Contraindications for administering yellow fever vaccine

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Please check the TravelHealthPro and Yellow Fever Zone websites for updates.

For specialist travel health advice, ring the NaTHNaC advice line for health professionals: 020 7383 7474.

A detailed risk assessment of the traveller is required to identify health conditions which contraindicate yellow fever (YF) vaccination. When the vaccine is contraindicated, travel is unavoidable and a receiving country has a certificate requirement as a condition of entry, a Medical Letter of Exemption, instead of vaccination can be offered.

Contraindication	Administer vaccine?	Additional information
Aged under six months	No	There is an increased risk of vaccine-associated encephalitis.
Confirmed anaphylactic reaction to a previous dose of YF vaccine	No	The vaccine is propagated in chick embryos. Egg allergy is therefore a relative contraindication to YF vaccination. Egg allergy is very common in younger children, but a majority outgrow this by school age; a detailed dietary history to determine whether an individual has outgrown their egg allergy should be undertaken. Specialist advice may be required, and some individuals can be vaccinated in specialist centres (refer to UKHSA Green Book chapter 35). A history of anaphylaxis to other components in the vaccine is a contraindication.
Confirmed anaphylactic reaction to any vaccine component, (see note for egg allergy)	No	
History of a thymus disorder (includes myasthenia gravis and thymoma) or thymectomy e.g. during cardiac surgery	No	There is an increased risk of YF vaccine–associated serious adverse events in people who have a history of thymus disorder and those who have undergone removal of their thymus for any reason. For those with a history of cardiac surgery which involved opening the chest, guidance is available in the Green Book chapter 35.
History of a first-degree family member who has had a serious adverse event following YF vaccination	No	YF vaccine is not to be given to those who have a first-degree family member (i.e. blood relative – mother, father, full brother or sister or child) with a history of YF vaccine associated viscerotropic or neurologic disease (YEL-AVD or YEL-AND) following vaccination, where the reaction was not related to a known medical risk factor (i.e. in case of an unidentified genetic predisposition).

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Contraindication	Administer vaccine?	Additional information

Primary or acquired immunodeficiency refer to Green Book chapter 6	No	Includes
		• immunosuppression due to acute and chronic leukaemias and lymphoma (including Hodgkin's lymphoma).
		• severe immunosuppression due to HIV/AIDS (refer to British HIV Association and Children's HIV Association guidance).
		• cellular immune deficiencies (e.g. Severe combined immunodeficiency, Wiskott-Aldrich syndrome, 22q11 deficiency/DiGeorge syndrome).
		• being under follow up for a chronic lymphoproliferative disorder including haematological malignancies such as indolent lymphoma, chronic lymphoid leukaemia, myeloma and other plasma cell dyscrasias.
		• having received an allogenic (cells from a donor) stem cell transplant in the past 24 months and no on-going immunosuppression or graft versus host disease (GVHD).
		• having received an autologous (using their own stem cells) haematopoietic stem cell transplant in the past 24 months.
		• those who are receiving, or have received in the past 6 months, immunosuppressive chemotherapy or radiotherapy for malignant disease or non-malignant disorders.
		• those who are receiving, or have received in the past 6 months, immunosuppressive therapy for a solid organ transplant (with exceptions, depending upon the type of transplant and the immune status of the patient).
		• those who are receiving or have received in the past 12 months immunosuppressive biological therapy (e.g. anti-Tumour Necrosis Factor therapy such as alemtuzumab, ofatumumab and rituximab) unless otherwise directed by a specialist.
		• those who are receiving or have received in the past 3 months immunosuppressive therapy including:
		  ○ adults and children on high-dose corticosteroids (>40mg prednisolone per day or 2mg/kg/day in children under 20kg) for more than 1 week.
		  ○ adults and children on lower dose corticosteroids (>20mg prednisolone per day or 1mg/kg/day in children under 20kg) for more than 14 days.
		  ○ adults on non-biological oral immune modulating drugs e.g. methotrexate >25mg per week, azathioprine >3.0mg/kg/day or 6-mercaptopurine >1.5mg/kg/day.
		  ○ for children on non-biological oral immune modulating drugs (except those on low doses, see below), specialist advice should be sought prior to vaccination.

Precautions for administering yellow fever vaccine

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Please check the TravelHealthPro and Yellow Fever Zone websites for updates.

A detailed risk assessment is required to identify conditions that may reduce the effectiveness of the vaccine or may increase the risk of serious adverse events following vaccination. Yellow fever vaccination can be considered where precautions to vaccination are identified but exposure to yellow fever is unavoidable and the benefit of vaccination is considered to outweigh the risk of vaccine associated adverse reaction.

When precautions are identified and travel to a country or region with a certificate requirement for yellow fever vaccination is unavoidable, and when the risk of vaccine associated serious adverse events outweighs risk of disease at the destination, a Medical Letter of Exemption from yellow fever vaccination can be considered. For specialist travel health advice, ring the NaTHNaC advice line for health professionals: 020 7383 7474.

Precaution	Administer vaccine?	Additional information
Aged 60 years and older	Can be given to those aged 60 years and older if at significant and unavoidable risk of infection (such as travel to an area where there is current or periodic risk of YF transmission) following a detailed risk assessment.	The risk for neurologic and viscerotropic adverse events increases with age. The risk for these serious adverse events increases to approximately 2.2 cases per 100,000 doses distributed for YEL-Associated Neurologic Disease (YEL-AND). For YEL-Associated Viscerotropic Disease (YEL-AVD), the risk for those who are 60 years and older is 1.2 cases per 100,000 doses distributed and higher for those who are 70 years and older. To date almost all cases of YEL-AND and all laboratory confirmed YEL-AVD have occurred in those receiving the vaccine for the first time. Those over 60 years of age should not be vaccinated if they are only visiting countries / areas designated by World Health Organization (WHO) as having low potential for exposure to yellow fever or where vaccination is 'generally not recommended', or not recommended by WHO.
Pregnancy	Generally not, but can be considered following a detailed risk assessment, if benefits may outweigh the risk of the vaccine. Consider discussing with specialist before administering vaccine.	Pregnant women should be advised not to travel to YF risk areas. YF vaccine should not generally be given to pregnant women because of the theoretical risk of foetal infection from the live virus vaccine. When travel is essential, WHO consider that in areas where YF is endemic, or during outbreaks, the benefits of vaccination are likely to far outweigh risk from the vaccine. Women who are vaccinated during pregnancy and continue to be at risk should be revaccinated once the pregnancy is completed, see Green Book chapter 35.
Breastfeeding		There is some evidence of transmission of live vaccine virus to infants under two months of age from breast milk. For women who are breastfeeding children under the age of nine months specialist advice should be sought.
Infants (six to eight months)		For infants aged six to eight months, vaccination is generally only recommended when risk of YF transmission is high, such as during epidemics/outbreaks. If travel is unavoidable; specialist advice should be sought.
Living with HIV		There is limited evidence that YF vaccine may be given safely to persons living with HIV who have a CD4 count greater than 200 and a suppressed viral load. Specialist advice should be sought in these cases. The antibody response following YF vaccine in those who are HIV positive may be diminished. See Green Book chapter 35.
Immunocompromise due to low dose steroid ornon-biological oral immune modulating drugs		A cautious approach recommended. Generally speaking long term low dose corticosteroid therapy (defined as up to 20mg prednisolone per day for more than 14 days in an adult or 1mg/kg/day in children under 20kg) either alone or in combination with other immunosuppressive drugs e.g. low dose non-biological oral immune modulating drugs (e.g. methotrexate 25mg per week in adults or up to 15mg/m2 in children, azathioprine 3.0mg/ kg/day or 6-mercaptopurine 1.5mg/kg/day), are not considered sufficiently immunosuppressive; these patients can generally receive live vaccines. **As data are limited, specialist advice may be sought.**