



International  
Medical Clinic

International Doctors  
Caring for You



# TRAVEL HEALTH & VACCINATIONS

**Welcome to  
International Medical Clinic**

International Medical Clinic (IMC) specializes in family, paediatric and travel medicine. We have been providing medical care in Singapore since 1999 and are a trusted medical provider for the international community.

We are dedicated to the highest standards of patient care and understand how to support you and your family's needs. Our doctors are experienced general practitioners and specialist paediatricians and are able to consult in a broad range of medical issues. Our quality healthcare extends beyond the care offered within our clinics, to the selection of specialists and other medical service providers which we recommend, as and when needed.

*This complimentary guide is provided for information only, and is not intended to replace professional medical advice. Please consult your doctor or obtain other information as necessary.*

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## **Travel Health**

Whilst Singapore itself is relatively free of certain tropical diseases, the surrounding areas around Asia are not. Expatriate life in Singapore often includes extensive travel for business people, families for leisure and children on school trips.

It is therefore important to be aware of health issues related to regional and international travel.

## **Travel Medicine Consultation**

A doctor's consultation is required prior to vaccinations being administered or medications being provided. Issues which should be discussed at this time include food and water safety, mosquito avoidance measures, pre-existing medical problems and the need for prescription drugs. Medical advice should be sought at least 4 to 6 weeks before departure. For an extended trip or relocation overseas, ideally allow up to 6 months prior to your departure. Remember — it is never too late to seek advice.

## **Drinking and Eating Safely**

Where sanitation is poor, drinking water or food can easily become contaminated with organisms that have unpleasant effects on our gut. Travellers need to be more careful with their personal hygiene habits when staying in less developed areas than when they are at home in a 'safer' environment. A simple and effective way of decreasing the ingestion of unwanted organisms is to wash hands with soap prior to eating, or to use an alcohol hand rub. Other considerations include:

## **Drinking**

- Assume all water is contaminated (this does not apply in Singapore);
- Never use ice unless you know it has been made from safe water (this includes luxury hotels in areas of concern);
- Boil water for 5-10 minutes. This is the most effective way to make sure water is safe;
- If safe water is unavailable, use bottled or canned fluids;
- Use clean water (bottled or boiled) to brush teeth.

## **Eating**

*Do not eat the following:*

- Uncooked, undercooked food or reheated food;
- Uncooked fruits or vegetables that you do not prepare yourself;
- Ice cream (unless it is an internationally packaged and labelled brand) and dairy products;
- Oysters, clams, mussels, barbecued prawns or mud-crabs;
- Cooked food which has been left at room temperature or exposed to flies;
- Dishes requiring a lot of handling to prepare.

*Do eat the following:*

- Freshly cooked (fried, boiled, steamed) food;
- Peelable fruits (bananas, citrus fruits, etc);
- Food of acceptable brands in cans or sealed packs;
- Local food served in well patronised, busy restaurants;
- Off clean plates with clean cutlery;
- Food prepared by yourself.

## Traveller's Thrombosis

### What is traveller's thrombosis ('Economy Class Syndrome')?

Venous thrombo-embolism (VTE)/Deep-vein thrombosis (DVT) is also known as "Economy Class Syndrome". It is a condition where a blood clot develops in the leg veins after long distance travel. It can occur in any class of travel and even on land based journeys (car and train) as it is caused by prolonged immobility and cramped conditions. It should be more correctly termed "traveller's thrombosis".

The blood clot causes pain, warmth and swelling in the legs. In some cases the clot travels to the lungs and causes a blockage of the blood vessels there; this will cause shortness of breath. If the clot is large enough, sudden death can ensue.

The actual risk is very low for most people. However, it is wise to seek medical advice should you experience any of the above symptoms after a long journey.

### How to reduce your risk

**Ask your travel agent about a stopover** — if your travelling time is greater than 4 hours you are at greater risk.

**Assessing your risk** — speak to your doctor before you plan a long-distance trip or if you travel frequently. He or she can assess your individual risk factors and recommend appropriate preventive measures.

In general, risks factors for VTE include:

- A history of previous VTE
- Active malignancy, gross obesity, marked immobility
- Lower limb injury, especially fractures in a cast

- Persons with clotting abnormalities
- Older age (over 60 years old)
- Large varicose veins
- Travellers on oestrogen containing oral contraceptives or hormonal replacement therapy
- Pregnancy
- Recent surgery, stroke or heart attack
- Smoker
- Overweight travellers

**Prevention** — on the plane be sure to:

- Take regular walks around the plane
- Do isometric exercises of the thighs and calves
- Luggage should not press on the back of your legs
- Use a foot rest if available
- Avoid dehydration by drinking water (1 glass per hour) and avoiding alcohol and caffeinated drinks.

Depending on your risks and medical condition, your doctor may also recommend:

- Below knee graduated compression stockings, which must be properly fitted
- Aspirin
- Low molecular weight heparin injections

## **Skin Care in the Tropics**

Skin disorders can be more common in the tropics. Babies especially are frequently troubled by heat rashes so dressing in natural fibres and loose clothing can prevent this.

In this tropical region the intensity of the sun's rays is strong, and the development of premalignant and malignant skin tumours and skin ageing are long-term side effects of ultraviolet exposure.

The shortest wavelength, ultraviolet B (UVB), is mainly responsible for the premalignant and malignant skin changes. Longer wavelength ultraviolet A (UVA) is responsible for photo-ageing of the skin (i.e. dry skin, wrinkles, loss of elasticity and uneven pigmentation), and some forms of cancer.

### **How to minimise sun-induced skin damage?**

- Avoid the noonday sun;
- Seek natural shade;
- Wear appropriate clothing and hats;
- Regular and adequate application of a broad-spectrum sunscreen with a sun protection factor (SPF) of 30 or above.

## **Sun Protection**

Excessive sun exposure is a health hazard due to the effect of ultraviolet radiation on the skin. Sunburn can range from redness to blistering. Besides sunburn, ultraviolet radiation can also cause pre-mature skin cancers. Vulnerable groups are babies and children, fair skinned people, those with albinism or previous skin cancer, and those on medications such as tetracycline.

## **Bird Flu**

Bird flu is a disease affecting birds that is caused by several types of flu viruses. Also known as Highly Pathogenic Avian Influenza (HPAI), this is an extremely contagious disease affecting wild birds and poultry, and has been responsible for human outbreaks and deaths in Asian countries.



Bird flu spreads to humans mainly through contact with infected birds, which shed the virus in their saliva, nasal secretions and faeces. Very rarely, inefficient and limited human-to-human transmission may occur.

There is currently no evidence that you can acquire avian influenza by eating eggs, chicken, and other poultry that has been thoroughly cooked. If you intend to travel to countries with cases of avian influenza, you should adopt the following practices to minimise your risk of acquiring avian influenza:

- Avoid contact with live poultry and birds, especially for children;
- Avoid crowded areas and stay in places with good ventilation;
- Wash hands thoroughly with soap and water after handling live poultry and birds, and when they are dirtied by respiratory secretions e.g. after sneezing;
- Observe good personal and environmental hygiene.

There is currently no commercially available vaccine for bird flu. The Singapore government has a stock pile which will be released if necessary. Note that the vaccine for normal influenza does not give protection against bird flu. Antiviral drugs can be used in the prevention and treatment of bird flu.

## **Insect Avoidance**

Insect bites, apart from being a nuisance, may spread diseases like dengue fever and malaria. Bites may also get infected, requiring treatment with antibiotics. Travellers are advised that they can reduce their risk by remaining in well-screened or air-conditioned areas when possible, wearing clothing that adequately covers the arms and legs, and applying insect repellent to both skin and clothing.

The most effective repellents are those containing N, N-diethyl-m-toluamide (DEET).

The RID range of insect repellents from Australia is exclusive to IMC. RID with its active ingredient of DEET, has been proven for decades as most effective in repelling biting insects. IMC carry the Tropical Strength range, which provides up to 6 hours protection, while our low irritant Kids RID is suitable for children over 6 months of age and provides protection for up to 3 hours.

## **Dengue Fever**

Dengue fever is present in Singapore. It is a viral infection with flu-like symptoms, spread by Aedes mosquito, unlike malaria mosquitoes, they can be found in the city area in daylight hours. There is no treatment and the disease can be serious due to bleeding risks.

Prevention by mosquito avoidance measures is the most effective action e.g. RID (insect repellent) and mosquito nets. Also, remove stagnant water around the home (e.g. vases), and note that the risk is higher with a house and garden.

Anti-malarial tablets do not offer any protection against dengue fever. Insect avoidance measures offer the best protection against dengue.

Dengue viruses are found in many countries of the Caribbean, Central and South America, Mexico, the Pacific Islands, most tropical countries of Asia and parts of tropical Africa. Cases of Dengue Fever in most tropical areas have increased in recent years.

The symptoms — fever, severe headache, joint and muscle pain, rash and sore throat — usually appear 5-8 days after being bitten by the offending mosquito. The rash, which develops on the 3<sup>rd</sup> to 5<sup>th</sup> day of the illness, spreads from the stomach to the arms, legs and face. A few days after the rash appears, the fever breaks and recovery begins.

Dengue Haemorrhagic Fever is a rare but potentially fatal complication of Dengue Fever. This is more common in India and Southeast Asia, particularly amongst those who have had dengue fever before.

Any persons suspected of having dengue fever should be observed for signs of bleeding or bruising and seek urgent medical attention if this happens. Diagnosis is by blood test. It is usual practice to monitor the platelet count until full recovery. This may require repeated blood tests.

The disease is endemic in many parts of the tropics. Outbreaks have occurred in recent years in Africa, Southeast Asia, South Asia (e.g. India and Sri Lanka), and the Indian Ocean islands. In Singapore, there has been a 20% spike in cases between 2017 and 2018. There is now a vaccine against the dengue virus, however is only suitable when one had contracted dengue at least once before. It can be given as soon as one month after the dengue illness.

## **Chikungunya Fever**

Chikungunya fever, like dengue fever, is a mosquito-borne disease and the best way to prevent chikungunya fever is to take precautionary measures to prevent mosquito breeding around the house and to protect against mosquito bites.

Imported cases of chikungunya fever have also been reported in Europe, US, South America and Asia amongst travellers returning from chikungunya fever affected areas. The first outbreak of this disease in Singapore was in January 2008 and the last spike in cases was in 2013.

There is no effective vaccine for the prevention of chikungunya fever.

## **Malaria**

Malaria is a serious and sometimes fatal disease caused by a parasite that commonly infects a certain type of mosquito which feeds on humans. People who get malaria are typically very sick with high fevers, shaking chills, and flu-like illness.

Based on the risk assessment, specific malaria prevention interventions should be used by the traveller. Often this includes bite avoidance, treated bed nets, and specific medicines to prevent malaria. A consultation with a doctor is highly recommended.

## **Snake Bites**

Snakes are found in the parks and around some housing areas, especially near undeveloped land. They can be poisonous, and the public hospitals carry the necessary anti-venom.

In case of a snake bite:

- Keep the victim as still as possible;
- Do not wash, cut, manipulate the wound, apply ice or use a tourniquet;
- Immediately bandage the bite site very firmly (not too tight). A 15cm crepe bandage is ideal. This should extend above the bite site for 15cm;
- Splint the limb to immobilise it;
- Transport to a medical facility for definitive treatment;
- Do not give alcoholic beverages or stimulants;
- If possible (i.e. it poses no danger to others) the dead snake should be brought along.

## Travel Vaccinations

Vaccinations provide protection against diseases you might be exposed to during travel. For many countries no vaccinations are necessary apart from booster doses of those generally given during childhood i.e. polio, tetanus, diphtheria and possibly measles. Hepatitis A & B vaccinations are also advisable.

On the other hand, a number of more exotic vaccines may be recommended for those venturing off the beaten path. Vaccinations are not the only reason to see a doctor before travelling. On average about 30-80% of travellers to developing countries will suffer a travel related illness, some with potentially serious consequences.

### Recommended for Travel:

- Hepatitis A
- Typhoid
- Influenza

### Special Situations:

- Yellow fever
- Meningitis ACWY
- Meningitis B & C
- Cholera/Traveller's Diarrhoea
- Japanese B Encephalitis
- Rabies

## **Hepatitis A**

Hepatitis A is a viral disease of the liver causing fever, nausea and jaundice and is the most common vaccine preventable health problem faced by travellers to less developed regions of the world. Hepatitis A can be contracted from contaminated food or water. Even those staying in “5 star” or resort accommodation may be exposed.

The Hepatitis A vaccine can be given to adults and children age 1 year and older. The vaccine requires two doses 6 months apart and gives immunity for about 50 years or perhaps lifetime. The vaccine is very well tolerated. The vaccine can also be given in a combined form with Hepatitis B vaccine.

## **Typhoid**

Typhoid is a bacterial infection transmitted through contaminated food, water or ice, raw seafood (in particular shellfish), raw fruit and vegetables, milk and milk products. It is often acquired from food contaminated by unhygienic food handlers.

Typhoid vaccination is strongly recommended for travellers to areas where environmental sanitation is poor. The vaccine is used from age 2 onwards and is very well tolerated. It is given as a single dose vaccine which gives immunity for 2-3 years. An oral preparation of the vaccine is also available for age 6 and above, with a course of 4 doses over 1 week which will give a 5 year coverage.

## **Meningococcal Vaccine**

This vaccine offers protection against infections caused by meningococcal groups A, C, W & Y. Meningococcal infections can cause severe blood sepsis, meningitis or a combination of both.

Meningitis is an infection of the lining of the brain. The infection is transmitted from person to person via respiratory droplets (i.e. through coughing and sneezing). High risk groups include travellers on the Haj pilgrimage, where large crowds are expected.

Some countries' national immunisation schedules recommend the meningococcal vaccine to children age 11-12 years. It is also recommended to previously unvaccinated adolescents at high school entry (at approximately age 15 years) as well as to previously unvaccinated college students living in dormitories.

### **Meningococcus B and C Vaccine**

Meningococcal infections can cause severe blood sepsis, meningitis or a combination of both in humans. It is most common in infants under 5 years of age, and in teenagers between 15 to 19 years. There are 5 groups of meningococcus that cause disease in humans; and Groups B and C are the most common types in developed countries.

Meningococcus C causes up to 40% of meningitis and can be effectively protected against with the vaccines, which are given separately. It can be given as young as 2 months of age for Men B (3 months for Men C) however we urge you to discuss with the doctor for further specific details. It does not prevent meningitis caused by other bacteria or viruses.

### **Japanese B Encephalitis**

This is a viral infection that may cause severe brain inflammation and is transmitted by a species of mosquito which breeds in rice paddies and is common in Asia. Vaccination is recommended for long-term travellers depending upon their itinerary and time of travel, and for residents (China, Thailand, Indonesia, Philippines) in at-risk destinations.

Depending on which brand of vaccine is used, the course consists of 2 or 3 doses over the course of a month and can be associated with mild local and/or generalised reactions.

### **Rabies**

Rabies is a fatal infection transmitted to humans via the bite of a rabid animal. Singapore is rabies-free but rabies is present in most other countries in Asia. Pre-exposure rabies vaccine is recommended for long-term travellers and those who may be occupationally exposed. Prolonged time in the outdoors (e.g. trekking, cycling) also increases risk of exposure. Children are at higher risk of exposure mainly due to less accurate risk assessment of a situation. It is available in a 3 dose schedule which is given over 1 month. Seek immediate medical attention if you experience an animal bite in any country known to have rabies, even after pre-exposure vaccination.

### **Yellow Fever**

Yellow fever is a serious mosquito-borne viral infection which causes Haemorrhagic Fever. Vaccination against yellow fever is a compulsory requirement by the WHO for travel to many parts of Africa and South America. A vaccination certificate may be required to enter an infected country or upon leaving an infected country and entering the next country. Singapore also has its guidelines for entering post travel.

Yellow fever vaccinations can only be obtained from registered vaccination centres. All branches of International Medical Clinic are registered yellow fever vaccination centres in Singapore.

The vaccine is single dose, which is now valid for life. It is safe to use in children over 9 months of age.



## **Cholera**

Cholera is a serious food/water borne infectious illness which is relatively common in developing countries. High risk food include raw seafood; outbreaks are also known to occur in disaster zones and areas with extremely poor sanitation. The vaccine available comes in an oral form. Care with foods eaten and using a “safe” water source are the keys to preventing the illness.

## OUR LOCATIONS



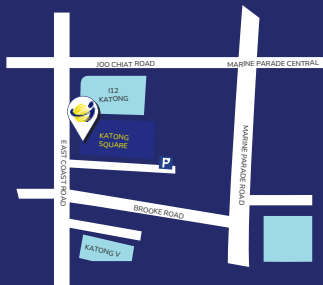
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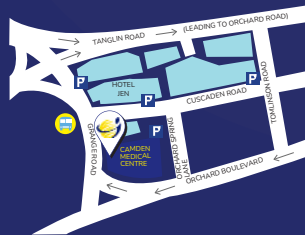
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