

YELLOW FEVER VACCINATION



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Disclaimer

**This presentation is for
educational purposes
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Yellow Fever Disease

- Yellow fever is an acute viral hemorrhagic disease
- Yellow fever virus is arbovirus of flavivirus genus
- Vectors- Aedes mosquitos (Africa)
 - Haemogogus mosquitoes(South America)
- Host - Monkeys and Humans
- Yellow Fever does not occur in India
- The conditions for transmission of Yellow Fever are very conducive in India
- Endemic in 46 countries of Africa and Central & South America
- Incubation Period – 3 to 6 days after bite

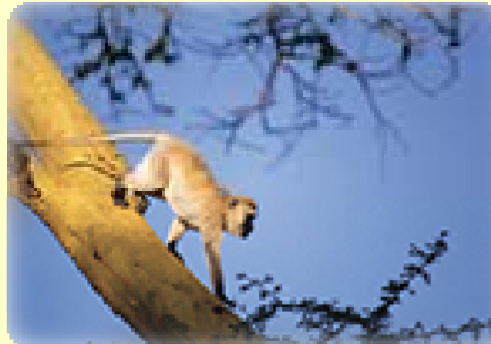
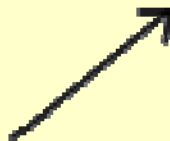
Vector-Female Aedes Mosquito



START



Mosquitoes breed in tree holes in the forest canopy, or in tree holes on the edge of forested areas, such as banana plantations.



Monkeys become infected when bitten by infected mosquitoes.



The virus continues transmission as uninfected mosquitoes bite infected monkeys.



Humans become exposed to the virus when bitten by an infected mosquito.



Epidemiology of Yellow Fever Disease

- Globally about 20,00,000 cases occur annually
- 90 % of Yellow Fever Cases occur in Africa
- Each year 30,000 people die from Yellow Fever
- An attack of Yellow Fever gives lifelong immunity

CLINICAL MANIFESTATIONS — The clinical spectrum of yellow fever includes

- Subclinical infection
- Abortive, nonspecific febrile illness without jaundice
- Life-threatening disease with fever, jaundice, renal failure, and hemorrhage

The classical illness is characterized by three stages:

- **Period of infection**- lasts for three to four days. The patient is febrile and complains of generalized malaise, headache, photophobia, lumbosacral pain, pain in the lower extremities, myalgia, anorexia, nausea, vomiting, restlessness, irritability, and dizziness. Symptoms and signs are relatively nonspecific
- **Period of remission**-A period of remission lasting up to 48 hours may follow the period of infection, characterized by the abatement of fever and symptoms. Patients with abortive infections recover at this stage. Approximately **15 percent of individuals infected with yellow fever virus enter the third stage of the disease**

- **Period of intoxication**-begins on the third to sixth day after the onset of infection with return of fever, prostration, nausea, vomiting, epigastric pain, **jaundice**, oliguria, and hemorrhagic diathesis. The viremia terminates at this stage and antibodies appear in the blood. This phase is characterized by variable dysfunction of multiple organs including the liver, kidneys, and cardiovascular system. Multiorgan failure in yellow fever is associated with high levels of proinflammatory cytokines similar to that seen in bacterial sepsis and systemic immune response syndrome

Yellow Fever Endemic Countries in Africa

SN	Country	SN	Country	SN	Country
1.	Angola	12.	Equatorial Guinea	23.	Niger
2.	Benin	13.	Ethiopia	24.	Nigeria
3.	Burkina Faso	14.	Gabon	25.	Rwanda
4.	Burundi	15.	The Gambia	26.	SaoTome& Principe
5.	Cameroon	16.	Ghana	27.	Senegal
6.	Cape Verde	17.	Guinea	28.	Sierra Leone
7.	Central African Republic	18.	Guinea Bissau	29.	Somalia
8.	Chad	19.	Kenya	30.	Sudan
9.	Congo	20.	Liberia	31.	Tanzania
10.	Cote d' Ivoire	21.	Mali	32.	Togo
11.	Democratic Republic of Congo	22.	Mauritania	33.	Uganda



Yellow Fever Endemic Countries in Central and South America

SN	Country	SN	Country
1.	Argentina	8.	Panama
2.	Bolivia	9.	Paraguay
3.	Brazil	10.	Peru
4.	Colombia	11.	Suriname
5.	Ecuador	12.	Trinidad and Tobago
6.	French Guiana	13.	Venezuela
7.	Guyana		

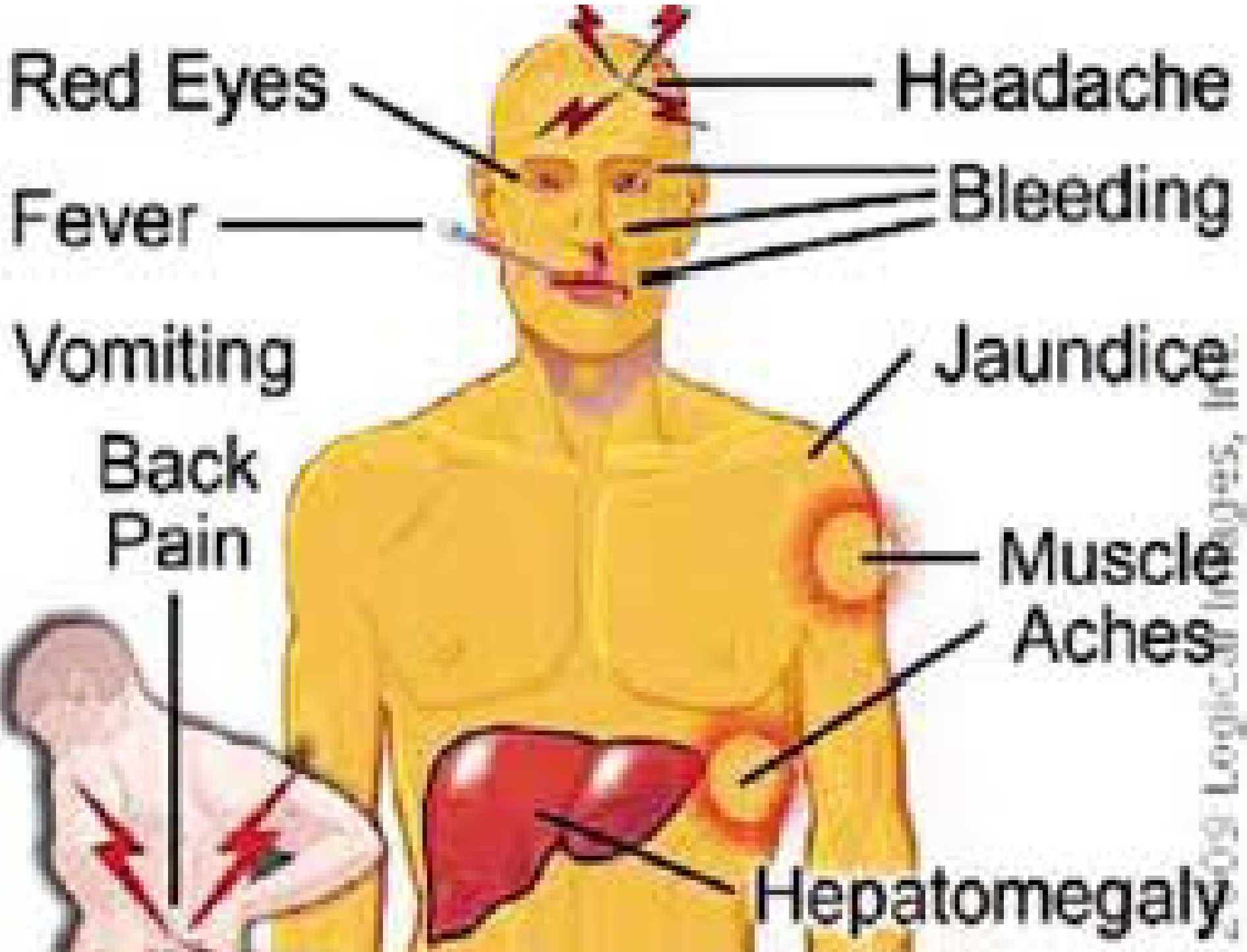


Clinical Presentation of Yellow Fever Disease

- Clinical disease varies from non-specific abortive illness to fatal haemorrhagic fever
- **Symptoms**-Onset is abrupt with fever, chills, malaise, headache, lower back pain, generalised myalgia, nausea & dizziness
- **Physical Examination**-Patient is febrile and acutely ill, congestion of conjunctivae & face, relative bradycardia, febrile convulsions in young children
- Average fever is 39 degree C and lasts 3-4 days

Serious Illness in Yellow Fever Disease

- About 25 % patients develop severe form
- Fever, Vomiting, Epigastric pain, **Jaundice**, Renal failure, Hemorrhagic diathesis,
- Hemorrhagic manifestations-petechiae, ecchymoses, epistaxis, oozing of blood from gums and needle puncture sites
- Haematemesis, malaena, metrorrhagia
- ECG-Myocardial Injury--ST-T wave anomalies
- About 50 % of patients with hepatorenal disease die within 10 days



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Laboratory abnormalities

- Leukopenia with relative neutropenia
- Raised Serum transaminase(within 48-72 hrs)
- Blood may contain non-infectious immune complexes detectable by immunoassays or PCR
- Thrombocytopenia, prolonged clotting and prothrombin time, reduced fibrinogen and factors II, V, VII, VIII, IX, and X
- Platelet dysfunction
- CSF- raised albumin but no increase in WBC

Diagnosis of Yellow Fever

- **Serology** — Serologic diagnosis is best accomplished using an enzyme-linked immunosorbent assay (ELISA) for IgM. The presence of IgM antibodies in a single sample provides a presumptive diagnosis; confirmation is made by a rise in titer between paired acute and convalescent samples or a fall between early and late convalescent samples
- **Rapid diagnostic tests** — Rapid diagnostic tests include PCR to detect viral genome in the blood or tissue and ELISA for determination of IgM antibody
- **Virus isolation** — Virus isolation is accomplished by inoculation of mosquito or mammalian cell cultures, intracerebral inoculation of suckling mice or intrathoracic inoculation of mosquitoes.

Yellow Fever Vaccination

- No cure for Yellow fever, treatment is symptomatic
- Vaccination is most important preventive measure
- Yellow Fever Vaccine is an Attenuated Live Virus preparation of the 17D strain of Yellow fever virus grown in leucosis-free chick embryos.
- A single dose correctly given confers Life long immunity in 100 % of recipients
- Protective immunity is achieved after 10 days
- Dose- One dose of 0.5 ml subcutaneously
- Storage temperature- +2 to +8 degree Centigrade

Who should not get Yellow Fever Vaccine

- **Anyone with allergy to eggs, chicken protein or gelatin**
- **Pregnant or could be pregnant now or in the next two weeks**
- **Children younger than 12 months of age**
- **Who are HIV positive**
- **Whose Immune system is weakened as a result of cancer or other medical conditions, a transplant or radiation or drug treatment (such as steroids or cortisone, cancer chemotherapy or other drugs that affect immune cell function)**
- **Persons who have an acute/moderate illness (with or without a fever) should postpone receiving this vaccine until they are well**
- **Who have a thymus disorder such as myasthenia gravis, DiGeorge Syndrome or thymoma or Thymus removed**
- **Who have any major Liver or Kidney Disease**

Other Advisory regarding YF Vaccination

- **Nursing mothers should avoid or postpone travel to an area where there is risk of Yellow Fever**
- **Adults 60 years of age and older might be at increased risk for severe problems following vaccination**
- ***# Exemption or contraindication to Yellow Fever Vaccination does not provide any immunity from Quarantine(isolation)***

Mild Side Effects of Yellow Fever Vaccination

- **Fever, Aches, Soreness, Redness or Swelling where the shot was given-25 %**
- **Slight sore arm - common**
- **Feel tired, Headache, Muscle ache, Fever for 24 hours starting 3-9 days after vaccination- 2 to 10 %**

Serious Side Effects of Yellow Fever Vaccination

- **Severe allergic reaction- 1 in 58,000**
- **Severe nervous system reaction-1in1,25,000**
- **Immediate Hypersensitivity-Rash, Itching, Faint or Asthma – 1 in 1,30,000**
- **Life threatening severe illness with organ failure- 1 in 2,50,000**
- **Inflammation of multiple organs e.g. Lungs, Kidney,Liver,Spleen,Spleen-1 in million**
- **Encephalitis – 1 in 8 million**

International Health Regulations


- Passengers travelling to and from YF endemic countries (countries where Yellow Fever disease is persisting) are required to be in possession of a “**VALID YELLOW FEVER VACCINATION CERTIFICATE**” issued by authorized and designated vaccination centers in India
- There are 44 Govt of India authorized YFVCs in India
- Those found not in possession of such Valid certificate or defective certificate as enumerated by the WHO, are upon reporting by the Immigration Officers are quarantined for a period till the YF certificate becomes “valid” or until a period of six days, reckoned from the date of last possible exposure to infection, has elapsed, whichever occurs first

Yellow Fever Vaccination at KGMU Lucknow

- GOI authorised YFVC started on 15-12-2016
- Persons from Uttar Pradesh, Uttarakhand, Jharkhand, Bihar and Nepal attend this YFVC for Vaccination
- Validity starts 10 days after vaccination
- Life Time Validity
- Vaccination Days- Monday, Thursday
and Saturday
- Registration 9 AM to 10 AM
- Vaccination 10 AM to 1 PM

Govt. of India, MOHFW Website : www.ihrpoe.co.in

health X +
cure | www.ihrpoe.co.in/yellow-fever-pro.php
22nd September 2018



International Health Regulations at Point of Entries India

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Links

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- Vacancy
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- Public Forum
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Yellow Fever Vaccination & Quarantine

Procedure for taking Yellow Fever Vaccination

Passengers planning to travel to or passing through any of the Yellow Fever endemic country/ies even while seated within the aircraft, are required to have the vaccination and in possession of VALID YELLOW FEVER CERTIFICATE in Original at all times, complete in all respects as per standards laid down by the WHO in its Regulations.

Since the Vaccine is developed and prepared in Chick Embryo, anyone having Allergy to Egg protein must not take the vaccination, as it is likely to lead to severe anaphylactic reaction, which could be fatal. Besides this other absolute contradictions are deficient immunity in individuals under medication for Thymus disease, Cancer, HIV/AIDS, on Corticosteroids for any reasons, suffering from any severe allergies. Those suffering from severe Asthmatic conditions should also avoid taking this vaccination.

The vaccination is valid after 10 days from the date of vaccination and duration of its validity is the life of the person vaccinated.

Vaccination Procedure

The vaccine beneficiary moves in following direction

Flow of vaccine Beneficiary

Registration counter — waiting area — Injection Room — Observation Room

- Yellow Fever Vaccination received in India is valid only if it is received from Govt. of India recognized centers only.
- 10 PERSONS ARE REQUIRED IN THE LAST BATCH (As the vaccine available vial is of 10 dose each & it is opened only when 10 person are available)
- FEE - RS.300/- FOR ONE VACCINE, fixed by Govt. of India from time to time.

Mandatory Requirement - Original Passport

- There has to be gap of four weeks between two different live vaccines.

The procedure for Yellow Fever Vaccination:

- The vaccination services are to be provided on the first come first served basis.
- The registration / token distribution system may be followed to maintain the first come first served system.
- At time of registration, the Travel Document (passport) is to be checked and all the vaccinees are instructed to read the necessary information regarding Yellow Fever Vaccination displayed in the registration / waiting area.
- The vaccinees are informed to bring/keep the Travel Document (passport) and the vaccination fee Rs.300/- with them at the vaccination time.
- All the vaccinees are instructed to wait in the waiting area and the vaccinees are called for vaccination in batches of 10 persons in vaccination room.
- All the vaccinees are informed and allowed to read about the side effects / adverse reactions and other related information about Yellow Fever Vaccination.

	Research Institute, Kasauli	Institute, Kasauli, Himachal Pradesh-173204	Monday & Thursday 2:00 PM - 4:00 PM	01792-272338 (O) 01792-273209 (O) 01792-272016 (F)
KARNATAKA (01)				
33	Public Health Institute, Bengaluru	Joint Director (Labs), Public Health Institute, Sheshadri Road, Opp. S.J. Polytechnic, Bengaluru-560001	Wednesday 10:30 AM - 12:00 PM	080-22210248 (O) 080-22277389 (F)
UTTAR PRADESH (01)				
34	King George's Medical University, UP, Lucknow-226003	Department of Community Medicine & Public Health, KGMU, Lucknow	Monday and Thursday Registration: 09:00 AM - 10:00 AM Vaccination: 10:00 AM - 1:00 PM	0522-2257343 (F)
DAMAN & DIU (02)				
35	Community Health Centre, Moti Daman	Fort Area, Moti Daman, Daman Union Territory - 396 210	1st and 3rd Tuesday of Every Month 9:30 AM - 12:30 PM	0260-2230847 (O)
36	Community Health Centre, Ghoghla, Diu	Community Health Center, Ghoghla, Diu(U.T.)	1st and 3rd Tuesday of Every Month 9:30 AM - 12:30 PM	02875-252244 (O)
ODISHA (01)				
37	AIIMS, Bhubaneshwar	Patrapada, Chotaraypur, Dumduma, Bhubaneshwar, Odisha - 751019	Monday and Thursday 9:00 AM - 1:00 PM	0674 - 2476789 (O)
CHATTISGARH (02)				

Yellow Fever Vaccination Centre KGMU



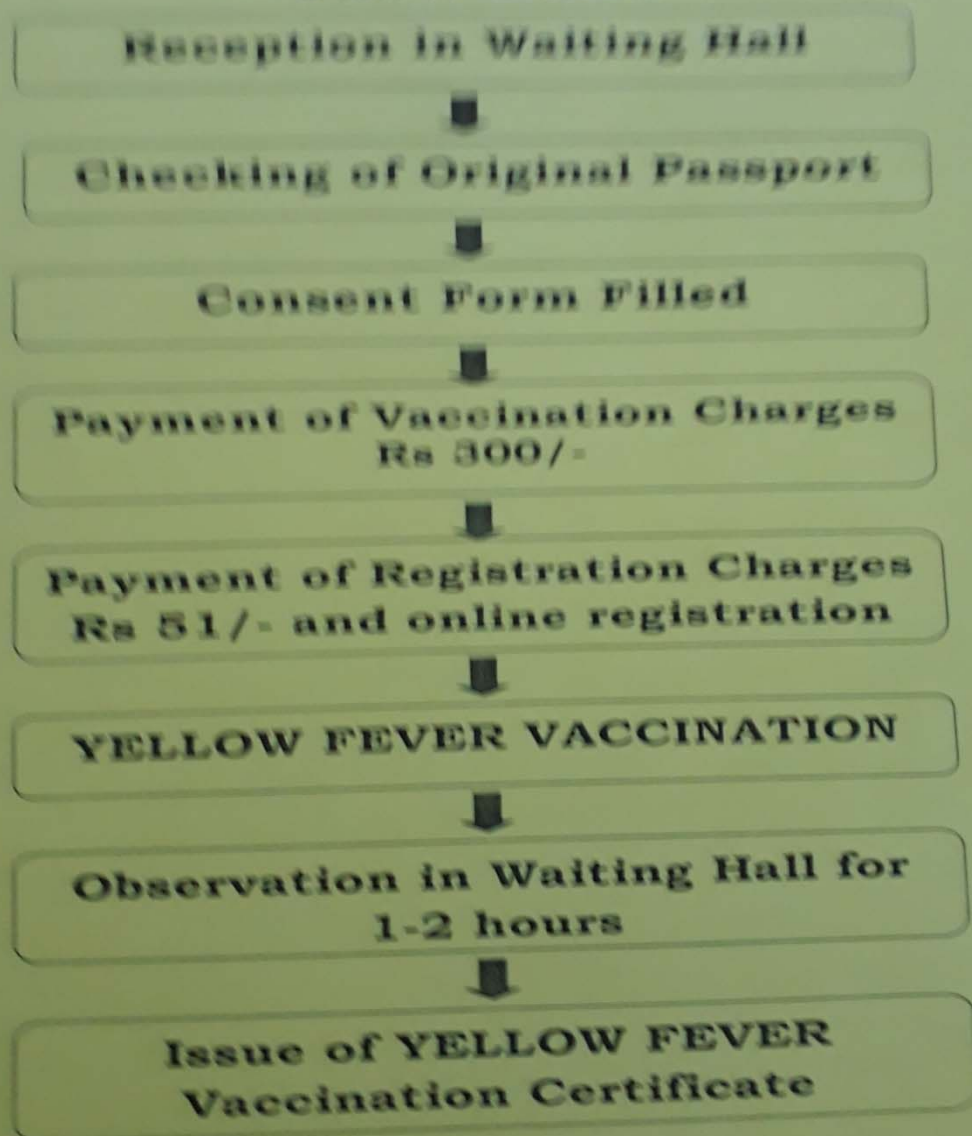




King George's Medical University, U.P., Lucknow

YELLOW FEVER VACCINATION CENTRE


FLOW CHART



Yellow Fever Vaccination Certificate-Old

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<p>अन्तर्राष्ट्रीय स्वास्थ्य विनियम INTERNATIONAL HEALTH REGULATIONS REGLEMENT SANTE INTERNATIONAL</p>	<p>भारत सरकार GOVERNMENT OF INDIA GOUVERNEMENT DE L'INDE</p> <p>स्वास्थ्य एवं परिवार कल्याण मंत्रालय MINISTRY OF HEALTH AND FAMILY WELFARE MINISTERE DE LA SANTE PUBLIQUE</p>  <p>सत्यमेव जयते</p> <p>टीके का अन्तर्राष्ट्रीय प्रमाण-पत्र INTERNATIONAL CERTIFICATE OF VACCINATION CERTIFICATS INTERNATIONAUX DE VACCINATION</p> <p>कम्युनिटी मेडिसिन एवं पब्लिक हेल्थ विभाग किंग जॉर्ज चिकित्सा विश्वविद्यालय उ०प्र०, लखनऊ-226003 भारत DEPARTMENT OF COMMUNITY MEDICINE & PUBLIC HEALTH KING GEORGE'S MEDICAL UNIVERSITY UP, LUCKNOW-226003 INDIA</p>
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अन्तर्राष्ट्रीय स्वास्थ्य विनियम
INTERNATIONAL HEALTH REGULATION
REGLEMENT SANTE INTERNATIONAL

पीत ज्वर के टीके या पुनर्टीके का अन्तर्राष्ट्रीय प्रमाणपत्र
INTERNATIONAL CERTIFICATE OF VACCINATION OR
REVACCINATION AGAINST YELLOW FEVER

CERTIFICAT INTERNATIONAL DE VACCINATION OU
DE REVACCINATION CONTRE LA FIEVRE JAUNE

यह प्रमाणित किया जाता है कि

This is to certify that

Je soussigné (e) certifie que

CHANDRVATI

जन्मतिथि

date of birth

ne (e) le

10/02/1940

लिंग

Sex

sexe

F



तथा जिनके हस्ताक्षर यहां दिये गये हैं

Whose signature follows

Dont la signature suit

Chandrvati

निर्दिष्ट तारीख को पीत ज्वर का टीका अथवा पुनर्टीका लगा दिया गया है ।
has on the date indicated been vaccinated or revaccinated against yellow fever.
a été vaccine (e) ou revaccine (e) contre la fièvre jaune a la date indiquée.

तारीख Date	टीकाकारक के हस्ताक्षर और उसका व्यवसायिक पद Signature and professional status of Vaccinator Signature et titre du vaccinateur	वैक्सीन निर्माता और वैक्सीन की बैच संख्या Manufacturer and batch no. of vaccine. Fabricant du vaccine et numero du lot	टीका लगाने वाले केंद्र की सरकारी मोहर Official stamp of vaccinating centre Cachet officiel du centre de vaccination
17 SEP 2018	 DR. JAMAL MASOOD Professor Department of Community Medicine King George's Medical University, UP Lucknow	Lot No. 571 FSBSI Chumakov FSC R&D Moscow Russian Federation	

LIFETIME VALIDITY

इस प्रमाणपत्र तभी वैध होगा जबकि प्रयुक्त वैक्सीन का सिव्य स्वास्थ्य संगठन द्वारा अनुमोदन किया गया हो और उस प्रदेश के लिए जिसमें यह टीका लगाने का केंद्र स्थित है, टीका लगाने के केंद्र के रूप में स्वास्थ्य प्रशासन द्वारा मान्योक्ति किया गया हो।

This certificate is valid only if the vaccine used has been approved by the World Health Organisation and if the vaccinating centre has been designated by the health administration for the territory in which that centre is situated.

इस प्रमाणपत्र वैक्सीन का टीका लगाने के 10 दिन के बाद से अथवा 10 साल की उसकी अवधि के भीतर पुनरा टीका लगाने की स्थिति में पुनरा टीका लगाने की तारीख से 10 साल तक विधिमान्य होगा।

The validity of this certificate shall extend for a period of ten years, beginning ten days after the date of vaccination or, in the event of vaccination within such period of ten years, from the date of that revaccination.

इस प्रमाणपत्र पर विक्रिसा व्यवसायी को अपने हस्ताक्षर स्वयं ही करने चाहिए, हस्ताक्षर के बदले उसके हस्ताक्षर की मोहर लगाना स्वीकार्य नहीं है।

This certificate must be signed by a medical practitioner in his own hand; Stamp of his signature is not an accepted substitute for the signature.

इस प्रमाणपत्र में किसी प्रकार का संशोधन करने, मिटाने अथवा इसके किसी भाग को पूरा न करने पर यह प्रमाणपत्र रद्द किया जा सकता है।

Any amendment of this certificate, or erasure, or failure to complete any part of it may render it invalid.

Ce certificat n'est valable que si le vaccin employé a été approuvé par l'Organisation Mondiale de la Santé et si le centre de vaccination a été habilité par l'administration sanitaire du territoire dans lequel ce centre est situé.

La validité de ce certificat couvre une période de dix ans commençant dix jours après la date de la vaccination ou, dans le cas d'une revaccination au cours de cette période de dix ans, le jour de cette revaccination.

Ce certificat doit être signé par un médecin de sa propre main, son cachet officiel ne pouvant être considéré comme tenant lieu de signature.

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व्यक्ति का नाम
Issued to
Delivre a

CHANDRVATI

पार पत्र संख्या
अथवा यात्रा पत्र संख्या
Passport No. or
Travel Document No.:

Z 2630107

Numero du passeport
Ou
de la place Justificative

कम्युनिटी मेडिसिन एवं पब्लिक हेल्थ विभाग
किंग जॉर्ज चिकित्सा विश्वविद्यालय उ०प्र०, लखनऊ-226003 भारत
DEPARTMENT OF COMMUNITY MEDICINE & PUBLIC HEALTH
KING GEORGE'S MEDICAL UNIVERSITY UP, LUCKNOW-226003 INDIA

स्वास्थ्य सेवा महानिदेशालय, नई दिल्ली
(Directorate General of Health Service, New Delhi)
(Directior Generale des Services d'Hygiene, New Delhi)

Yellow Fever Vaccination Card-New

Serial No. _____

International Health Regulations (2005)

Règlement sanitaire international (2005)

GOVERNMENT OF INDIA
GOUVERNEMENT DE L'INDE
MINISTRY OF HEALTH AND FAMILY WELFARE
MINISTÈRE DE LA SANTÉ PUBLIQUE

Issued to / Délivré à:

Passport Number
Numero du passeport:



International Certificate of Vaccination or
Prophylaxis

DEPARTMENT OF COMMUNITY MEDICINE & PUBLIC HEALTH
KING GEORGE'S MEDICAL UNIVERSITY UP, LUCKNOW-226003 INDIA
www.kgmu.org


Certificat international de vaccination

Yellow Fever Vaccination Card-New

INTERNATIONAL CERTIFICATE OF VACCINATION OR PROPHYLAXIS/CERTIFICAT INTERNATIONAL DE VACCINATION OU DE PROPHYLAXIE

This is to certify that (name) Date of birth Sex Nationality whose signature follows
 Nous certifions que (nom) Nè(e) le de sexe et de nationalité: don't la signature suit

has on date indicated been vaccinated or received prophylaxis against in accordance with the international Health Regulations.
 a été vacciné(e) ou a reçu des agents prophylactiques à la date indiquée contre **YELLOW FEVER VACCINE** Conformément au Règlement sanitaire international

Vaccine or prophylaxis Vaccin ou agent prophylactique	Date Date	Signature and professional status of supervising clinician Signature et titre du clinicien responsable	Manufacturer and batch no. of vaccine or prophylaxis Fabricant du vaccin ou de l'agent prophylactique et numéro du lot	Certificate valid From: Until: Certificat valable à Partir du: Jusqu'au:	Official stamp of the administering centre Cachet officiel du centre habilité
Yellow Fever Vaccine		<p>Dr. JAMAL MASOOD Professor and Head Department of Community Medicine & Public Health King George's Medical University, UP Lucknow</p>	<p>Lot No. Institute of Technology on Immunobiologicals Bio-Manguinhos/Fiocruz Rio de Janeiro, Brasil</p>	<p>LIFETIME VALIDITY</p>	

Persons vaccinated at YFVC KGMU Lucknow

Year	From	To	Period	Vaccinees
2016	December		One month	28
2017	January	December	12 months	1445
2018	January	December	12 months	2554
2019	January	December	12 months	3600



THANK YOU