

FISA Medical Information for the 2016 Olympic and Paralympic Games in Rio de Janeiro, Brazil (at 220216)

The following health information has been compiled by the FISA Sports Medicine Commission after significant consultations with multiple international public health and infectious disease experts. FISA would like to thank all of these experts who assisted in developing these recommendations.

Although Rio de Janeiro has specific issues, most of these recommendations are standard for anyone visiting tropical or sub-tropical areas of South America and are provided as a guideline to use for individual health and safety.

1. Climate

Rio is situated in the tropics, August being mid-winter; a moderate climate can therefore be expected. The daytime temperature is usually between 20°C and 30°C falling to approx. 20°C at night. The air humidity measures 60% to 80% with a 20% chance of rainfall (occasional heavy showers). The prevailing ocean breeze gradually increases during the day and is most prevalent close to the beaches. The climate is expected to be “comfortable” due to the persistent winds but the potential for heat stress or increased thermal load will exist on warmer days.

2. Environmental issues

- Rio is a large city closely integrated with tropical forest, mountains and the ocean. There are numerous favelas (improvised living areas without municipal sanitary facilities) throughout the city and in close proximity to the rowing venue. The sewage system in the favelas is nonexistent in many cases and insufficient for the size of the favelas. With heavy rains this results in overflow of raw sewage (increased fecal contaminants as indicated by e-coli and enterococcus counts) into the rivers, lagoons and the ocean.
- The official bathing beaches are generally clean although after rain the e-coli count increases (monitored and reported here www.rio.rj.gov.br/web/smac). It is **Strongly Recommended** that athletes should not partake in any recreational bathing in the ocean before competition.
- Ingestion of water from the lagoons or the sea should be avoided.
- After being in or on the water of the lagoons, shower with soap as soon as possible to minimize the risk of infection. Take extra care with open skin wounds or open blisters.
- Air quality in Rio is generally good due to the sea breeze although dust pollution is present in dryer spells. Allergen levels are moderate from the plants and trees.

3. Food and hygiene

Food and drinking water borne illnesses are a significant issue. The highest risk is with uncooked food like shellfish, eggs, vegetables and fruits, ice cream and foods not in controlled refrigeration such as cold meats or salad bars. The risk is highest at street vendors or market restaurants.

Apart from vaccinations (as discussed below) there are a number of basic precautions to take.

- Avoid hand to mouth-contact (the average person touches their face more than once per minute).
- Wash hands with soap before each meal. In addition hands should be disinfected by alcoholic disinfection solution before meals.
- Athletes should only eat at the hotel, venue or at the Olympic or Paralympic Village where food preparation is monitored and controlled. As noted avoid the high-risk foods above (“cook it, peel it or forget it”).

- Water from the tap should never be drunk unless it is explicitly marked as drinkable (or potable). Note that this includes ice not prepared from potable water. Drink water only from sealed bottles and use bottled water to brush your teeth.
- Hands and oar hand-grips should be disinfected by alcoholic disinfection solution regularly after contact with lagoon water (recommended after each row).
- Skin disinfection could be done with an alcohol-based solution e.g. Octenisept (Octenidin / ethanol solution).
- As soon as possible after training on the lagoon, rowers should shower with soap and dry thoroughly.

The official hotels and the Village have highly controlled hygiene standards but the above precautions are still recommended.

Use basic hygiene to prevent the spread of infections. If you experience signs of infection (coughing, fever, dizziness, nausea) vomiting or diarrhea, inform your team doctor immediately, self-isolate and avoid contact with other athletes, disinfect your hands with alcoholic disinfection solution, cough into your sleeve / elbow.

4. Infectious disease and vaccination recommendations

The following recommendations have been made by international experts for all individuals travelling to Brazil for the Games.

a. Travel vaccinations

- **Strongly recommended**

Hepatitis A: All staff and athletes should be vaccinated. Note this is a series of vaccinations and should be started 6 months before travel for maximum efficacy.

Typhoid fever (Salmonella): Especially recommended if one will be travelling post Games or eating at non-games venues. Given the prevalence of typhoid and non-symptomatic carriers in Brazil it is still recommended for Games participants.

Influenza: The latest available influenza vaccine should be used (“suggest” is a bit vague). A second dose at home should be considered if the first dose was greater than six months previously, because immunity does decrease and it will be the southern hemisphere influenza season in July and August. The WHO decides on influenza strains in February, so new vaccines may not yet be available until close to Games time.

- **Consider**

Dukoral: Protection is modest, but risk of traveller’s diarrhea is high as noted above. Take at least three weeks before trip.

b. Updating routine vaccinations

It is strongly recommended that all routine vaccinations be up to date, including:

- **Polio (Highly recommended)**
- **Tdap (Tetanus, Diphtheria and Pertussis)**
- **Varicella (Chicken Pox):**
- **MMR (Measles Mumps and Rubella):**

c. Mosquito Borne Diseases

We recommend that you refer to the travellers' web sites (some are listed below) for up to date guidelines for travel to specific areas outside of Rio - general advice is provided below.

- **Malaria:** Prophylaxis is not needed specifically for Rio but is recommended for travel into Amazonas, Pantanal or other South American Countries.
- **Zika/Dengue/Chickungunya:** Brazil is an endemic region for Zika, Dengue and Chickungunya infections. Dengue and Chickungunya are not common in the Rio area but have been reported in regions outside of Rio. Zika has been reported throughout Brazil, including Rio.

These are all mosquito borne diseases transmitted primarily by the Aedes mosquito (there have been rare reports of Zika transmitted sexually and through blood transfusions). Although Zika is not a new disease there has been a significant increase in the number of Zika cases in South America since May 2015 and information is constantly being updated. There has been extensive reporting about Zika recently because of the potential risk to pregnant women and the developing fetus.

Fortunately July and August are after the "peak" mosquito seasons for Rio and the Brazilian health authorities are taking significant steps to reduce mosquito-breeding conditions before and during the games. Even with these measures, it is important to protect yourself against mosquito bites:

- 20-30% DEET containing products are most effective.
- Avoid combination products that contain both sunscreen and mosquito repellants.
- Put sunscreen on first, wait a half hour and then apply the mosquito repellent.
- Long sleeved clothing and clothing with mosquito repellent permethrin will also help reduce mosquito bites.

As medical information on the Zika virus and its possible link to microcephaly is rapidly evolving, it is strongly recommended that contact is made with NF or NOC doctors as well as personal physicians and that relevant informational websites are consulted regularly for the latest information and travel recommendations. The FISA Sports Medicine Commission is always available to assist with information.

Suggested relevant informational websites:

- **CDC resource on mosquito bite prevention here ENG**
http://www.cdc.gov/chikungunya/pdfs/fs_mosquito_bite_prevention_travelers.pdf
- **CDC resource on Zika Virus here ENG** <http://www.cdc.gov/zika/index.html>
- **WHO resource on ZIKA here ENG** <http://who.int/mediacentre/factsheets/zika/en/>
- **IOC statement on ZIKA – ENG and FRA here:**
- http://www.worldrowing.com/mm//Document/General/General/12/22/47/2016-01-29-IOCStatementonZika-IF-eng_Neutral.pdf
- http://www.worldrowing.com/mm//Document/General/General/12/22/48/2016-01-29-IOCStatementonZika-IF-fre_Neutral.pdf
- Virus ZIKA et femme enceinte ou en âge de procréer (Conseil National Professionnel de Gynécologie et Obstétrique) FRA :
http://www.cnpgo.org/1/upload/virus_zika_et_grossesse_cnpgo_version_1.3_recos.pdf
- **Yellow fever:** Vaccination is recommended if you plan to travel in the interior of Brazil e.g. Amazonas and Pantanal (not coastal cities) or to other South American countries during the trip.

5. Precautions:

Climate – Heat

- Avoid unshielded sun exposure in midday hours. Seek shade by trees and covered areas. Avoid open and heated areas such as paved areas, hot tents or overheated cars.
- It is important to drink a lot of water and to be sure to get enough electrolytes.
- Use a personal drinking bottle that you do not share. Sterilize it regularly and protect it from exposure to lagoon water.
- Use weight and urine color as indicators of hydration; urine should be light yellow.

Personal Equipment and Protection

- Wear head protection in the sun.
- Water resistant sun lotion with high protection (20 to 50) is recommended.
- Use DEET based insect repellent as above.
- First apply sunscreen in the morning and after each shower; use insect spray only after 30 mins.
- Insect bites should be disinfected and cooled with ice. Do not touch or rub bites with fingers as open bites are easily infected.

Although these recommendations may seem daunting and restrictive they are important to take seriously for your own health and that of the rest of your team. FISA will continue to be in communication and discussion with local and international health experts to monitor for any new developments and issues that may arise before or during the Games. We will advise of any changes to the recommendations if this occurs.

6. Lagoon Water Quality

The Rodrigo de Freitas Lagoon in Rio de Janeiro is the competition venue for the rowing and canoeing events of the 2016 Olympic and Paralympic Games. As stated above, it is vulnerable to inflows of pollution with heavy rains. The water quality of the lagoon is tested regularly by the local government (twice per week) and is reported transparently on this website (<http://www.rio.rj.gov.br/web/smac/gestao-da-lagoa-rodrigo-de-freitas>).

The International Olympic Committee and FISA have decided to adhere to the recommendations of the World Health Organisation in terms of the types of testing needed in order to make a judgement on the quality of the water by measuring the presence of e-coli and total coliform. The World Health Organisation's (WHO) guidelines for safe recreational water environments is found here: http://www.who.int/water_sanitation_health/bathing/srwe1/en/

FISA has independently confirmed that the testing for levels of e-coli adequately provides the information needed to make this judgement, and agrees with the WHO and IOC that additionally testing for viruses does not provide additional information that results in a better understanding of the suitability of the water. Leading up to the Games, testing will be increased to every two days and every day during the Games.

7. Additional Useful Links

The following are a selection of useful travellers' health advisory sites from FISA member nations:

- National websites for health and travellers (as of 15.02.16)
 - FRA: <http://www.diplomatie.gouv.fr/fr/conseils-aux-voyageurs/>
 - USA : <http://wwwnc.cdc.gov/travel/yellowbook/2016/select-destinations/brazil>
 - CAN: <http://www.phac-aspc.gc.ca/tmp-pmv/countries-pays/country-pays-eng.php?id=350>
 - GBR : <http://travelhealthpro.org.uk/locations/brazil/>
 - GER <http://www.bnitm.de/reisen-impfen/reisemedizinische-beratung/brasilien/>
 - JPN www.forth.go.jp