

## Yellow fever policy - 2018

There are many different opinions regarding the need for, and the validity of, the yellow fever vaccine, and this has led to confusion amongst the members of SASTM as well as the travelling public of South Africa. The SASTM Executive has therefore given careful consideration to all the facts that have been presented regarding yellow fever vaccine administration and issues the following guideline to it's members:

### To vaccinate or not?

When a prospective traveller to a country with *any* risk of yellow fever presents for yellow fever vaccination, the decision to vaccinate or not should be based on the following:

1. Is there, according to current WHO and CDC publications, a risk of yellow fever at the destination? (See: <https://www.cdc.gov/yellowfever/maps/index.html> and [http://gamapserver.who.int/mapLibrary/Files/Maps/ITH\\_YF\\_vaccination\\_africa.png?ua=1](http://gamapserver.who.int/mapLibrary/Files/Maps/ITH_YF_vaccination_africa.png?ua=1) and <http://www.who.int/ith/yf-vaccination-30April2018.png?ua=1>)

OR

2. Is there a government entry requirement for proof of yellow fever vaccination in either the home, host or any country en route? (See: <http://www.who.int/ith/2017-ith-annex1.pdf?ua=1>)

AND

3. Does the traveller have a contraindication to yellow fever vaccine? If (s)he does, is the contraindication to the vaccine not also a contraindication to travel to this particular destination?
  - a. The practitioner should have a high threshold to the issuing of yellow fever vaccine waiver certificates - advising against travel should be a much bigger consideration in the prospective traveller with a genuine contraindication to the vaccine.

Table 3-25. Contraindications and precautions to yellow fever vaccine administration

CONTRAINDICATIONS	PRECAUTIONS
<ul style="list-style-type: none"><li>• Allergy to vaccine component<sup>1</sup></li><li>• Age &lt;6 months</li><li>• Symptomatic HIV infection or CD4 T-lymphocytes &lt;200/mm<sup>3</sup> (or &lt;15% of total in children aged &lt;6 years)<sup>2</sup></li><li>• Thymus disorder associated with abnormal immune-cell function</li><li>• Primary immunodeficiencies</li><li>• Malignant neoplasms</li><li>• Transplantation</li><li>• Immunosuppressive and immunomodulatory therapies</li></ul>	<ul style="list-style-type: none"><li>• Age 6-8 months</li><li>• Age ≥60 years</li><li>• Asymptomatic HIV infection and CD4 T-lymphocytes 200-499/mm<sup>3</sup> (or 15%-24% of total in children aged &lt;6 years)<sup>2</sup></li><li>• Pregnancy</li><li>• Breastfeeding</li></ul>

Extracted from: <https://wwwnc.cdc.gov/travel/yellowbook/2018/infectious-diseases-related-to-travel/yellow-fever>

b. NOTE: Age over 60 years:

- i. is a PRECAUTION and NOT a contraindication to the vaccine. A thorough, documented risk assessment is required in all cases considered under “precautions”
- ii. The risk of a Serious Adverse Event (SAE) in a person older than sixty years is the same as in persons younger than sixty, if they have had the vaccine previously. A booster vaccine does NOT pose a higher risk for an SAE hence the recommendation to give the vaccine whenever indicated in fit young travellers.

4. The practitioner should have a high inclination to give the yellow fever vaccine to all young, healthy travellers who are going to a country with any risk of yellow fever and / or a yellow fever vaccine proof entry requirement. Consider the immediate destination as well as any likely future journeys as part of a good travel health risk assessment – think “cumulative risk”. This will protect the traveller against actual infection and minimise the risk for bureaucratic hassles at border posts.

#### **Validity of the yellow fever vaccine certificate**

According to the amendment to the International Health Requirements from the World Health Organization (WHO), as of 11 July 2016, for both existing or new certificates, revaccination or a booster dose of yellow fever vaccine cannot be required of international travellers as a condition of entry into a State Party, regardless of the date their international certificate of vaccination was initially issued. This lifetime validity of these certificates applies automatically to certificates issued after 11 July 2016, as well as certificates already issued. No changes should be made to existing certificates (certificate would become invalid if any changes are made) and *life of person vaccinated* should be written on newly issued certificates.

SASTM however, recommends that, although the validity of the certificate is now lifelong with respect to entering specific countries, in the interest of the safety of South African travellers, the benefit of a booster dose is considered based on the risk to the individual traveller. Booster doses are safe, immediately valid and effective.

#### **Reasoning for the above recommendations**

In 2013, based on a systematic review of published studies, the Strategic Advisory Group of Experts on Immunization (SAGE) concluded that a single dose of vaccination is sufficient to confer life-long immunity against yellow fever disease and that a booster dose is not needed. They did however note that further studies and surveillance data should be used to identify specific risk groups who might benefit from a booster dose. In 2014, the World Health Assembly adopted the recommendation to remove the 10-year booster requirement by June 2016.

Although the studies indicated that vaccine failure was very rare, in a number of studies, seropositivity rate in persons vaccinated > 10 years previously, was found to be 92% and those vaccinated more than 20 years previously had a seropositivity rate of 80%. Pregnant women

who were vaccinated in their third trimester only had a seroconversion rate of 39%. Lower rates of yellow fever antibodies have also been found in HIV+ve vaccinees compared to uninfected controls.

*All these results indicate that the yellow fever vaccine may not have lifelong efficacy in all travellers, especially those that are immunocompromised, and that a booster would be recommended.*

90% of yellow fever cases have come from countries in West Africa and epidemiological data suggest that travellers to West Africa are at highest risk for travel-associated yellow fever, especially if they travel to an endemic area for a prolonged period. Countries in West Africa are frequent destinations for South Africans. Travel health practitioners must emphasise the need to revisit a travel clinic for the consideration of a booster dose for all travellers who travel to high risk areas at the time of administering the first dose.

Laboratory workers handling the yellow fever virus are also at high risk. It would therefore be prudent to give a booster after 10 years to ensure protection in these high risk group.

The CDC states that they no longer recommend a 10 year booster for most travellers. However, booster doses are recommended for those who might not respond as well to the vaccine; such as pregnant women, haematopoietic stem cell transplant recipients and those asymptomatic HIV+ve travellers. They also recommend boosters for those who are at high risk of contracting yellow fever.

Travellers also need to be aware that many corrupt officials at border posts may still only accept (albeit illegally) a certificate issued within the last 10 years. This may result in the traveller either being denied entry into the country or being given an additional vaccine (of unknown origin?)

The SASTM Executive, based on the above, therefore recommends that South African travel health practitioners advise their travellers to consider a booster after 10 years, especially if they are travelling to a high risk area.

**The Executive urges travel health practitioners and the travelling public to note the importance of a well informed travel health risk assessment as the foundation for healthy travel.**

#### References:

1. Yellow fever vaccination booster not needed.  
[http://www.who.int/mediacentre/news/releases/2013/yellow\\_fever\\_20130517/en/](http://www.who.int/mediacentre/news/releases/2013/yellow_fever_20130517/en/)
2. World - yellow fever vaccination booster.  
<http://www.who.int/ith/updates/20140605/en/>
3. CDC Yellow Book: Requirements vs Recommendations,  
<https://wwwnc.cdc.gov/travel/yellowbook/2018/infectious-diseases-related-to-travel/yellow-fever>
4. Yellow Fever Vaccine Booster Doses: Recommendations of the Advisory Committee on Immunization Practices, 2015. *Weekly* June 19, 2015 / 64(23);647-650  
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6423a5.htm>

5. Stamaril package insert. Sanofi Pasteur MSD Limited. 12/2015.  
<http://www.medicines.org.uk/emc/medicine/9846>
6. Amendment to International Health Regulations (2005), Annex 7 (yellow fever):  
<http://www.who.int/ith/annex7-ihl.pdf?ua=1> accessed 16/09/2016  
Yellow fever, Traveler's health  
<https://wwwnc.cdc.gov/travel/yellowbook/2018/infectious-diseases-related-to-travel/yellow-fever>