

**Nurse Practitioner  
CLINICAL PRACTICE GUIDELINE  
Travel Health**

	<b>Scope</b>	<b>Outcomes</b>
<b>Nurse Practitioner</b>	Patients >12 years and non-pregnant adults requesting; <ul style="list-style-type: none"> <li>• Travel vaccination</li> <li>• International travel health information</li> <li>• Supportive medications / advice in case of illness whilst overseas</li> </ul>	Identify patients suitable for NP.
<b>General Practitioner +/- NP</b> Refer onto a Travel Health Doctor	<ul style="list-style-type: none"> <li>• Pregnant patients &amp; patients &lt; 12 years</li> <li>• Immunocompromised; acute febrile illness T&gt;38.5C, on steroids, undergoing radiotherapy or chemotherapy</li> <li>• History of Guillain-Barré syndrome</li> <li>• Severe, complex or chronic illness</li> <li>• Previous anaphylactic reaction to vaccine</li> <li>• Received live parenteral vaccine or BCG vaccine in past 4 weeks</li> <li>• Bleeding disorder</li> <li>• Those at risk of thromboembolic disease</li> <li>• Those travelling to high-altitude destinations</li> <li>• Those requesting Yellow Fever vaccination</li> <li>• Those requesting Japanese Encephalitis vaccination</li> <li>• Those requesting TB vaccination or testing</li> <li>• Those requesting rabies vaccination</li> <li>• Those travelling for extended periods to rural and remote 3<sup>rd</sup> world locations, or as being identified as requiring Yellow Fever, Japanese Encephalitis or TB vaccination/testing</li> </ul>	Identify patients not suitable for NP CPG and redirect to GP.
	<b>Assessment and Intervention</b>	<b>Outcomes</b>
<b>Primary Survey</b>	<ul style="list-style-type: none"> <li>• Airway/breathing</li> <li>• Circulation</li> <li>• Disability</li> </ul>	Abnormal survey: Refer to ED immediately.
<b>History</b>	Pre vaccination screening check list; <ul style="list-style-type: none"> <li>• Departure date, destination, duration and nature of travel</li> <li>• Type of accommodation, type of tours</li> <li>• Immunocompromised; acute febrile illness T&gt;38.5C, on steroids, undergoing radiotherapy or chemotherapy</li> <li>• History of a severe reaction following any vaccine</li> <li>• Allergies</li> <li>• Vaccines in the last month</li> <li>• Current and past vaccination and medical history</li> <li>• Has had an injection of immunoglobulin, or received any blood products or a whole blood transfusion within the past year</li> <li>• Possible pregnancy or planning pregnancy</li> <li>• History of Guillain-Barré syndrome</li> <li>• Has a chronic illness</li> <li>• Has a bleeding disorder</li> </ul>	Identify any absolute or relative contraindications for vaccine. Patient not suitable for NP refer to GP / Travel Doctor.
<b>Focused Clinical Assessment</b>	<ul style="list-style-type: none"> <li>• Visual assessment / scan of patient wellbeing</li> <li>• Evidence of con-current infection</li> <li>• Skin integrity of injection site</li> </ul>	Determine the contraindications for NP

		immunisation.
<p><b>Travel Vaccines</b> Routine Vaccinations refer to Immunisation CPG</p> <p>Some countries may require proof of Yellow fever vaccination before a visa will be granted, or as a condition of entry. An International Vaccination Certificate is required to denote approved vaccination. Refer to a Travel Doctor</p>	<p><b>Routine (childhood) vaccinations:</b></p> <ul style="list-style-type: none"> <li>• Diphtheria/tetanus Pertussis</li> <li>• Hepatitis B</li> <li>• HIB (Haemophilus influenzae type b)</li> <li>• Measles, Mumps, Rubella</li> <li>• Poliomyelitis (IPV)</li> <li>• Varicella</li> </ul> <p><b>Recommended Vaccination:</b> Vaccines are recommended to international travellers according to countries to be visited, length and nature of their itinerary, and individual health and well being considerations. Vaccinations which may be recommended for overseas travel include:</p> <ul style="list-style-type: none"> <li>• Cholera</li> <li>• Influenza</li> <li>• Hepatitis A</li> <li>• Hepatitis B</li> <li>• Japanese Encephalitis – refer to Travel Doctor</li> <li>• Meningococcal Meningitis</li> <li>• Pneumococcal disease</li> <li>• Rabies – refer to Travel Doctor</li> <li>• Tuberculosis – refer to Travel Doctor</li> <li>• Typhoid fever</li> <li>• Plague - refer to Travel Doctor</li> </ul> <p><b>Required Vaccination:</b> The only vaccination that is mandatory under International Health Regulations is <b>Yellow fever</b>.</p> <ul style="list-style-type: none"> <li>• Vaccination is only available from approved Yellow fever providers</li> <li>• Exit CPG and refer to doctors or centres approved by the Health Department for administration of Yellow Fever vaccine</li> </ul>	Patients will be offered immunisation as appropriate.
<p><b>Airborne Illness Advice</b> Coughs, Colds, Chest Infections</p>	<p>Risk is greater in travel to North America, Europe, Japan, India and Nepal especially during the winter months.</p> <ul style="list-style-type: none"> <li>• Current Influenza Vaccine 2 weeks prior to travel</li> <li>• Those &gt;55 years Pneumonia vaccine</li> <li>• Commence antibiotics if signs and symptoms of acute infection occur</li> </ul>	Patients will be offered immunisation as appropriate.
<p><b>Coral Cuts Advice</b></p>	<p>Even if wound appears insignificant;</p> <ul style="list-style-type: none"> <li>• Prolonged flushing of wound at least 5 minutes</li> <li>• Gently scrub the wound with sterile gauze or a new toothbrush to remove the coral contaminates</li> <li>• Apply antibiotic powder or cream</li> <li>• Commence oral antibiotics if signs of infection present</li> </ul>	Optimise awareness. Optimise compliance. Optimise prevention.
<p><b>Insects</b> Preventing insect bites is the most effective precaution in avoiding Malaria, Dengue Fever, Japanese Encephalitis</p>	<p><b>Insect Avoidance Measures:</b></p> <ul style="list-style-type: none"> <li>• Wear long-sleeved shirts and trousers during risk times,</li> <li>• Avoid dark colour clothing, light colours are better</li> <li>• Wear shoes instead of sandals</li> <li>• Avoid scents and perfumes; they attract mosquitoes</li> </ul>	Optimise awareness. Optimise compliance. Optimise

<p>and Ross River Virus.</p> <p>Day biting mosquitoes – Dengue Fever, encephalitis</p> <p>Night biting mosquitoes – Malaria</p>	<ul style="list-style-type: none"> <li>• Apply mosquito repellent containing DEET to exposed areas of the skin (preferably 30% DEET) every 4 hours, especially after swimming or perspiring. (Repel Tropical Strength). Treat all exposed skin</li> <li>• Sleep under a mosquito bed net if not in screened or air-conditioned accommodation</li> <li>• Use the insecticide Permethrin to impregnate bed nets and clothing</li> <li>• If bedbugs are suspected; move bed away from walls and leave a light on, as bedbugs are more active in the dark. Sleep in sheets impregnated with Permethrin to reduce further attacks</li> </ul>	<p>prevention.</p>
<p><b>Jet lag</b></p>	<p>Symptoms of jet lag are common with time zone changes <math>\geq 5</math> hours</p> <ul style="list-style-type: none"> <li>• Be well-rested and not sleep-deprived at the commencement of a trans-meridian journey</li> <li>• Preventing dehydration may improve well-being for reasons not directly related to jet lag – ensure adequate intake of fluids on the flight but limit alcohol intake</li> <li>• Specific types of food; carbohydrate versus protein, have been suggested but not demonstrated to have an impact on symptoms of jet lag</li> <li>• Timing of meals may contribute to re-adjustment to a new zone</li> <li>• On arrival to adjust your cycle of sleeping, eating, and activity to that of the destination</li> <li>• This adjustment may be initiated during, or even prior to, the journey</li> <li>• Outdoor light exposure at the destination may be particularly helpful, bright light for 7.5 hours/day for 4 nights improved adaptation</li> <li>• Short-acting benzodiazepines may be used to facilitate sleep for the first night or few nights in a new time zone</li> <li>• Plan important physical or intellectual activities, such as competitive sports or critical negotiations, for 48 hours or more after arrival in a new time zone</li> </ul>	<p>Optimise awareness. Optimise compliance. Optimise prevention.</p>
<p><b>Malaria</b></p>	<p>Malaria transmission occurs in large areas of tropical countries: Central and South America, Sub-Saharan Africa, the Indian Subcontinent, Southeast Asia, the Middle East and parts of the Pacific.</p> <p>Transmission is generally higher in rural areas (urban cases occur in many cities, notably in India and Africa) and during the wet season when mosquito populations increase.</p> <p>Advice concerning the local malaria risk is essential for all travellers. Malaria is a common, potentially fatal parasitic disease. Transmission occurs mainly between sunset and sunrise.</p> <p>Malaria may occur when taking anti-malarial tablets; anti-malaria medication is designed to prevent a potentially fatal case of the disease.</p> <p><b>Malaria (BALI)</b></p> <p><b>Resort &amp; Urban Areas;</b></p> <ul style="list-style-type: none"> <li>• Minimal risk, antimalarial drugs not recommended</li> <li>• The use of insect repellents is recommended as this will also minimise the risk of other diseases from bites such as Dengue</li> </ul> <p><b>Inland Forested Areas:</b></p> <ul style="list-style-type: none"> <li>• The benign vivax form of malaria exists and is sensitive to Chloroquine</li> </ul> <p><b>Day Trips;</b></p> <ul style="list-style-type: none"> <li>• Antimalarial drugs not required (malarial mosquito is only active from dusk to dawn)</li> </ul>	<p>Optimise awareness. Optimise compliance. Optimise prevention.</p>

	<ul style="list-style-type: none"> <li>Insect repellents should be used for reasons as above</li> </ul> <p><b>Lombok:</b></p> <ul style="list-style-type: none"> <li>The risk of serious falciparum malaria exists and appropriate antimalarial drugs recommended, Mefloquine or doxycycline</li> </ul>	
<b>Rabies</b>	<p>Throughout the world apart from NZ, Australia, UK, parts of Western Europe and parts of the Caribbean and Pacific Islands. There is no cure, treatment to prevent development of the disease.</p> <ul style="list-style-type: none"> <li>Pre-exposure immunisation for travellers spending &gt;1 month in rural areas where rabies is endemic</li> <li>Avoid all animal contact – dogs, monkeys, bats, cats etc</li> <li>Consider all animal bites, scratches or puncture wounds a risk</li> <li>Wash wound with soap and water for min 5minutes</li> <li>Then clean with 40-70% alcohol solution</li> <li>Then apply betadine</li> <li>Seek medical advice re post exposure vaccination / antibiotics / tetanus status</li> </ul>	
<b>Traveller's diarrhoea</b>	<p><b>Caused by contaminated food and water:</b> Generally a short mild illness lasting an average of 3-5 days. Prevention is the best option. Pay particular attention to safe eating and drinking practices, as well as maintaining a high level of sanitation and hygiene</p> <ul style="list-style-type: none"> <li>Rehydration; at least 3L/day in a hot country, bottled water or Hydralyte or Gastrolyte</li> <li>1 dose of Hydralyte or Gastrolyte after each loose bowel motion</li> <li>If diarrhoea is severe or lasts &gt;48 hours in an adult or &gt;24 hours in a child seek medical advice</li> </ul>	
<b>Typhoid fever</b>	<ul style="list-style-type: none"> <li>Travellers must be advised about personal hygiene, food safety and drinking boiled or bottled water only.</li> <li>They should be advised that raw or undercooked shellfish, salads, cold meats, untreated water and ice in drinks are all potentially 'high-risk', as are short day trips away from higher quality accommodation venues</li> <li>Typhoid vaccination is recommended for all travellers ≥2 years of age going to endemic regions, where food hygiene may be suboptimal and drinking water may not be adequately treated</li> <li>Individuals travelling to endemic regions to visit friends or relatives are at considerable risk and vaccination is strongly recommended for them</li> <li>Vaccination should be completed at least 2 weeks before travel</li> </ul>	
	<b>Procedure of Immunisation</b>	<b>Outcomes</b>
<p>The NP will have annual CPR competency, including review of protocol for administration of adrenaline.</p> <p>Vaccine injections should not be given in the dorsogluteal site or upper outer quadrant of the buttock because of the possibility of a suboptimal immune response.</p>	<ul style="list-style-type: none"> <li>Ensure that fever or other symptoms of infection with influenza are not present</li> <li>Explain the rationale and purpose of prophylaxis immunisation</li> <li>Explain the potential side effects</li> <li>Explain that prophylaxis does not exclude the possibility of developing influenza</li> <li>Provide Health fact sheet as appropriate</li> <li>Obtain valid consent</li> <li>Ensure drug fridge temperature within +2C to +8C range</li> <li>Ensure correct vaccine</li> <li>Check the expiry date, patency, no particulate matter, or colour change in the vaccine</li> <li>All needles and syringes single use</li> </ul>	<p>Ensure patient understands treatment and is safe to continue.</p>

**If the vaccine is in a vial;**

- Remove the cap aseptically do not touch the rubber bung
- Do not wipe the rubber bung
- Use a 21g needle to draw up the recommended dose
- Reconstitute the vaccine using a sterile 21g needle
- Use only the diluent supplied with the vaccine
- Ensure that the diluent and vaccine are completely mixed
- Reconstituted vaccines may deteriorate rapidly, they should be administered as soon as practicable after they have been reconstituted
- Change needle prior to giving the vaccine

**If the vaccine is in an ampoule;**

- Use a 23g 25mm needle to draw up the recommended dose
- It is not necessary to change needles between drawing up a vaccine from an ampoule and giving the injection

**Do not mix other vaccines together in 1 syringe unless that is the manufacturer's registered recommendation. Never mix a local anaesthetic with a vaccine**

- Small air bubbles do not need to be extruded
- IM vaccinations immunise using a 23g or 25g, 25mm needle at 90° in most circumstances
- SC vaccinations immunise using a 25g or 26g, 16mm needle at 45° in most circumstances
- Anatomical sites recommended are the anterolateral thigh and the deltoid muscle
- Additional injections can be given into each deltoid muscle separated by 2.5cm from the initial vaccine site
- Provided the skin is visibly clean, there is no need to wipe it with an antiseptic
- If the skin is visibly not clean, alcohol and other disinfecting agents must be allowed to dry before vaccine injection
- It is not considered necessary to draw back on the syringe plunger before injecting a vaccine
- Inject the vaccine slowly over 5 seconds to avoid injection pain and muscle trauma
- Cover the site with a dry cotton ball and tape as needed
- Gently apply pressure for 1-2 minutes
- Do not rub the site as the vaccine will leak back up the needle track and may cause pain and local irritation
- Remove the cotton wool after a few minutes leaving the injection site exposed to the air
- Patients should remain under observation for a minimum of 15 minutes after the vaccination to ensure that they do not experience an immediate adverse event
- Paracetamol may be recommended as required for fever or pain

**In the event of collapse;**

- Unconscious; lie left lateral position to keep the airway clear
- Conscious; lie supine in 'head down feet up' position
- Report Adverse Event Following Immunisation (AEFI) to the Public Health Unit & GP

<p><b>Severe Anaphylactic Reactions:</b> usually have a rapid onset; most life-threatening adverse events begin within 10 minutes of vaccination.</p> <p>Adrenaline is not required for generalised non-anaphylactic reactions such as skin rash or angioedema.</p>	<p><b>Patient with respiratory or cardiovascular signs of anaphylaxis give adrenaline 1:1000 IM:</b></p> <p><b>Children 7–10 years (approx. 30 kg):</b> 0.3 ml  <b>Children 11–12 years (approx. 40 kg):</b> 0.4 ml  <b>Children 13 years and over (over 40 kg):</b> 0.5 ml  <b>Adults (over 40 kg):</b> 0.5mL</p> <ul style="list-style-type: none"> <li>• If in doubt, IM adrenaline should be given.</li> <li>• Repeat doses of adrenaline every 5 minutes until improvement occurs</li> <li>• Administer oxygen by facemask at high flow</li> <li>• If no signs of life commence CPR</li> <li>• Transfer anaphylactic response patient to ED via ambulance</li> <li>• Report Adverse Event Following Immunisation (AEFI) to the Public Health Unit &amp; GP</li> </ul>	
<b>Patient Discharge Education and Information</b>		<b>Outcomes</b>
<b>Patient Education</b>	<ul style="list-style-type: none"> <li>• Possible side effects</li> <li>• Advise re follow up</li> <li>• Conception should be deferred until at least 28 days after administration of live viral vaccines</li> <li>• Advocate immunisation and travel insurance</li> <li>• To report the development of fever or symptoms of influenza to their GP post travel</li> <li>• Opportunistic: lifestyle modification, regular BP checks</li> <li>• Traveller's diarrhoea management</li> <li>• Avoidance of local animals, don't touch</li> <li>• Avoid direct contact with live poultry, wild birds</li> <li>• Avoid live animal markets, farms</li> <li>• Animal bites / scratches</li> <li>• Wound care</li> <li>• Boil it / peel it / cook it / or forget it rule in less developed countries</li> <li>• Do not eat undercooked meats / poultry / eggs</li> <li>• Hand hygiene</li> <li>• Sunscreen</li> <li>• Safe sex</li> <li>• Personal security and safety advice</li> </ul>	<p>Optimise awareness.  Optimise compliance.  Optimise early eradication of infection and prevent recurrence.</p>
<b>Return / GP / ED</b>	<ul style="list-style-type: none"> <li>• Adverse reaction or intolerance</li> <li>• Any other concerns of patient</li> <li>• Flu like symptoms post travel</li> </ul>	<p>Instruct patient of follow up criteria.</p>
<b>Medication Storage</b>	<ul style="list-style-type: none"> <li>• Vaccine cold chain: maintain vaccine quality by keeping the temperature of vaccines between 2°C to 8°C</li> <li>• Daily documented drug fridge temperature checking</li> <li>• Vaccines stored out of the recommended range will be disposed of according to manufacturers recommendations</li> </ul>	<p>Ensure cold chain is preserved and monitored.</p>
<b>Certificates</b>	<ul style="list-style-type: none"> <li>• Sign and date immunisation records as appropriate</li> </ul>	
<b>Letters</b>	<ul style="list-style-type: none"> <li>• Written letter to GP as per patient request</li> <li>• Letter to support prescribed medications as required</li> </ul>	

	Medication	Outcomes
	All medication to be stored labelled and dispensed according to legislation	Patients will be offered immunisation and medications as appropriate to their identified travel health needs.
<b>Amoxycillin</b> <b>Antibiotic - penicillin</b> <b>S4</b>	<b>Sinus infection; headache, fever and copious green mucous from nose and back of throat</b> <b>Dental infection</b> <b>Urinary Tract infection</b> <ul style="list-style-type: none"> <li>Amoxycillin 250mg three times a day for 5 days</li> </ul> <b>Chest infection; fever &gt;38.5C, coughing green phlegm for more than 48 hours</b> <ul style="list-style-type: none"> <li>Amoxycillin 500mg three times a day for 5 days</li> </ul>	
<b>Augmentin Duo</b> <b>Antibiotic - penicillin</b> <b>S4</b>	<b>Chest infection; fever &gt;38.5C, coughing green phlegm for more than 48 hours</b> <b>Sinus infection; headache, fever and copious green mucous from nose and back of throat</b> <ul style="list-style-type: none"> <li>1 Augmentin Duo twice a day for 5 days</li> <li>Take with food</li> </ul>	
<b>Azithromycin</b> <b>Antibiotic - macrolide</b> <b>S4</b>	<b>Traveller's diarrhoea, URTI, LRTI, Typhoid</b> <b>Adults: Azithromycin 500mg</b> <ul style="list-style-type: none"> <li>1 Azithromycin 500mg tablet daily for 3 days</li> </ul> OR <ul style="list-style-type: none"> <li>As a single dose 2 tablets, Azithromycin (1000mg) once</li> </ul> <b>Children; Azithromycin powder for oral suspension</b> 200mg/5ml reconstituted with 15ml of safe water; <ul style="list-style-type: none"> <li>Give 10mg/kg daily for 3 days</li> </ul>	
<b>Cephalexin</b> <b>Antibiotic - cephalosporin</b> <b>S4</b>	<b>Skin / wound infection; increasing redness and /or pus formation and fever i.e. coral cuts</b> <ul style="list-style-type: none"> <li>Cephalexin 500mg twice a day for 5-10 days</li> </ul>	
<b>Cholera (Dukoral)</b> <b>Vaccines ORAL</b> <b>S4</b> Areas of poverty and poor sanitation, volunteers to 3 <sup>rd</sup> world camps	There is no longer an official requirement for cholera vaccination for arriving travellers to any country. Vaccination for cholera is only recommended for high-risk travellers, aid or refugee camp workers, persons planning extended stays in remote rural areas in close contact with the local population and for those visiting countries experiencing floods. An added advantage of the cholera vaccine, Dukoral is that it offers some degree of protection against a common diarrhoea-causing bacterium ETEC (enterotoxigenic E. coli). <ul style="list-style-type: none"> <li>Oral inactivated, 3mL vaccine vial plus a sachet of the buffer granules</li> <li>Dissolve buffer granules in 150ml of water and add the vaccine to the solution</li> <li>Two doses are required, 1-6 weeks apart</li> <li>Provides 60-70% protection against severe disease for 2 years</li> <li>At least 8 hours between the administration of the inactivated oral cholera and oral typhoid vaccines</li> </ul>	

<b>Dengue Fever</b> <b>Insect Avoidance</b>	Dengue Virus Caribbean, Central & South America, Mexico, Pacific Islands, tropical areas of Asia, parts of tropical Africa, North Queensland. Symptoms appear 5-8 days post mosquito bite; fever, severe headache, joint & muscle pain, rash and strange taste sensation. A few days after the rash appears the fever breaks and recovery begins. <ul style="list-style-type: none"> <li>• RIB</li> <li>• Paracetamol</li> <li>• NO ASPIRIN</li> <li>• Drink extra fluids</li> </ul>	
<b>Diphtheria, Tetanus, Pertussis (DTP, DTPa, dTp, dTpa)</b> <b>Diphtheria toxoid, pertussis vaccine, tetanus toxoid.</b> <b>Vaccines</b> <b>S4</b>	As a booster following primary immunisation <ul style="list-style-type: none"> <li>• <b>15-17 years dTp</b></li> <li>• <b>50 years and over dT, consider dTp</b></li> </ul> <b>Adults:</b> 0.5mL deep IMI <b>Children 10 years and over:</b> 0.5mL deep IMI	
<b>Doxycycline</b> <b>Antibiotics - tetracycline</b> <b>S4</b>	<b>Chest infection; fever &gt;38.5C, coughing green phlegm for more than 48 hours</b> <b>Sinus infection; headache, fever and copious green mucous from nose and back of throat</b> <b>Skin / wound infection; increasing redness and /or pus formation and fever i.e. coral cuts</b> <ul style="list-style-type: none"> <li>• Doxycycline 100mg in persons &gt;8 years</li> <li>• 1 daily for malaria prophylaxis</li> <li>• Otherwise 100mg every 12 hours</li> <li>• Take with food or milk</li> </ul>	
<b>Hepatitis A Vaccine</b> <b>Vaccines</b> <b>S4</b>	<b>Inactivated Hepatitis A vaccine:</b> <ul style="list-style-type: none"> <li>• Havrix / Avaxim / Vaqta</li> <li>• Single dose</li> <li>• Dose repeated in 6-12 months</li> <li>• Adults: 0.5mL deep IMI</li> <li>• Children 2 years and over: 0.5mL deep IMI</li> </ul>	
<b>Hepatitis A and Hepatitis B Combined Vaccines</b> <b>S4</b>	<b>Hepatitis A with Hepatitis B Vaccine:</b> <ul style="list-style-type: none"> <li>• Twinrix</li> <li>• 3 doses at 0, 1 and 6 months</li> </ul>	
<b>Hepatitis A and Typhoid Combined Vaccines</b> <b>S4</b> Traveller's to areas of poor sanitation, backpackers	<b>Hepatitis A with Typhoid Vaccine:</b> <ul style="list-style-type: none"> <li>• Vivaxim</li> <li>• Single dose</li> <li>• Followed by Hepatitis A only booster at 6-12 months</li> </ul>	
<b>Hepatitis B Vaccine</b> <b>Vaccines</b> <b>S4</b>	<b>Adults &gt; 19 years:</b> 3 doses at 0, 1 and 6 month intervals. 20mcg/1mL dose, deep IMI  <b>Children 10-19 years:</b> 3 doses at 0, 1 and 6 month intervals 10mcg/0.5mL  <b>Children &lt; 10 years:</b> exit CPG and refer to a GP/Travel Doctor  <b>Accelerated vaccine:</b> <b>Adult only:</b> <ul style="list-style-type: none"> <li>• At 0, 7 and 21 days in exceptional circumstances, eg travel within 1 month of beginning course</li> </ul>	

<b>Influenza Vaccine Vaccines S4</b>	Immunisation 2 weeks prior to travel <ul style="list-style-type: none"> <li>15mcg/0.5mL deep SCI or IMI</li> </ul>	
<b>Japanese Encephalitis Vaccine S4</b> Typically rice paddies. Travellers living for prolonged periods (>30 days) in rural, or agricultural, areas where Japanese Encephalitis is endemic or epidemic. Travellers with extensive unprotected outdoor exposure in rural areas, particularly during the evening and at night. Those engaging in activities such as bicycling, camping or engaged in certain occupational activities in rural area may be at high risk, even if their trip is brief.	Japanese Encephalitis occurs in China and Korea (June through September) Indian Subcontinent including India, Bangladesh, Nepal, Sri Lanka and Pakistan. South East Asia including Myamar, Thailand, Cambodia, Laos, Vietnam, Malaysia, Indonesia and The Philippines. (Wet and early dry season). Also occurs with lower frequency in Japan, Taiwan, Singapore, Hong Kong, Eastern Russia, Guam, Saipan and Brunei Durussalam. (Wet and early dry season) The disease is seasonal. In China and Korea and other temperate climates, the transmission season extends through the summer and autumn. In subtropical and tropical regions risk is associated with the rainy season, which varies in each country. Sporadic cases may occur at any time of the year. <b>Insect prevention measures are paramount</b> <b>Refer to Travel Doctor</b>	<b>Refer to Travel Doctor: JE</b> Vaccine available through travel doctor only
<b>Loperamide Anti-diarrhoeal S4 Traveller's diarrhoea</b>	<b>Loperamide 2mg;</b> <ul style="list-style-type: none"> <li>2 capsules at once, then 1 after each loose bowel motion</li> <li>Maximum of 8 capsules in 24 hours</li> <li>Do not take Loperamide if diarrhoea is bloody</li> <li>Do not give Loperamide to children under 12 years</li> </ul>	
<b>Malaria Prevention Vaccines ORAL S4</b> <b>Post minimum of 3 days Ty21a oral typhoid prophylaxis</b>  Any flu like illness; fever, rigors, headache, myalgia, +/- diarrhoea or vomiting occurring 7 days post and up to 12 months after travel to a malarial region MUST be reviewed by GP	<b>Doxycycline 100mg:</b> <ul style="list-style-type: none"> <li>For short-term travellers</li> <li>Doxycycline 100 mg/day is approved for a period of up to 8 weeks</li> <li>Take 2 days prior to prior to entry into malaria area</li> <li>Once daily while remaining in risk area</li> <li>Continue daily dose for 2- 4 weeks after last exposure</li> <li>Take with or after food; washed down with a full glass of water</li> <li>Take at least 2 hours before lying down</li> <li>Using Doxycycline may make the Contraceptive pill unreliable</li> <li>Women may consider using barrier methods for the duration of antibiotic therapy</li> <li>Side Effects include thrush, stomach &amp; bowel upsets, (particularly if medication is taken on an empty stomach) and sunlight sensitivity</li> <li>The exaggerated sunburn reaction may be minimised by avoidance of sunlight, using sunscreen and taking the drug in the evening</li> </ul> OR <b>Atovaquone and Proguanil (Malarone):</b> <b>Adult:250/100mg</b> Approximately 98% effective may be used in areas of Chloroquine resistance <ul style="list-style-type: none"> <li>Taken once a day, starting 1 day before entering malarial risk area and continuing for 1 week after leaving the malarious area</li> <li>It should be taken with food or milk</li> <li>This regime is simple and suited to business &amp; frequent travellers</li> <li>Malarone used for malaria prevention, the side effects are</li> </ul>	

	<p>uncommon</p> <ul style="list-style-type: none"> <li>• Considered the drug of choice, expensive approx \$100</li> <li>• Take 1-2 days prior to entry into malaria area</li> <li>• Once daily while remaining in risk area</li> <li>• Continue daily dose for 7 days after leaving</li> <li>• Safe for children over 11 kg</li> <li>• Interacts with rifampicin, rifabutin, tetracycline and metoclopramide</li> </ul> <p><b>Child: Refer to Travel Doctor/GP</b></p>	
<p><b>Meningococcal Vaccines</b> <b>S4</b> Required by Saudi Arabia for Hajj or Umra pilgrims visiting Mecca.</p>	<p><b>Meningococcal polysaccharide vaccines</b> Routine vaccination with 4vMenPV is not recommended. However, if the vaccine is indicated usually travel to risk areas such as sub-Saharan Africa, Sengal, Mauritania, Ethiopia, Burundi and Rwanda, the dosage and administration are as indicated below. <b>Adults and children &gt; 2 years:</b> 0.5mL dose SCI A single revaccination after 3-5 years is recommended for people at continued high risk of infection</p>	
<p><b>NSAIDS Moderate Pain</b> <b>S4</b></p>	<ul style="list-style-type: none"> <li>• Add to paracetamol if still in pain:</li> </ul> <p><b>Adults;</b></p> <ul style="list-style-type: none"> <li>• Naproxen 500mg initially</li> <li>• then 250 mg 6–8 hourly</li> </ul> <p><b>Children;</b></p> <ul style="list-style-type: none"> <li>• Ibuprofen 10mg/kg, 3–4 times daily</li> <li>• Not to exceed 600mg in 24 hours</li> </ul>	
<p><b>Norfloxacin Antibiotic - quinolone</b> <b>S4</b> Use only in; non-pregnant, non-seizure, non-steroid taking persons &gt;18 years of age</p>	<p><b>Non-Blood Traveller's diarrhoea; caused by contaminated food and water.</b> <b>Norfloxacin 400mg if;</b></p> <ul style="list-style-type: none"> <li>• More than 4 watery bowel actions in &lt;24 hours and feeling unwell i.e. nausea, abdominal cramps or fever</li> <li>• Take 2 (800mg) Norfloxacin tablets together with 1 Loperamide tablet</li> </ul> <p>If symptoms resolved in 12 hours;</p> <ul style="list-style-type: none"> <li>• No further treatment needed</li> </ul> <p>If symptoms remain unresolved in 12 hours;</p> <ul style="list-style-type: none"> <li>• Take 1 Norfloxacin (400mg) tablet every 12 hours for 2 days</li> <li>• Seek medical advice, especially if in Malaria risk area</li> </ul> <p><b>Blood in Diarrhoea;</b></p> <ul style="list-style-type: none"> <li>• Do not take Loperamide</li> <li>• Take 1 Norfloxacin (400mg) tablet every 12 hours for 3 days</li> <li>• Seek medical advice</li> </ul>	
<p><b>Paracetamol Simple Analgesia Mild Pain</b> <b>S2</b></p>	<ul style="list-style-type: none"> <li>• Paracetamol 500mg 1- 2 tablets</li> <li>• 4–6 hourly</li> <li>• Not to exceed 8 tablets in 24 hours</li> </ul> <p><b>Children:</b></p> <ul style="list-style-type: none"> <li>• 15mg/kg, 4–6 hourly</li> <li>• Not to exceed 4 doses in 24 hours</li> </ul>	
<p><b>Pneumococcal Vaccine Vaccines</b> <b>S4</b></p>	<p>23-valent pneumococcal polysaccharide vaccine <b>Adults and children &gt; 2 years:</b> 0.5mL dose, SCI / IMI, in the opposite limb to other injectable vaccines if possible Booster 5 years; a maximum of 2 revaccinations are recommended</p>	

<b>Rabies (Mérieux &amp; Rabipur) Vaccine S4</b>	<ul style="list-style-type: none"> <li>• 1ml reconstituted vaccine deep SC or IMI into the deltoid</li> <li>• Repeated 1ml doses at day 0, 7 and 28</li> <li>• Booster 1ml dose in 12 months</li> <li>• Then further boosters 1ml dose every 2 years for sustained antibody titres if required</li> </ul> <p>Rabipur is contraindicated to those who have an anaphylaxis to eggs Mérieux contains human albumin, inform patient of potential risk of transmission of unknown human infectious agents Refer to travel doctor - GP</p>	
<b>Roxithromycin Antibiotic - macrolide S4</b>	<p><b>Chest infection; fever &gt;38.5C, coughing green phlegm for more than 48 hours</b>  <b>Sinus infection; headache, fever and copious green mucous from nose and back of throat</b>  <b>Skin / wound infection; increasing redness and /or pus formation and fever</b>  <b>Dental infection</b></p> <ul style="list-style-type: none"> <li>• Roxithromycin 300mg once a day for 5 days, at least 15 minutes before food</li> </ul>	
<b>Temazepam S4</b>	<p><b>For travellers who experience insomnia at their arrival destination – jet lag</b>  <b>Temazepam 10mg</b></p> <ul style="list-style-type: none"> <li>• Should not be used if normal sleeping position cannot be achieved i.e. sitting up on a bus / plane etc</li> <li>• Take 10-20mg, 30 minutes prior to bedtime in a new time zone or on returning home</li> </ul>	
<b>Tinidazole Anti-infective: Nitroimidazoles S4</b>	<p><b>Giardiasis:</b> Explosive diarrhoea with bloating and rotten egg gas-like burping and flatulence  <b>Adults:</b> 2g as a single dose, taken with food</p>	
<b>Typhoid (Vivotif Oral) Vaccines S4</b> <i>To precede antimalarial prophylaxis by minimum of 3 days</i> Traveller's to areas of poor sanitation, backpackers. Vaccination must be completed at least 1 week prior to travelling.	<p><b>Ty21a Live attenuated vaccine</b></p> <ul style="list-style-type: none"> <li>• <b>Adults &amp; Children &gt; 6 years of age</b></li> <li>• Given by mouth, 1 hour before food</li> <li>• At least 8 hours between the administration of the inactivated oral cholera and oral typhoid vaccine</li> <li>• Capsules or a liquid suspension</li> <li>• An initial course of 1 capsule on days 1, 3 and 5</li> <li>• Protection is achieved 7 days after the last dose</li> <li>• May cause diarrhoea, nausea and stomach cramps within 24 hours of taking a capsule, if symptoms occur after 2<sup>nd</sup> capsule see Travel Doctor/GP</li> <li>• Must be stored at 2 to 8 °C, but will retain its potency for 14 days at 25°C</li> <li>• A booster is recommended every 3 years for people living in endemic areas, but every year for people travelling from non-endemic to endemic areas</li> </ul>	
<b>Typhoid Vi polysaccharide (Typherix and Typhim Vi) Vaccines S4</b>	<p><b>Adults &amp; Children ≥2 years of age;</b></p> <ul style="list-style-type: none"> <li>• 0.5 ml by IM injection</li> <li>• Recommend a booster 0.5ml dose 3 yearly if continued exposure to S. Typhi exists with either prolonged travel or residence in an endemic region</li> </ul>	
<b>Yellow Fever Vaccines S4</b> Compulsory for parts of Africa	<p><b>Yellow Fever Vaccination lasts 10 years</b>  West, East and Central Africa, tropical region of South America</p> <ul style="list-style-type: none"> <li>• Only available from Travel Doctors</li> <li>• Must be given at least 10 days before entry into a Yellow Fever</li> </ul>	Exit CPG and refer to Travel Doctor

and South America.	<p>area</p> <ul style="list-style-type: none"> <li>• Travellers should seek up to date Yellow Fever endemic zone information from WHO internet site</li> </ul>	
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## Formulary

Adrenergic Agonist S4		
Route	Drug / Dose	Indication
IMI	<b>Adrenaline 1:1000</b> <ul style="list-style-type: none"> <li>• Children 7–10 years (approx. 30 kg): 0.3 mL</li> <li>• Children 11–12 years (approx. 40 kg): 0.4 mL</li> <li>• Children 13 years and over (over 40 kg): 0.5 mL</li> </ul> <b>Adults (over 40 kg): 0.5mL</b> <ul style="list-style-type: none"> <li>• Repeat doses of adrenaline every 5 minutes until improvement occurs</li> </ul>	Patient with respiratory or cardiovascular signs of anaphylaxis Emergency treatment of severe anaphylaxis due to insect bites, drugs and other allergens. Symptomatic relief of respiratory distress due to bronchospasm
Analgesia S4		
Route	Drug / Dose	Indication
Oral	<b>NSAIDS</b> Add to paracetamol if still in pain: <b>Adults;</b> <ul style="list-style-type: none"> <li>• Naproxen 500mg initially</li> <li>• then 250 mg 6–8 hourly</li> </ul> <b>Children;</b> <ul style="list-style-type: none"> <li>• Ibuprofen 10mg/kg, 3–4 times daily</li> <li>• Not to exceed 600mg in 24 hours</li> </ul>	Moderate Pain
Anti-infectives S4		
Route	Drug / Dose	Indication
Oral	<b>Amoxicillin</b> Antibiotic - penicillin <ul style="list-style-type: none"> <li>• 250mg tds for 5 days</li> <li>• Chest infection; 500mg tds for 5 days</li> </ul>	Chest infection Dental infection Sinus infection Urinary Tract infection
Oral	<b>Augmentin Duo</b> Antibiotic - penicillin <ul style="list-style-type: none"> <li>• 1 Augmentin Duo bd for 5 days</li> <li>• Take with food</li> </ul>	Chest infection Sinus infection
Oral	<b>Azithromycin</b> Antibiotic - macrolide <b>Adults: Azithromycin 500mg</b> <ul style="list-style-type: none"> <li>• 1 Azithromycin 500mg tablet daily for 3 days</li> </ul> OR <ul style="list-style-type: none"> <li>• As a single dose 2 tablets, Azithromycin (1000mg) once</li> </ul> <b>Children; Azithromycin powder for oral suspension</b> <ul style="list-style-type: none"> <li>• 200mg/5ml reconstituted with 15ml of safe water;</li> <li>• Give 10mg/kg daily for 3 days</li> </ul>	Chlamydial infections LRTI Traveller's diarrhoea Typhoid URTI
Oral	<b>Cephalexin</b> Antibiotic - cephalosporin	Skin / wound infection Coral cuts

	<ul style="list-style-type: none"> <li>Cephalexin 500mg bd for 5-10 days</li> </ul>	
Oral	<p><b>Doxycycline</b> Antibiotics - tetracycline</p> <ul style="list-style-type: none"> <li>Doxycycline 100mg in persons &gt;8 years</li> <li>Take 1 in am and 1 in pm on the first day</li> <li>Then 1 daily for 6 days</li> <li>Take with food or milk</li> </ul>	<p>Chest infection Coral cuts Prophylaxis of malaria Skin / wound infection Sinus infection</p>
Oral	<p><b>Norfloxacin</b> Antibiotic - quinolone Use only in; non-pregnant, non-seizure, non-steroid taking persons &gt;18 years of age</p> <p><b>Norfloxacin 400mg if; Non-Blood Traveller's Diarrhoea</b></p> <ul style="list-style-type: none"> <li>More than 4 watery bowel actions in &lt;24 hours and feeling unwell i.e. nausea, abdominal cramps or fever</li> <li>Take 2 (800mg) Norfloxacin tablets together with 1 Loperamide tablet</li> </ul> <p>If symptoms resolved in 12 hours;</p> <ul style="list-style-type: none"> <li>No further treatment needed</li> </ul> <p>If symptoms remain unresolved in 12 hours;</p> <ul style="list-style-type: none"> <li>Take 1 Norfloxacin (400mg) tablet every 12 hours for 2 days</li> </ul> <p>Seek medical advice, especially if in Malaria risk</p> <p><b>Norfloxacin 400mg if; Blood in Diarrhoea;</b></p> <ul style="list-style-type: none"> <li>Do not take Loperamide</li> <li>Take 1 Norfloxacin (400mg) tablet every 12 hours for 3 days</li> </ul> <p>Seek medical advice</p>	<p>Traveller's diarrhoea</p>
Oral	<p><b>Roxithromycin</b> Antibiotic - penicillin</p> <ul style="list-style-type: none"> <li>Roxithromycin 300mg once a day for 5 days, at least 15 minutes before food</li> </ul>	<p>Chest infection Dental infection Sinus infection Skin / wound infection</p>
Oral	<p><b>Tinidazole (Simplotan)</b> <b>Adults:</b> 2g as a single dose, taken with food</p>	<p>Protozoal infections, eg giardiasis, trichomoniasis Amoebiasis (intestinal and extra-intestinal)</p>
<b>Anti-diarrhoeal S4</b>		
<b>Route</b>	<b>Drug / Dose</b>	<b>Indication</b>
Oral	<p><b>Loperamide 2mg</b></p> <ul style="list-style-type: none"> <li>2 capsules at once, then 1 after each loose bowel motion</li> <li>Maximum of 8 capsules in 24 hours</li> <li>Do not take Loperamide if diarrhoea is bloody</li> <li>Do not give Loperamide to children under 12 years</li> </ul>	<p>Traveller's diarrhoea; caused by contaminated food and water</p>
<b>Benzodiazepine S4</b>		

Route	Drug / Dose	Indication
Oral	<b>Temazepam 10mg</b> <ul style="list-style-type: none"> <li>Should not be used if normal sleeping position cannot be achieved i.e. sitting up on a bus / plane etc</li> <li>Take 10-20mg, 30 minutes prior to bedtime in a new time zone or on returning home</li> </ul>	For travellers who experience insomnia at their arrival destination – jet lag
<b>Vaccine S4</b>		
Route	Drug / Dose	Indication
Oral	<b>Cholera (Dukoral)</b> Oral inactivated <ul style="list-style-type: none"> <li>2 sachets mixed in 150ml of water</li> <li>Provides 60-70% protection against severe disease for 2 years</li> </ul> At least 8 hours between the administration of the inactivated oral cholera and oral typhoid vaccines	High-risk travellers, aid or refugee camp workers, persons planning extended stays in remote rural areas in close contact with the local population and for those visiting countries experiencing floods.
IMI	<b>Diphtheria, Tetanus, Pertussis (DTP, DTPa, dTp, dTpa)</b> <ul style="list-style-type: none"> <li>15-17 years dTp</li> <li>50 years and over dT, consider dTp</li> </ul> <b>Adults &amp; Children ≥ 10 years:</b> 0.5mL deep IMI	As a booster following primary immunisation
IMI	<b>Inactivated Hepatitis A vaccine:</b> <ul style="list-style-type: none"> <li>Havrix / Avaxim / Vaqta</li> <li>Single dose</li> <li>Dose repeated in 6-12 months</li> <li><b>Adults &amp; Children ≥ 2 years:</b> 0.5mL deep IMI</li> </ul>	Immunisation Hepatitis A
IMI	<b>Hepatitis A with Hepatitis B Vaccine</b> <ul style="list-style-type: none"> <li>Twinrix</li> <li>1ml dose, deep IMI</li> <li>Doses at 0, 1 and 6 months</li> <li></li> </ul>	Immunisation Hepatitis A & B combined
IMI	<b>Hepatitis A with Typhoid Vaccine</b> <ul style="list-style-type: none"> <li>Vivaxim</li> <li>Single dose</li> <li>Followed by Hepatitis A only booster at 6-12 months</li> <li></li> </ul>	Traveller's to areas of poor sanitation, backpackers
IMI	<b>Hepatitis B vaccine</b> <b>Adults &gt; 19 years:</b> <ul style="list-style-type: none"> <li>20mcg/1mL dose</li> <li>Deep IMI</li> <li>Doses at 0, 1 and 6 month intervals</li> </ul> <b>Children 10-19 years</b> <ul style="list-style-type: none"> <li>10mcg/0.5mL doses at 0, 1 and 6 month intervals</li> </ul> <b>Accelerated vaccine:</b> <b>Adult only:</b> <ul style="list-style-type: none"> <li>At 0, 7 and 21 days in exceptional circumstances, eg travel within 1 month of beginning course</li> </ul>	Immunisation Hepatitis B

IMI / SCI	<p><b>Influenza Vaccine</b>  Immunisation 2 weeks prior to travel  <b>Adults and children &gt; 36 months:</b></p> <ul style="list-style-type: none"> <li>• 15mcg/0.5mL deep SCI or IMI</li> </ul> <p><b>Children ≤9 years receiving influenza vaccine for the first time:</b></p> <ul style="list-style-type: none"> <li>• Two 0.5mL doses, IMI or SCI, at least 1 month apart</li> </ul>	Immunisation Influenza
Oral	<p><b>Atovaquone and Proguanil (Malarone):</b>  <b>Adult:250/100mg</b></p> <ul style="list-style-type: none"> <li>• Taken once a day, starting 1-2 days before entering malarial risk area and continuing for 1 week after leaving the malarious area</li> <li>• It should be taken with food or milk</li> <li>• Once daily while remaining in risk area</li> <li>• Continue daily dose for 7 days after leaving</li> <li>• Safe for children over 11 kg</li> <li>• Interacts with rifampicin, rifabutin, tetracycline and metoclopramide</li> </ul> <p><b>Child: 6.25/25mg</b></p> <ul style="list-style-type: none"> <li>• 11-20kg 1 tablet/daily</li> <li>• 21-30kg 2 tablets/daily</li> <li>• 31-40kg 3 tablets/daily</li> </ul> <p>40kg and over use adult dose</p>	Malaria prophylaxis
SCI	<p><b>Meningococcal</b>  <b>Adults and children &gt; 2 years:</b></p> <ul style="list-style-type: none"> <li>• 0.5mL dose SCI</li> <li>• Booster 2 to 3 years</li> </ul>	Indicated in travel to risk areas such as sub-Saharan Africa, Sengal, Mauritania, Ethiopia, Burundi and Rwanda. Required by Saudi Arabia for Haj or Umra pilgrims visiting Mecca.
IMI/SCI	<p><b>Pneumococcal Vaccine</b>  23-valent pneumococcal polysaccharide vaccine  <b>Adults and children &gt; 2 years:</b></p> <ul style="list-style-type: none"> <li>• 0.5mL dose, SCI / IMI, in the opposite limb to other injectable vaccines if possible</li> <li>• Booster 5 years</li> </ul>	Immunisation Pneumococcal
IMI/SCI	<p><b>Rabies (Mérieux &amp; Rabipur)</b></p> <ul style="list-style-type: none"> <li>• 1ml reconstituted vaccine deep SC or IMI into the deltoid</li> <li>• Repeated 1ml doses at day 0, 7 and 28</li> <li>• Booster 1ml dose in 12 months</li> <li>• Then further boosters 1ml dose every 2 years for sustained antibody titres if required</li> <li>• Rabipur is contraindicated to those who have an anaphylaxis to eggs</li> </ul> <p>Mérieux contains human albumin, inform patient of potential risk of transmission of unknown human infectious agents</p>	Rabies prophylaxis
Oral	<p><b>Typhoid (Vivotif Oral)</b>  <b>Ty21a Live attenuated vaccine</b></p> <ul style="list-style-type: none"> <li>• <b>Adults &amp; Children &gt; 6 years of age</b></li> </ul>	Traveller's to areas of poor sanitation, backpackers. Vaccination must be completed at

	<ul style="list-style-type: none"> <li>• At least 8 hours between the administration of the inactivated oral cholera and oral typhoid vaccine</li> <li>• Capsules or a liquid suspension</li> <li>• An initial course of 1 capsule on days 1, 3 and 5</li> <li>• Protection is achieved 7 days after the last dose</li> <li>• A booster is recommended every 3 years for people living in endemic areas, but every year for people travelling from non-endemic to endemic areas</li> </ul> <p><b><i>To precede antimalarial prophylaxis by minimum of 3 days</i></b></p>	least 1 week prior to travelling.
IMI	<p><b>Typhoid Vi polysaccharide (Typherix and Typhim Vi)</b>  <b>Adults &amp; Children ≥2 years of age;</b></p> <ul style="list-style-type: none"> <li>• 0.5 ml by IM injection</li> <li>• Recommend a booster 0.5ml dose 3 yearly if</li> <li>• continued exposure to S. Typhi exists</li> </ul>	Traveller's to areas of poor sanitation, backpackers. Vaccination must be completed at least 1 week prior to travelling

Diarrhoea is the most common travel-related illness. Up to 50% of all international travellers will experience a diarrhoeal illness. Traveller's diarrhoea is generally a short, mild illness lasting an average of 3-5 days. However, it can be more severe and debilitating, especially in younger travellers.

Most cases of diarrhoea are caused by toxin-producing bacteria (70-80%), a virus or a parasite (10-12%). The infection is always contracted by consuming contaminated food or water.

### **Prevention**

Prevention is the best option. Pay particular attention to safe eating and drinking practices, as well as maintaining a high level of sanitation and hygiene.

### **Eating and Drinking Safely**

When choosing food the golden rule is: "BOIL IT, COOK IT, PEEL IT OR FORGET IT"

#### **FOODS TO AVOID:**

- Unpasteurised dairy products: unpasteurised milk, yoghurt or cheese
- Raw or undercooked meat, seafood (especially shellfish and prawns) and processed meats, such as salami
- Reheated or cold foods
- Ice cubes
- Salads
- Any food in contact with flies, food handled by dirty hands

#### **SAFE FOODS:**

- Fruit with skin or peel intact – remove skin or peel before eating
- Fruit or vegetables pre-soaked in an iodine or permanganate solution
- Recently-cooked meals made from fresh ingredients and served piping hot. Look for food outlets with a high turnover of clients
- Tinned food, wipe the top of the tin before opening
- Freshly-baked bread

#### **KEEP CLEAN:**

- Cover food to protect it from flies
- Wash and dry hands before preparing or eating food
- Avoid hand contact with the mouth
- Maintain strict hygiene habits after toileting
- Use an antibacterial hand wash or wipes before eating
- Ensure cutlery and crockery are clean

#### **DRINKING:**

NEVER trust the local water supply in a developing country without first treating it effectively. In general, it is safer to assume that all tap water is contaminated. There are several ways to purify water if safe, bottled water is not available. Coffee or Tea served and drunk hot without milk is generally safe.

#### **BOILING**

- Vigorous boiling for 1 minute is the most effective means of water purification
- Bringing water to the boil will kill all bacteria
- To ensure that parasitic cysts, eggs and larvae are killed, boiling water for five minutes is recommended

- At higher altitudes, longer boiling times may be needed; in general allow one minute for every 300m above sea level

#### **IODINE TABLETS AND SOLUTION**

- Add four drops of 2% iodine solution per litre of water and allow it to stand for 20-30 minutes; use iodine tablets as per the manufacturer's recommendations
- Do not use iodine if allergic to iodine or suffer from a thyroid condition
- Avoid frequent use during pregnancy

#### **CHLORINE TABLETS AND SOLUTION**

- Are less effective than iodine but may be more appropriate in certain situations, such as for a traveller with thyroid condition
- Micropur tablets combine chlorine and silver nitrate (one tablet per litre) and offer a safe, cheap, effective and palatable option
- Water purification devices such as PUR water purifiers which house filters with an additional iodine core

Bottled carbonated drinks are a good source of uncontaminated fluid and are generally available worldwide. The carbonation process kills most bacteria. Insist that the bottle is opened in front of you and drink from it, preferably using a straw.

#### **Ice**

Ice is only as safe as the water from which it is made; neither alcohol nor cordial render contaminated ice or water safe.

#### **Symptoms of Traveller's Diarrhoea**

Regardless of how careful traveller's are, many will experience at least one episode of diarrhoea when travelling to a developing country. Caffeine, alcohol and aspartame; found in diet drinks, can aggravate diarrhoea, especially in people susceptible to stomach upsets.

**Mild:** Symptomless, nuisance diarrhoea usually disappears without treatment within a day or two. Watery diarrhoea often associated with, abdominal cramps, nausea and vomiting.

**Dysentery:** Any diarrhoea containing blood or pus. Usually caused by bacteria, but may also be caused by an amoeba (amoebic dysentery). This form will generally require treatment with antibiotics and a medical review.

**Giardia:** Explosive diarrhoea with bloating and rotten egg gas-like burping and flatulence. Specific treatment is required.

#### **Treatment**

Most cases resolve spontaneously with fluid replacement in 3–4 days. Persistent or complicated diarrhoea may require further drug treatment. **Replacing lost fluids and salts is crucial in treating diarrhoea.**

#### **Dehydration**

Dehydration is the most serious consequence associated with most forms of traveller's diarrhoea. Traveller's experiencing diarrhoea should drink small amounts of clean water frequently to maintain good urine output (urinating twice a day, preferably more). The use of commercially-available rehydration salts, such as Gastrolyte or Pedialyte is also recommended.

An alternative is adding 6 teaspoons of sugar and 1 teaspoon of salt to 1L of water.

**Fluids with too much sugar, such as fruit juices and soft drinks can worsen dehydration.**

It is preferable to dilute juices and soft drinks with 4 parts of boiled (and cooled) water to 1 part fruit juice or soft drink.

#### **One sip at a time**

Fluid lost through vomiting or persistent diarrhoea must be replaced to ensure recovery. The best

way to replace fluids is with small, regular sips of fluid, not by the glassful. This process allows for continual rehydration. Drink at least 2 glasses for every bowel movement. Urine colour is a good indicator of your fluid levels. Aim to maintain clear-coloured urine. Small amounts of dark-coloured urine may indicate the need to increase fluid intake.

#### **Diet and travellers' diarrhoea**

Food is important to maintain energy and help the bowel to heal.

- Multiple small meals may be better tolerated
- Try to match food consistency to stool consistency
- Light foods are easiest to tolerate
- Eating rice may assist early recovery
- Avoid dairy products, fatty foods and spicy foods until diarrhoea has settled
- Breast-feeding infants should continue being breastfed and solids should not be discontinued for more than 24 hours if possible.

#### **ANTIBIOTIC REGIME:**

Emergency antibiotics can be carried to treat diarrhoea if simple measures do not work.

- Norfloxacin is effective against bacterial infections
- Tinidazole (Simplotan) is usually effective against Giardiasis
- Must be taken as per directions on the box

#### **ANTIMOTILITY REGIME:**

Antimotility drugs may control frequency of bowel movements but do not kill bowel infections. Using these agents may cause infections to stay in the intestines longer.

Antimotility drugs are dangerous for young children and pregnant women; they are useful in emergencies when a toilet is unavailable. Use for longer than 24 hours should be avoided.

- ***Should not be used if diarrhoea is associated with a high fever or with blood or pus in the stool***
- Loperamide (Gastrostop, Imodium)
- Diphenoxylate (Lomotil)
- Codeine

<b>NOTES:</b>

If at all concerned please seek urgent medical advice.

Reference:  
Travelvax. 2008. <http://travelvax-px.rtrk.com.au>  
[www.traveldoctor.com.au](http://www.traveldoctor.com.au)

reviveclinic

*Approval Signatories –Travel Health*  
Guidelines for NP Practice

Name:

Position: **General Practitioner**

Professional Qualification:

Organisation:

Signature:

Name:

Position: **Pathologist**

Professional Qualifications:

Organisation:

Signature:

Name:

Position: **Pharmacist**

Professional Qualifications:

Organisation:

Signature:

Name:

Position: **Nurse Practitioner (Designate)**

Professional Qualifications:

Organisation:

Signature: