either side of the middle back, possibly along with high fevers cold chills and nausea. This requires TRIMETHOPRIM (or AMOXYCILLIN) for seven days.

## **Dental infections**

These appear as infections around the teeth and gums, or they may cause an abscess causing pain and swelling in the upper or lower jaw. They are best treated with ERYTHROMYCIN or AMOXYCILLIN. If it does not settle on your return home, see a dentist.

## **Skin infections**

See section on skin

## **Travellers diarrhoea**

See section on gut problems

## **Vaginal infections**

See section on women's problems

## **Sexually transmitted diseases**

The best possible advice is to avoid them in the first place by avoiding casual sexual encounters. If such infection is suspected, specialist medical help must be sought to avoid long term consequences.

# **Amoxycillin capsules 250 mg**

## **Reasons for using it**

This is a penicillin based broad spectrum antibiotic which is useful against many, but not all, types of bacterial infection including Sinus infections, Ear infections, Chest infections and Kidney or Bladder infections (but due to bacterial resistance it is second choice to Trimethoprim for these). N.B. IT IS SAFE TO USE IN PREGNANCY.

## **Reasons for not using it**

- if infection is probably viral (see under Throat Infections )
- if patient is known to be allergic to Penicillin
- if allergy develops on taking it (rashes, itching, swellings, wheeze)

## **How to take it**

ADULTS - one capsule (250 mg) three times/day for 5 days

IF SEVERE infection double to 2 caps (500mg) three times/day for 7 days

CHILDREN 10 to 15 yrs - one caps. (250 mg) three times/day for 5 to 7 days

## **Erythromycin tablets 250 mg**

### **Reasons for using it**

This is an antibiotic which is active against a wide spectrum of different bacteria. Because of its' tendency to cause stomach upsets it is usually reserved as a second choice to Amoxicillin, except in patients who are allergic to Penicillin, in which case it becomes first choice. Such conditions include sinus infections, ear infections and chest infections. It also becomes first choice if Amoxicillin is ineffective, or contraindicated. Such conditions include:-

- Tonsillitis (see under throat infections)
- Skin infections (see under skin)
- Abscesses (see under skin)

### **Reasons not to use it**

If the patient is known to be allergic to it.

If an allergy develops on using it (rash, swellings, wheeze).

If taking antihistamines for hay fever or allergies.

N.B. Erythromycin often causes sick feelings, stomach discomfort and diarrhoea. If these symptoms become severe it may have to be stopped

### **How to take it**

ADULTS - one tablet (250 mg ) four times /day for 5 to 7 days  
double dose to 2 tabs (500 mg) four times/day in severe infections

CHILDREN 8 to 15 yrs - one tab (250 mg) four times / day

## **Trimethoprim tablets 200mg**

### **Reasons for using it**

This is a more specialised antibiotic which is first choice for infections of the bladder ( 3 day course ) and kidneys ( 7 day course). It can also be used as a third choice medicine (after Amoxicillin and Erythromycin) for infections of the ears, sinuses and chest.

### **Reasons for not using it**

If the patient is known to be allergic to it.

If an allergy develops when using it (rash, swellings, itching, wheezing).

It must be avoided if the patient is pregnant.

Avoid if history of kidney damage.

### **How to take it**

ADULTS - one tablet (200 mg) twice daily for 3 to 7 days.

# **WOMENS' PROBLEMS**

## **Vaginal infections**

These are more common in travellers, probably because of poorer sanitary conditions combined with long periods of providing a nice hot sweaty greenhouse environment which allow your personal germs to travel and breed as if they were on holiday also!

They are also of course far more likely in those who share intimate contact with not-so-intimate partners, in which case the only sensible advice is to seek the help of a doctor or clinic with special experience of venereal diseases, since these days all sorts of nasties have to be excluded. Perhaps the best advice is not to allow yourself to get into this situation in the first place.

For those vaginal infections which have happened without any obvious sexually transmitted disease, there are three sorts of germs which can do this, each requiring different treatments. Although it is impossible even for a doctor to make a firm diagnosis without laboratory tests, there are some pointers that can be used to make a best guess as to which to have a stab at treating first. If one treatment does not work it is possible to move onto the next most likely (as long as the patient has not become ill in the meantime).

### **PROTOZOANS (trichomonas)**

These tend to cause a lot of thick greenish, frothy secretions, which usually have a nasty smell (often described as fishy ). They may also cause pelvic infections which give a pain either side of the lower abdomen. They are treated by taking a single dose of five METRONIDAZOLE TABLETS- see under Gut Problems.

### **BACTERIA**

These tend to cause a thin watery non-smelly brownish discharge. They can also cause pelvic infections giving pain either side of the lower abdomen. Some types of bacteria are also sensitive to METRONIDAZOLE, so if in doubt, it is probably worth trying this first. Other types respond better to a more general antibiotic such as ERYTHROMYCIN (see under Infections). This can be tried if there is no response to Metronidazole. In the rare case of severe infections with severe pains, high temperature and an unwell patient, it may be worth taking both Metronidazole and Erythromycin together until medical help is found.

### **FUNGAL (thrush)**

This is usually easy to distinguish from the other two, and is much more common, so it may well be instantly recognisable to the patient from previous encounters. It can be suspected if there is a lot of itching or rawness, and a thick creamy discharge which often leaves small white patches sticking to the sides of the vagina resembling blobs of yoghurt. It is treated by inserting a single CANESTEN PESSARY into the vagina overnight, and applying CANESTEN CREAM, to the outside. If there is a male partner involved, the cream can also be used on him, to prevent the infection being passed back and fro!

## **Periods**

As if the usual hazards of travelling are not already onerous enough, women (up to a certain age at least) have also to deal with the inconvenience of a monthly period. Most will have learned to cope with these from previous experience, and will be equipped with the usual pads or devices to deal with them. However an unexpectedly heavy period can be a real pain (in more ways than one). IBUPROFEN can be most helpful in dealing with the pain, then if still desperate either PARACETEMOL or CO-CODAMOL can be taken on top.

If you suffer from particularly heavy periods then you may want to postpone your period if your calculations suggest it may happen whilst on a long bus journey or perhaps half way up a mountain. This can be achieved if you are taking certain combined contraceptive pills by taking them continuously without a break, (or leaving out the dummy tablets if you have a 28 day pack). If you are on other types of pills or are uncertain of which type you are taking, you will need to discuss this with your GP before travelling. Otherwise you may use a hormone tablet called NORETHISTERONE to the same effect. This will need to be prescribed by your GP and the number of tablets is determined by how long you need to delay your period by.

## **Urine infections**

Once again these are more common in women travellers for all the same reasons as vaginal infections. They are usually simple to recognise by an unavoidable urge to pass water frequently (you will know all about this if you are travelling by bus), usually accompanied by a burning sensation on actually passing urine. These symptoms are suggestive of cystitis, and are best treated by a three day course of an antibiotic called TRIMETHOPRIM, (or if allergic to this, or if any possibility of being pregnant use AMOXICILLIN as an alternative.)

If in addition to the increased frequency and burning sensation there is also a high fever, an ache in one side or other of the mid back, a feeling of sickness, or of generally feeling unwell, the infection has probably migrated upwards into the kidneys. In this case the TRIMETHOPRIM (or AMOXICILLIN) should be taken for seven days

## **Preventing urine tract infections**

Some women are prone to repeated infections of their water works. A few tips when travelling may help to decrease the chances of this:-

- 1) Make sure you drink plenty when in a hot country- you should aim at drinking enough to make your urine pale or clear.
- 2) Empty your bladder ten minutes before going to bed, then a second time immediately before hitting the sack to prevent carrying any unspent urine over to the next day.
- 3) If possible avoid nylon underwear and tights- use cotton instead
- 4) If possible avoid tight trousers (especially jeans), wear skirts/dresses or baggy cotton trousers.
- 5) Wash before and after intercourse.
- 6) If possible, wash after opening bowels and avoid stained underwear.

# OUTDOOR ACTIVITIES

## TREKKING/BACKPACKING

Few pleasures can compare with the sight that awaits you as you crest a ridge after an arduous climb and gaze at a vista of snow capped peaks stretching into infinity. Although nothing can totally spoil this pleasure, it can be greatly diminished by a nagging muscular strain, or by the exhaustion of salt depletion. We have therefore included some preparations to hopefully allow you to enjoy your trek to the full.

### Balmosa cream (see also under Pain Relief )

This is an anti-inflammatory cream with an aspirin base. When applied it causes a warm sensation, causing increased blood flow to the muscles and joints underneath. It is most helpful for the minor strains and sprains in muscles and joints that all trekkers will recognise. It can also be applied to bumps and bruises after a fall, as long as the skin has not been broken. Do not apply if scratches, scrapes, cuts or grazes. It should not be applied if the individual is allergic to aspirin, and with caution (that means try a little patch first) if there is a history of asthma or stomach ulcers. It can be applied three or four times a day. For more persistent or serious injuries it can be combined with oral anti-inflams (Ibuprofen) or strong painkillers (Co-codamol).

### Sodium and Potassium tablets

All trekkers sweat, some more than others. Since sweat contains salts as well as water, replacing fluid on it's own can leave the body weak and exhausted and lead to muscle cramps. This is especially so if trekking in hot countries. Because everyone sweats at different rates, calculating how much to replace can be difficult. A simple rule is that you can roughly estimate how much fluid you need to replace by keeping on drinking until you are passing clear urine about every four hours. To achieve this in hot countries you may need as much as eight to ten litres per day ! The exact amount will vary for each member of your group, and will gradually decrease as your body acclimatises to the heat. We then recommend that you take one Sodium Tablet for every two litres of fluid, and one Potassium Tablet for every four litres of fluid. In addition you must add table salt to all the food you can.

### **AVOID SODIUM AND POTASSIUM TABLETS IF :-**

There is a history of high blood pressure (especially if on treatment for this), gastric or duodenal ulcers, kidney damage (seek specialist advice).

### **A SIMPLE GUIDE TO CALCULATE HOW MANY TABLETS YOU NEED:-**

SODIUM – the number in the party **times** the number of days trekking **times two**.

POTASSIUM - the number in the party **times** the number of days trekking.

# **HIGH ALTITUDE TREKKING/CLIMBING**

The pleasures of trekking in the world's highest mountain ranges cannot be overstated. Neither can the dangers. Altitude sickness can occur in some people as low as 8,000 feet, but serious symptoms do not usually occur until over 12,000 feet. Even then it is not the height that is important, rather the speed in which you ascended to that altitude. Acute mountain sickness is actually more common in fit young men because they are more likely to attempt to be macho in racing up the mountain like some indestructible super hero!

As a general rule, it is far safer (and more enjoyable) to avoid altitude sickness by planning a sensible itinerary that allows for gradual acclimatisation to altitude as you ascend (you can race back down as fast as you like!).

## **What is High Altitude?**

Altitude can be defined as follows:-

<b>High</b>	<b>2,500 to 4,000 metres</b>	<b>8,000 to 13,000 feet</b>
<b>Very High</b>	<b>4,000 to 5,500 metres</b>	<b>13,000 to 18,000 feet</b>
<b>Extremely High</b>	<b>5,500+ metres</b>	<b>18,000+ feet</b>

It is difficult to determine who may be affected by altitude sickness since there are no specific factors such as age, sex, or physical condition that correlate with susceptibility. Some people get it and some people don't because some people are more susceptible than others.

Most people can ascend to 2,500 metres (8,000 feet) with little or no effect. If you have been at that altitude before with no problem, you can probably return to that altitude without problems as long as you are properly acclimatised. If you haven't been to high altitude before, you should exercise caution when doing so.

## **The Cause of Altitude Sickness**

The percentage of oxygen in the atmosphere at sea level is about 21% and the barometric pressure is around 760 mmHg. As altitude increases, the percentage remains the same but the number of oxygen molecules per breath is reduced. At 3,600 metres (12,000 feet) the barometric pressure is only about 480 mmHg, so there are roughly 40% fewer oxygen molecules per breath so the body must adjust to having less oxygen. In addition, high altitude and lower air pressure causes fluid to leak from the capillaries in both the lungs and the brain which can lead to fluid build-up. Continuing on to higher altitude without proper acclimatisation can lead to the potentially serious, even life-threatening altitude sickness.

## **Acclimatisation**

The main cause of altitude sickness is going too high too quickly. Given enough time, your body will adapt to the decrease in oxygen at a specific altitude. This process is known as acclimatisation and generally takes one to three days at any given altitude, e.g. if you climb to 3,000 metres and spend several days at that altitude, your body will acclimatise to 3,000 metres. If you then climb to 5,000 metres your body has to acclimatise once again.

Several changes take place in the body which enable it to cope with decreased oxygen:

- The depth of respiration increases.
- The body produces more red blood cells to carry oxygen.
- Pressure in pulmonary capillaries is increased, "forcing" blood into parts of the lung which are not normally used when breathing at sea level.
- The body produces more of a particular enzyme that causes the release of oxygen from haemoglobin to the body tissues.

### **Cheyne-Stokes Respirations**

Above 3,000 metres (10,000 feet) most people experience a periodic breathing during sleep known as Cheyne-Stokes Respirations. The pattern begins with a few shallow breaths and increases to deep sighing respirations then falls off rapidly even ceasing entirely for a few seconds and then the shallow breaths begin again. During the period when breathing stops the person often becomes restless and may wake with a sudden feeling of suffocation. This can disturb sleeping patterns, exhausting the climber. This type of breathing is **not** considered abnormal at high altitudes. Acetazolamide is helpful in relieving this periodic breathing.

### **Acute Mountain Sickness (AMS)**

AMS is very common at high altitude. At over 3,000 metres (10,000 feet) 75% of people will have mild symptoms. The occurrence of AMS is dependent upon the elevation, the rate of ascent, and individual susceptibility. Many people will experience mild AMS during the acclimatisation process.

The symptoms usually start 12 to 24 hours after arrival at altitude and begin to decrease in severity around the third day.

The symptoms of Mild AMS include:

- Headache,
- Nausea & Dizziness,
- Loss of appetite,
- Fatigue,
- Shortness of breath,
- Disturbed sleep,
- General feeling of malaise,

Symptoms tend to be worse at night and when respiratory drive is decreased. Mild AMS does not interfere with normal activity and symptoms generally subside within two to four days as the body acclimatises. As long as symptoms are mild, and only a nuisance, ascent can continue at a moderate rate. When hiking, it is essential that you communicate any symptoms of illness immediately to others on your trip. AMS is considered to be a neurological problem caused by changes in the central nervous system. It is basically a mild form of High Altitude Cerebral Oedema (see below).

## **Moderate AMS**

The signs and symptoms of Moderate AMS include:

- severe headache that is **not** relieved by medication,
- nausea and vomiting, increasing weakness and fatigue,
- shortness of breath,
- decreased co-ordination (ataxia).

Normal activity is difficult, although the person may still be able to walk on their own. At this stage, only advanced medications or descent can reverse the problem. Descending only 300 metres (1,000 feet) will result in some improvement, and twenty four hours at the lower altitude will result in a significant improvement. The person should remain at lower altitude until all the symptoms have subsided (up to 3 days). At this point, the person has become acclimatised to that altitude and can begin ascending again.

The best test for moderate AMS is to have the person walk a straight line heel to toe just like a sobriety test. A person with ataxia would be unable to walk a straight line. This is a clear indication that an **immediate** descent is required. It is important to get the person to descend **before** the ataxia reaches the point where they cannot walk on their own (which would necessitate a stretcher evacuation).

## **Severe AMS**

Severe AMS results in an increase in the severity of the aforementioned symptoms including:

- Shortness of breath **at rest**,
- Inability to walk,
- Decreasing mental status,
- Fluid build-up in the lungs,

Severe AMS requires **immediate** descent of around 600 metres (2,000 feet) to a lower altitude.

There are two serious conditions associated with severe altitude sickness; High Altitude Cerebral Oedema (HACO) and High Altitude Pulmonary Oedema (HAPO). Both of these happen less frequently, especially to those who are properly acclimatised. But, when they do occur, it is usually in people going too high too fast or going very high and staying there. In both cases the lack of oxygen results in leakage of fluid through the capillary walls into either the lungs or the brain.

## **High Altitude Pulmonary Oedema (HAPO)**

HAPO results from fluid build up in the lungs. This fluid prevents effective oxygen exchange. As the condition becomes more severe, the level of oxygen in the bloodstream decreases, which leads to cyanosis, impaired cerebral function, and death. Symptoms include;

- Shortness of breath at rest,
- Tightness in the chest, and a persistent cough bringing up white, watery, or frothy fluid,
- Marked fatigue and weakness,
- A feeling of impending suffocation at night,
- Confusion, and irrational behaviour,

Confusion, and irrational behaviour are signs that insufficient oxygen is reaching the brain. One of the methods for testing yourself for HAPO is to check your recovery time after exertion. In cases of HAPO, **immediate** descent of around 600 metres (2,000 feet) is a necessary life-saving measure. Anyone suffering from HAPO **must** be evacuated to a medical facility for proper follow-up treatment.

## **High Altitude Cerebral Oedema (HACO)**

HACO is the result of the swelling of brain tissue from fluid leakage. Symptoms include:

- Headache,
- Weakness,
- Disorientation,
- Loss of co-ordination,
- Decreasing levels of consciousness,
- Loss of memory, Hallucinations & Psychotic behaviour,
- Coma.

It generally occurs after a week or more at high altitude. Severe instances can lead to death if not treated quickly. **Immediate** descent of around 600 metres (2,000 feet) is a necessary life-saving measure.

There are some medications that may be used for treatment in the field, but these require proper training in their use. Anyone suffering from HACO **must** be evacuated to a medical facility for follow-up treatment.

## **Prevention of Altitude Sickness**

Prevention of altitude sickness involves proper acclimatisation and the possible use of medications.

Here are a few basic guidelines:

- If possible, don't fly or drive to high altitude. Start below 3,000 metres (10,000 feet) and walk up.
- If you do fly or drive, do not over-exert yourself or move higher for the first 24 hours.
- If you go above 3,000 metres (10,000 feet), only increase your altitude by 300 metres (1,000 feet) per day, and for every 900 metres (3,000 feet) of elevation gained, take a rest day to acclimatise.
- Climb high and sleep low! You can climb more than 300 metres (1,000 feet) in a day as long as you come back down and sleep at a lower altitude.
- If you begin to show symptoms of moderate altitude sickness, don't go higher until symptoms decrease.
- If symptoms increase, go down, down, down!
- Keep in mind that different people will acclimatise at different rates. Make sure everyone in your party is properly acclimatised before going any higher.
- Stay properly hydrated. Acclimatisation is often accompanied by fluid loss, so you need to drink lots of fluids to remain properly hydrated (at least four to six litres per day). Urine output should be copious and clear to pale yellow.
- Take it easy and don't over-exert yourself when you first get up to altitude. Light activity during the day is better than sleeping because respiration decreases during sleep, exacerbating the symptoms.
- Avoid tobacco, alcohol and other depressant drugs including, barbiturates, tranquillisers, sleeping pills and opiates such as dihydrocodeine. These further decrease the respiratory drive during sleep resulting in a worsening of symptoms.
- Eat a high calorie diet while at altitude.
- Acclimatisation is inhibited by over-exertion, dehydration, and alcohol.

## Preventative Medications

- **Acetazolamide** (Diamox) allows your body to metabolise more oxygen, thereby minimising the symptoms caused by poor oxygenation. This is especially helpful at night when the respiratory drive is decreased. It is advisable to start taking it 24 hours before you go to altitude and to continue treatment while ascending until you have fully acclimatised to your final altitude.

The recommended dose is 125 mg (half a tablet) twice a day (morning and night) but this can be increased to 250mg (one tablet) twice a day if required. Possible side effects include tingling of the lips and fingertips, blurring of vision, and alteration of taste.

You must contact your doctor for a prescription since Diamox is a prescription only drug and people with a known allergy to it should not take it. A trial course is recommended before going to a remote location where a severe allergic reaction could prove difficult to treat if it occurred.

- **Dexamethasone** (a steroid) is a drug that decreases brain and other swelling reversing the effects of AMS. The dose is typically 4 mg twice a day for a few days starting with the ascent. This prevents most of the symptoms of altitude illness from developing. **WARNING:** Dexamethasone is a powerful drug and should be used with caution and only on the advice of a physician and should only be used to aid acclimatisation by sufficiently qualified persons or those with the necessary experience of its use.

## Treatment of AMS

The only **cure** for mountain sickness is either acclimatisation or descent. Symptoms of Mild AMS can be treated with pain killers for headache, acetazolamide and dexamethasone. These help to reduce the severity of the symptoms, but remember, reducing the symptoms is not curing the problem and could even exacerbate the problem by masking other symptoms. Acetazolamide allows you to breathe faster so that you metabolise more oxygen, thereby minimising the symptoms caused by poor oxygenation which is especially helpful at night when the respiratory drive is decreased.

## The Gamow Bag

This clever invention has revolutionised field treatment of altitude sickness. The bag is composed of a sealed chamber with a pump. The casualty is placed inside the bag and it is inflated by pumping it full of air effectively increasing the concentration of oxygen and therefore simulating a descent to lower altitude. In as little as 10 minutes the bag can create an "atmosphere" that corresponds to that at 900 to 1,500 metres (3,000 to 5,000 feet) lower. After two hours in the bag, the person's body chemistry will have "reset" to the lower altitude. This acclimatisation lasts for up to 12 hours outside of the bag which should be enough time to get them down to a lower altitude and allow for further acclimatisation. The bag and pump together weigh about 6.5 kilos (15 pounds) and are now carried on most major high altitude expeditions. Bags can be rented for short term treks or expeditions.

## Other Medicines used for treating Altitude Sickness

- **Ibuprofen** is effective in relieving altitude induced headache. (600mg three times a day).
- **Nifedipine** rapidly decreases pulmonary artery pressure and relieves HAPO. (20mg three times a day).
- **Frusemide** may clear the lungs of water in HAPO and reverse the suppression of urine brought on by altitude. **CAUTION:** Can also lead to collapse from low volume shock if the victim is already dehydrated. (120mg daily). Breathing
- **100% Oxygen** reduces the effects of altitude sickness.

# **CYCLING**

With an increasing choice of long distance routes and off road trails, cycling is becoming one of the fast growth areas in adventure tourism. However along with all the fun and excitement come some fairly common ailments that can spoil the trip for any one individual, whilst the rest of the group are having the time of their lives.

We have included several medications that will hopefully be of some help to the unfortunate sufferers:-

## **Balmosa cream** (see also under Pain Relief )

This is an anti-inflammatory cream with an aspirin base. When applied it causes a warm sensation, causing increased blood flow to the muscles and joints underneath. It is most helpful for the minor strains and sprains in muscles and joints that all cyclists will recognise. It can also be applied to bumps and bruises after a fall, as long as the skin has not been broken. Do not apply if scratches, scrapes, cuts or grazes. It should not be applied if the individual is allergic to aspirin, and with caution (that means try a little patch first) if there is a history of asthma or stomach ulcers. It can be applied three or four times a day. For more persistent or serious injuries it can be combined with oral anti-inflams (Ibuprofen ) or strong painkillers (Co-codamol).

## **Xyloproct ointment**

Even in this age of what must surely be the best invention since the wheel -namely padded bicycle shorts- some of us still suffer from soreness rawness and aching in our most delicate places. Why we should be so designed that one of the sweatiest and most delicate parts of our body should happen to be at the very point of maximum contact with a bicycle seat is one of lives greatest ponderables. A general rule is that the heavier you are, the more likely you are to suffer. Xyloproct ointment applied up to three or four times per day can give wonderful relief from such soreness. However it must only be used as a last resort - after you have tried adjusting your shorts, your seat, your pants or anything else you can adjust- since long term use for more than a few days can sensitise the anal area and may mask the development of sores or more serious pressure injuries.

## **Sodium and Potassium tablets**

All cyclists sweat, some more than others. Since sweat contains salts as well as water, replacing fluid on it's own can leave the body weak and exhausted and lead to muscle cramps. This is especially so if cycling in hot countries. Because everyone sweats at different rates, calculating how much to replace can be difficult. A simple rule is that you can roughly estimate how much fluid you need to replace by keeping on drinking until you are passing clear urine about every four hours. To achieve this in hot countries you may need as much as eight to ten litres per day ! The exact amount will vary for each member of your group, and will gradually decrease as your body acclimatises to the heat. We then recommend that you take one Sodium Tablet for every two litres of fluid, and one Potassium Tablet for every four litres of fluid. In addition you must add table salt to all the food you can.

### **AVOID SODIUM AND POTASSIUM TABLETS IF :-**

There is a history of high blood pressure (especially if on treatment for this), gastric or duodenal ulcers, kidney damage (seek specialist advice).

See the section on Trekking for the formula for working out the number of tablets required.

# CANOEING/RAFTING

The fast flowing rivers of many countries provide an ideal playground and challenge for canoeing and white water rafting. Because of the inherent dangers both of these sports carry, it is important that people who organise their own trips to remote areas ensure that all members of their group are competent, suitably equipped and aware of their own limits and the potential hazards likely to be encountered.

Most (but not all!) of the white water rafting that takes place nowadays is organised by local companies who provide all the necessary safety equipment and employ suitably qualified guides who are familiar with the river and local conditions making it relatively safe without reducing the exhilaration.

Quite apart from the obvious dangers, there are also several health hazards that participants should be aware of:-

## Water Borne Diseases

Many of the rivers in developing countries are fed by tributaries that flow through towns and villages where the waste water and sewage is allowed to drain into them. They are therefore a potential source of illness e.g. typhoid and hepatitis A. So it is a good rule never to drink the river water and to take care not to swallow any water when rafting or canoeing through rapids and white water. If you have no alternative but to use river water for drinking, you should always boil it and/or sterilise it first.

One particularly nasty water borne illness is **Weil's disease (leptospirosis)** which is a life threatening disease caused by a bacteria and spread through rat's urine. You are more likely to be exposed to it if you have an open wound or cut so cover any up with a waterproof dressing. If you develop severe flu like symptoms two to three weeks after exposure to river water you must seek medical help immediately. It could be the first sign of Weil's disease and you should be tested for it.

Eye infections picked up from river water can be annoying but are rarely dangerous and can be easily treated using **Chloramphenicol eye ointment**.

## Exposure to the Sun

Travelling down a fast flowing river surrounded by tropical rainforest is a thrilling experience but it also means that you will be spending a considerable amount of time exposed to direct sunlight. In a hot climate it is possible to become severely sunburned if precautions are not taken. Because of the cooling effect of the river you may not be aware of the severity of the sun's rays. Rafters are particularly prone since the temptation is to wear minimal clothing and inflatable rafts are very exposed. Burning of the face, shoulders, arms and legs is common and can be very uncomfortable for several days after.

Make sure that any exposed skin is protected with sunscreen lotion etc. River water will tend to wash off any sunscreen you apply so make sure you use a waterproof brand and re-apply often, especially after taking a soaking. If possible wear long sleeves and tracksuit bottoms to protect your arms and legs. Wearing a sun hat is not always possible since you will probably be wearing a helmet. Applying total sun block cream to the face is a good idea.

## **Biting Insects**

Insects are always more plentiful around rivers. This is because watercourses tend to be the hunting and breeding grounds of many biting insects. All the usual precautions should therefore, be observed and insect repellents should be constantly re-applied since the river water will wash them away.

## **Chloramphenicol eye ointment**

This is a broad-spectrum antibiotic preparation used to treat bacterial conjunctivitis (infections of the eye).

It should be applied to the affected eye(s), four times a day. Treatment should be continued for two days after apparent cure.

## **SCUBA DIVING**

The human body may not have been designed to be totally immersed in water, but to appreciate the sheer delight of the infinite colour and variety of life under the seas usually involves getting your eardrums wet. For such a tiny hidden part of the anatomy they can cause huge problems. A few simple items in your kit can help you to be prepared:-

### **Otomize ear spray**

When repeatedly immersed in water, the ear canal is more to be exposed to bacteria and more likely to suffer injury. After a days' diving excess water can become trapped in the ear canal providing an ideal growth medium for bugs. This can sometimes result in an uncomfortable infection of the outer ear canal, (otitis externa) characterised by pain, discharge, and decreased hearing. Otomize ear spray contains an antibiotic (Neomycin) and a healing agent (Dexamethasone) which when sprayed into the ear canal helps to reduce the infection and the inflammation. A painkiller such as Ibuprofen is also useful in this case.

One metered spray is to be applied to the affected ear three times a day. If the pain and discharge worsen, there may be an infection of the middle ear (otitis media), in which case cease from diving and take a five day course of Amoxycillin capsules (three times a day).

### **Aluminium Acetate ear drops**

As with all medical conditions; "prevention is better than cure" and these ear drops are there to prevent infection of the ear canal by drying up any moisture left behind after diving and they also have a mild antiseptic effect. It is not necessary to use them after every dive rather at the end of the day when you've done your last dive.

Rinse your ears with clean water (in the shower etc.) then dry them with a towel WITHOUT poking anything into the ear canal itself then apply two to three drops to one ear and allow the solution to work by holding your head on one side for a few minutes then allow the excess to run out naturally and wipe away any excess with a tissue, repeat for the other ear. You may experience a tingling in your ears when you first use the drops, don't worry, this is normal.

You should not use these drops if you already have an ear infection; they are for prevention not a cure. If you start using them at the beginning of your dive trip, you shouldn't have any problems. Nowadays these drops can be difficult to obtain but any proprietary alternative will suffice, e.g. "Swim-Ear solution" which can be obtained from dive shops or pharmacies.

## **Antacid Tablets**

Since divers spend a significant time hanging upside down in the water, gravity can have the effect of causing acid reflux. This is often made worse by a change of diet where the local food is often oily and very spicy and most evenings is accompanied by an alcoholic beverage or two.

All this usually results in a high prevalence of acid indigestion amongst the group. It is therefore recommended that you take an adequate supply of indigestion tablets with you.

## **Pseudoephedrine Tablets 60mg (Sudafed)**

During a multi-dive holiday it is quite common to find members of the party complaining about being “bunged up” in the morning and having difficulty clearing their ears due to a build up of catarrh.

The true cause of this is unclear but it probably has something to do with repeated immersion in salt water combined with numerous temperature and atmospheric changes caused by moving in and out of air-conditioned quarters into a hot climate. The condition appears to be worse in the morning immediately after a night’s sleep.

Pseudoephedrine is an effective decongestant which can dry up this condition. One tablet will have an effect for up to eight hours by which time the worst effects will have subsided. The tablet should be taken before the first dive of the day.

## **Cinnarizine Tablets 15mg (Stugeron)**

This is a very effective drug used in the treatment of all types of motion sickness especially sea-sickness which affects many divers. It is also an effective anti-nauseant and anti-emetic.

Since divers spend a lot of time on boats it is a good idea to include cinnarizine in the divers medical kit.

Cinnarizine can be obtained over the counter in most chemists.

**Dosage:** For motion sickness;

Adults: Take two tablets two hours prior to travelling followed by a further tablet every eight hours during travel or until the symptoms subside.

Children: under 5 not recommended. 5 to 12 half the adult dose.

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