

Vaccinaties en preventie: maar beter voorkomen dan genezen

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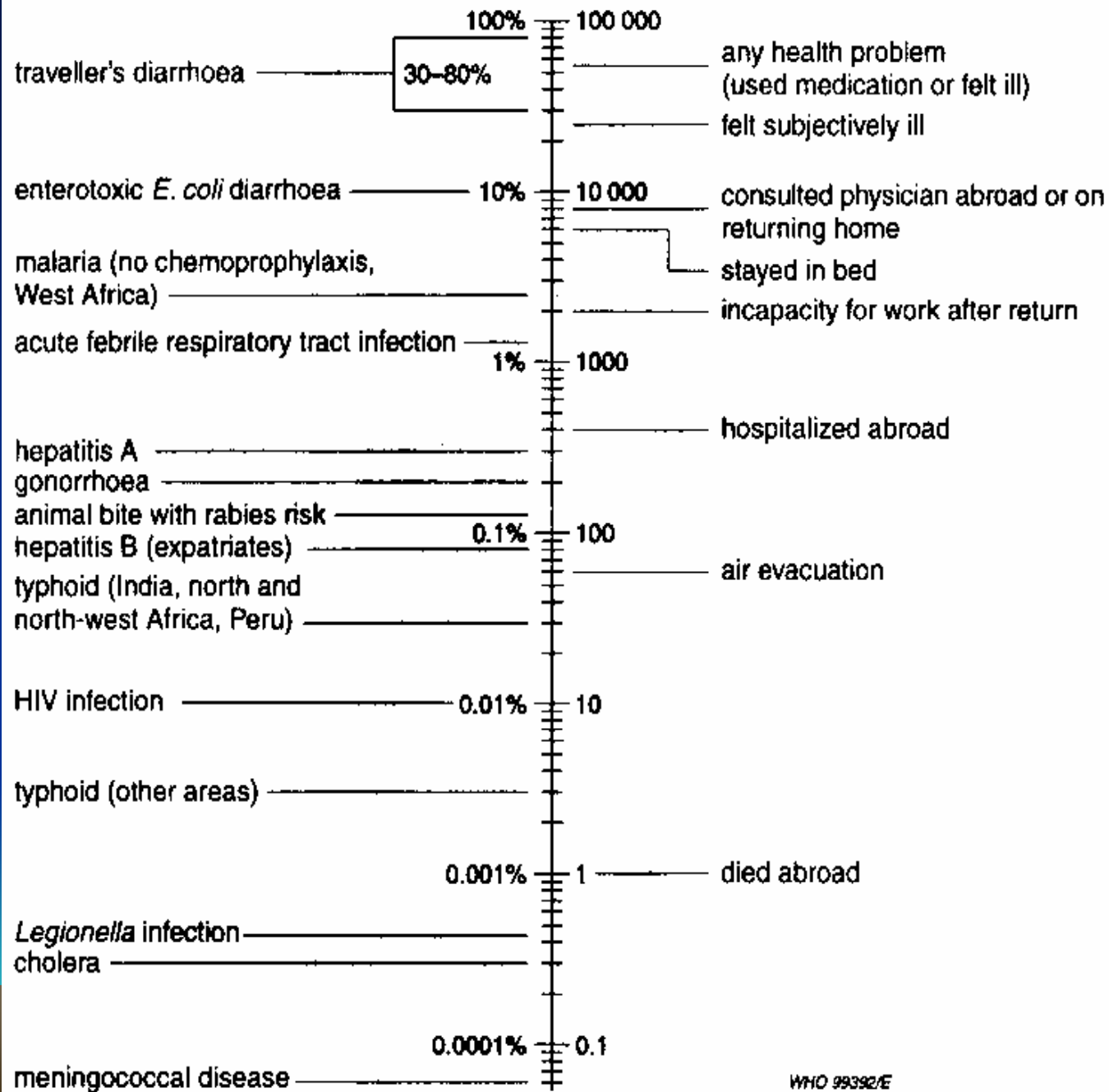
Wat zijn vaccins?

- Je spuit beestjes of stukken van beestjes, **ANTIGENEN**, in...
- ...en het lichaam maakt er **BESCHERMENDE** antilichamen tegen.
- Deze bescherming dient soms herhaald te worden
- Soms is de bescherming onvolledig
- Niettegenstaande deze protectie blijft 'preventie' belangrijk!
- Je kan en mag eigenlijk niet tegen vaccinaties zijn...



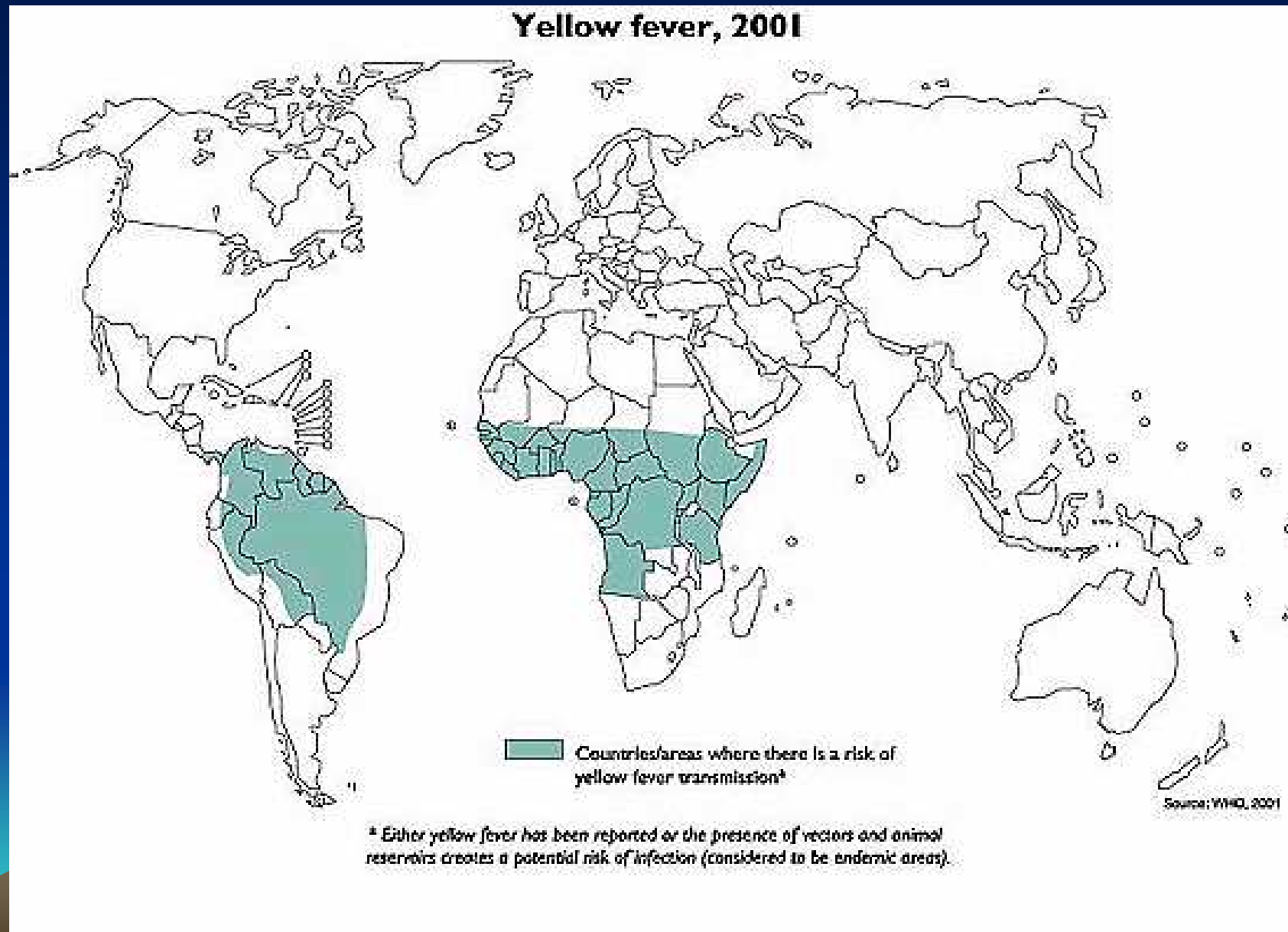
Infections

Other problems

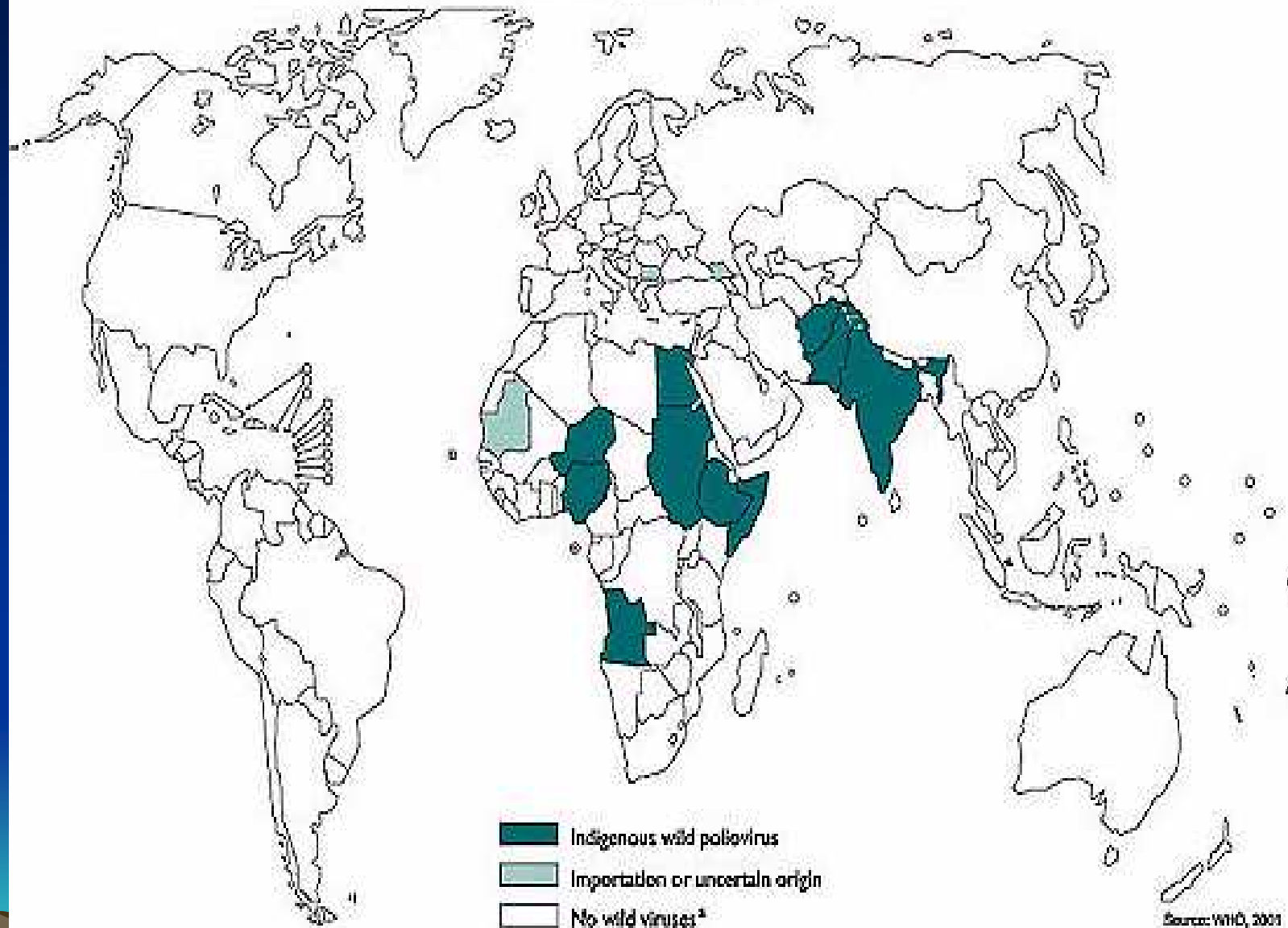


YELLOW FEVER

- **Risk : frequency, severity, ⊕**
 - Sporadic cases. < 1/1.000.000/m - in endemic rural region 1/1000 ?
 - Incomplete or asymptomatic forms 4:1
 - ⊕ 20-60% for declared cases
- **Incubation : 3-6 d**
- **Indication for vaccination - Vaccination schedule**
 - Compulsory for certain countries; strongly recommended when travelling in endemic zones of Latin America and Africa (perhaps it isn't required by the country, although yellow fever may be present - see WHO maps)
 - 1 injection - only @designated YF centre
- **Protection : > 99%**
- **Immunity is complete after : 10 d / after booster : immediately**
- **Booster (duration) : 10 y (lifelong validity?)**
- **Price in Euro (€) : 10 € / 8 \$**
- **Side effects (SE) : Light febrile reaction and malaise on day 4-7 in one person out of 10 to 20**
- **Other preventive measures ? ((Antimosquito-measures (Aedes) during the day and the night))**
- **Treatment ? /post-exposure treatment (PET) ? : None**

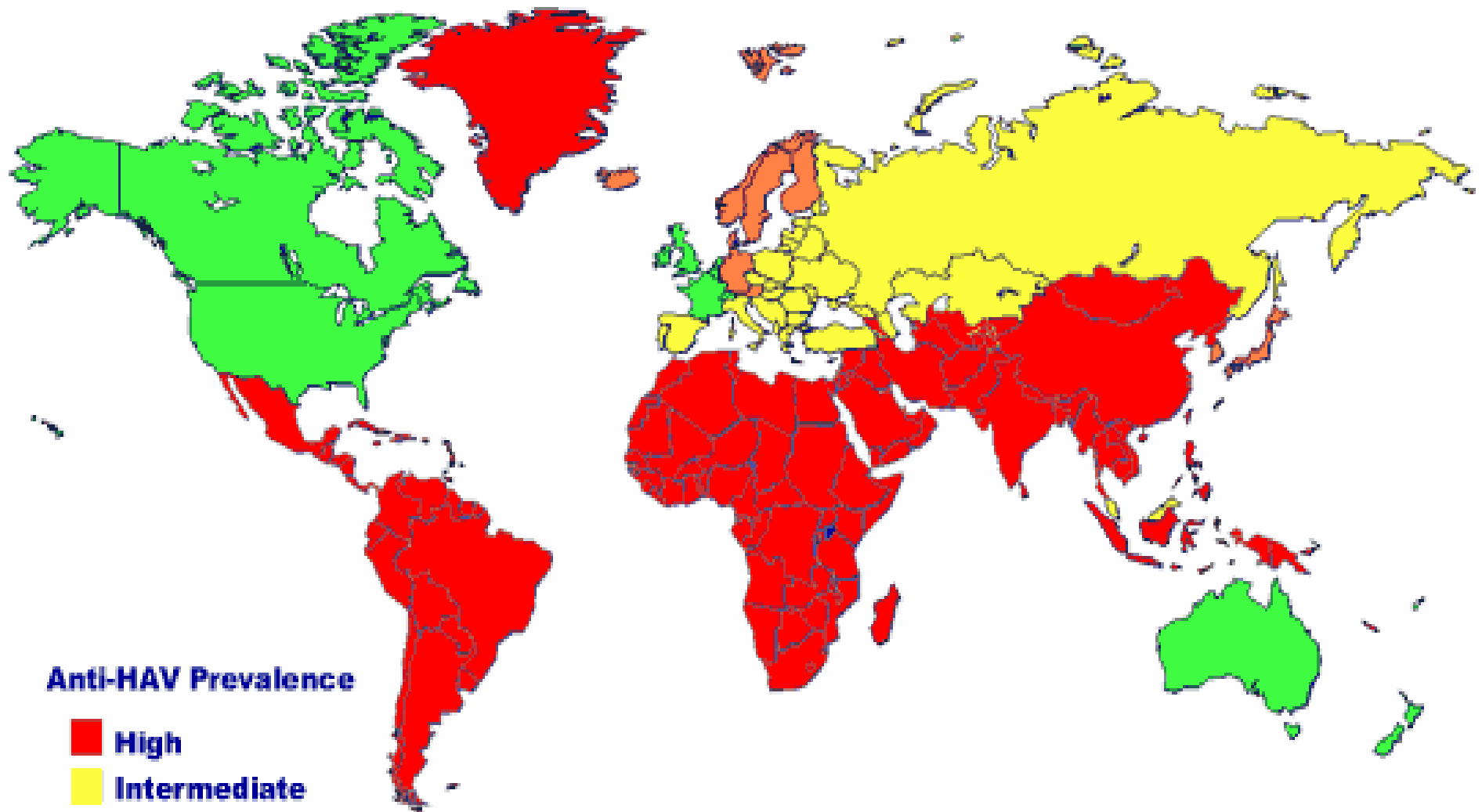


Poliomyelitis, 2001



² Countries bordering an area where wild poliovirus transmission occurs should be considered to pose a risk for travellers. The Democratic Republic of the Congo should be considered as continuing to pose a risk, although no virus has been detected in that country for over a year.

Geographic Distribution of HAV Infection



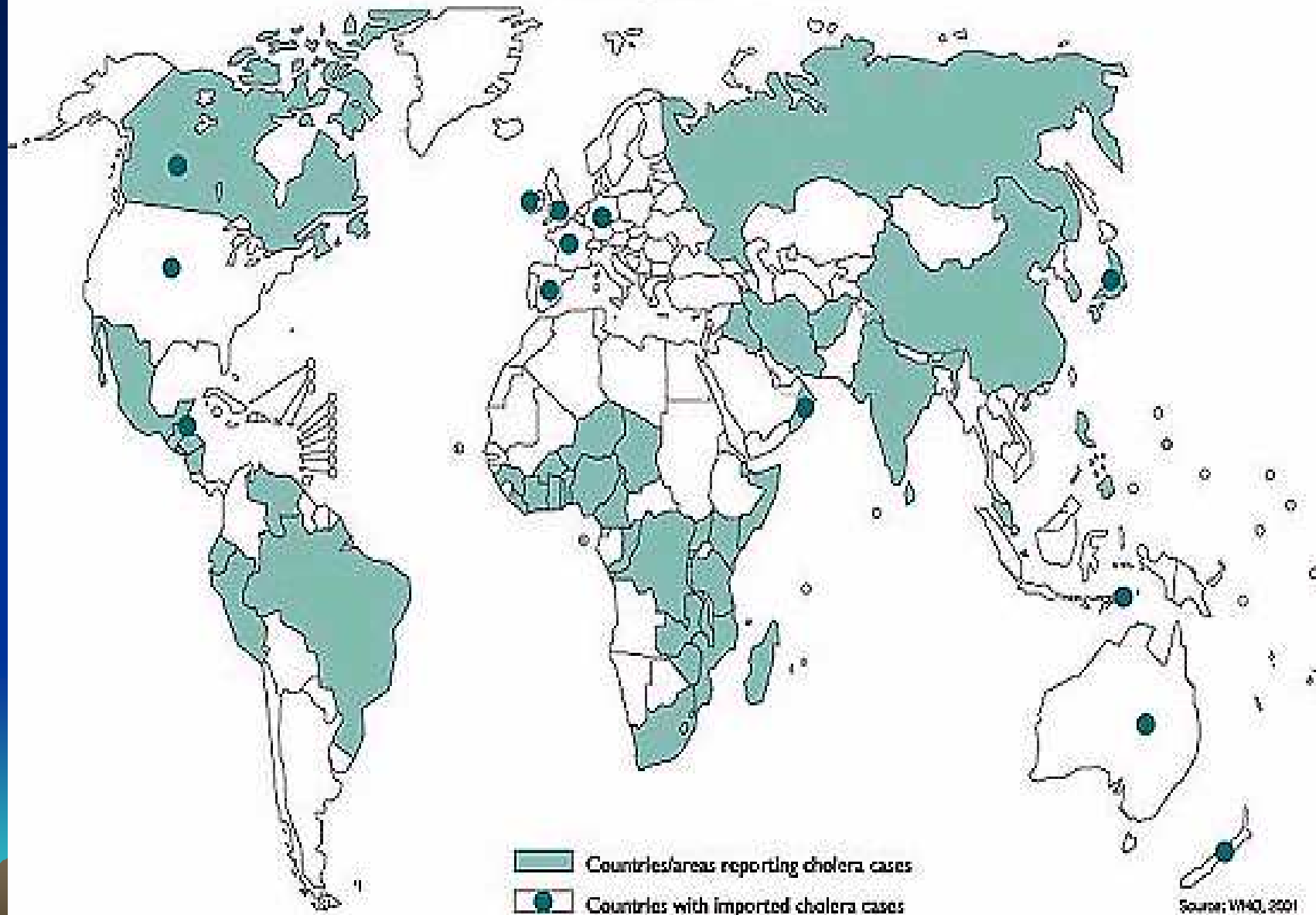
Anti-HAV Prevalence

- High
- Intermediate
- Low
- Very Low

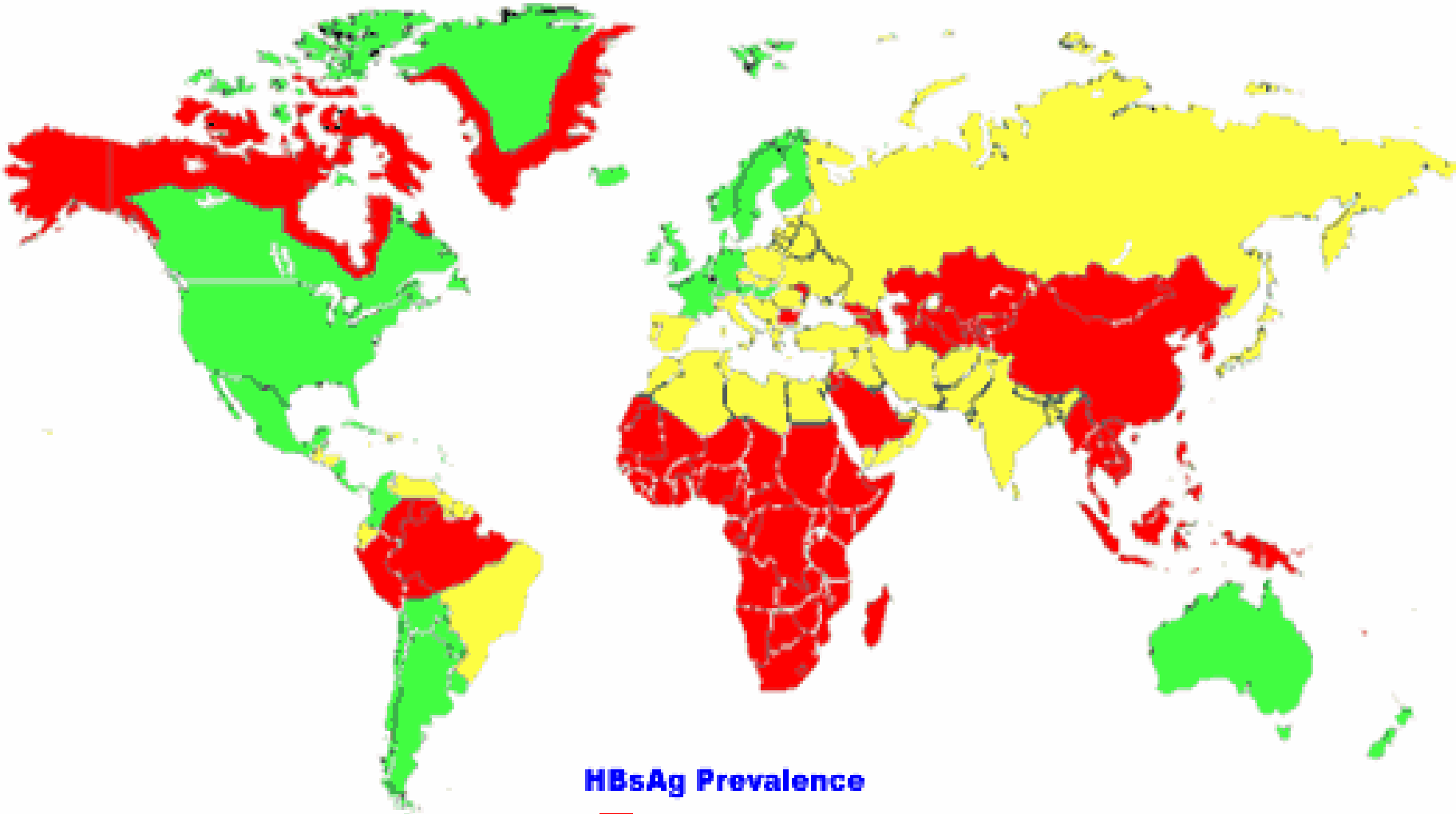
HEPATITIS A

- **Risk : frequency, severity, ⊕ :**
 - 1 to 5/1000/w (Southern Europe/Eastern Europe : >1/10.000/m)
 - ⊕ depends on age, children : <1/1000, >40 years : 2/100
- **Incubation : 2-6 w**
- **Indication for vaccination - Vaccination schedule - Vaccine**
 - WHO : non immunised travellers \geq 1 year (children of <5-10 years ?)
 - In any case : persons who reside for a longer period of time or travel frequently
 - 1 injection + booster after 6-12 m
 - USA : recommended now for children >2yrs in high rate U.S. communities; Children >2yrs & adults departing >4wks to countries with intermediate and high risk of hepatitis A
- **Protection : >99%**
- **Immunity is complete after ... (appears on ...) : >90% 2 w, >99% 4w (on day 8)**
- **Booster (duration) : >10y**
- **Price in Euro (€) : 42 € x 2**
- **Side effects (SE) : Local reaction/fever : rarely**
- **Other preventive measures ? (Hygienic measures)**
- **Treatment ? /post-exposure treatment (PET) :**
 - Lancet : vaccine in case of exposure \leq 1w?
 - give IgG, if exposure \leq 14d

Cholera, 2000-2001



Geographic Distribution of Chronic HBV Infection



HBsAg Prevalence

- Red: ≥8% - High
- Yellow: 2-7% - Intermediate
- Green: <2% - Low

HEPATITIS B

- **Risk : frequency,severity, ⊕ :**
 - Varies according to behaviour : 1/1000/m (expat.) à 1/2000 - 10.000/m (tourist)
 - ⊕ 2%, Chronic : 10%
- **Incubation : 6-25w**
- **Indication for vaccination - Vaccination schedule**
 - Short stay : persons at risk; adolescents/young adults; regular travellers
 - Long stay (>3-6 months) : all the non immunised travellers in endemic zones.
 - USA : recommended for all children age 18 and younger; household contacts of HBV+ adoptees, travellers to endemic areas >6m, especially if rural travel, local contact, medical or dental care; travellers to endemic areas anticipating blood or sexual contact
 - Classic schedule 3 inj. : 0-30-180d
 - **Accelerated schedule 4 inj. :**
 - 0-30-60-360d
 - 0-7-21-360d
 - USA : children-start series @birth-2m, complete by 18m, 3 doses-0,1,6 months
 - Engerix-B approved for 4 doses-0,1,2,12 months
 - Recombivax-approved for 2 dose schedule for children 11-15y use-give adult vaccine 4-6 months apart

HEPATITIS B

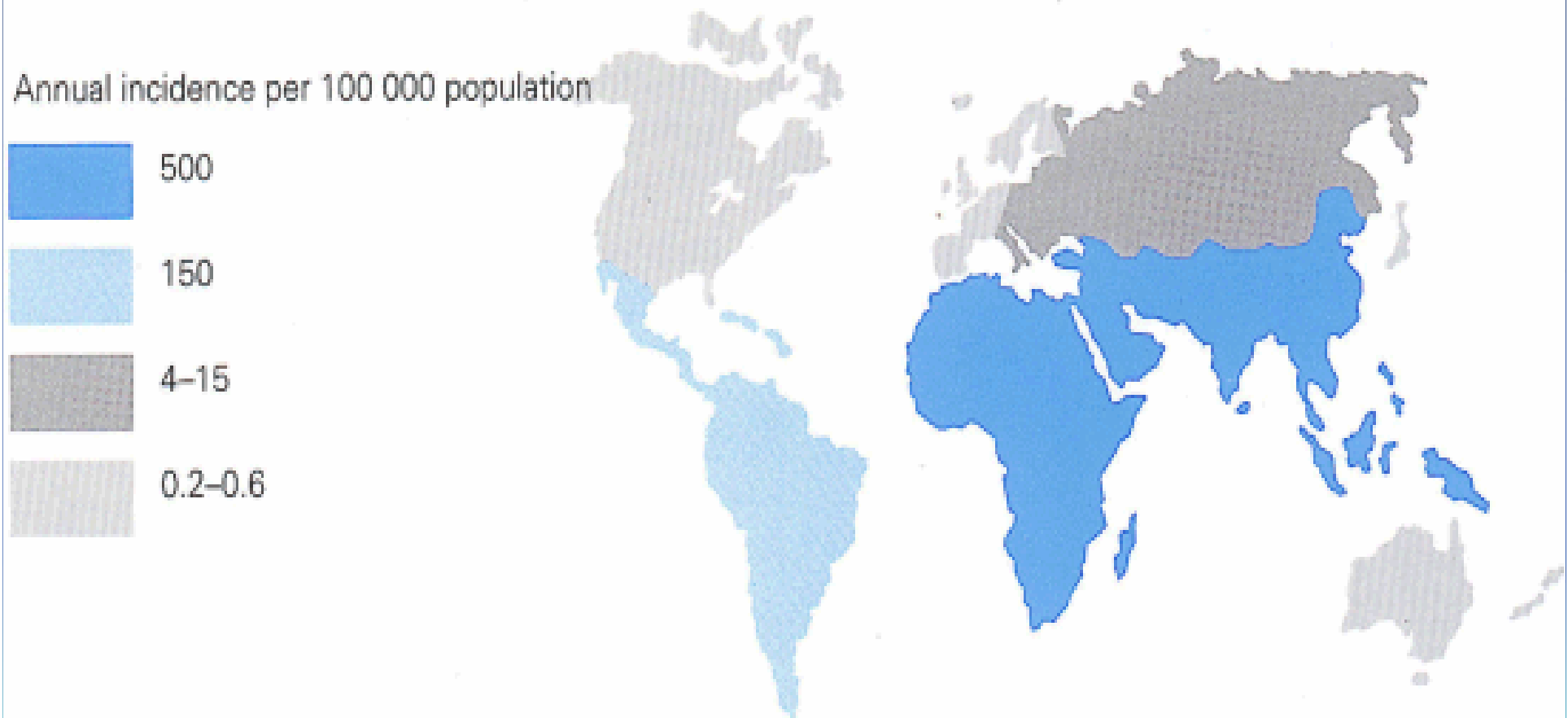
- **Immunity is complete after ... (appears on ...)** : *Varies according to age*
 - Classic schedule 3 inj. : 0-30-180 d **B : 2 m 70%**
 - **Accelerated schedule** 0 – 30 – 60 – 360 d **B : 1m 15% / 3m 85-90%**
 - **Accelerated schedule** 0 – 7 – 21– 360 d **B : 1m 62% / 2m 84%**
 - USA : 1 dose-20-30%, 2 doses-75-80%, 3 doses-long-term efficacy
- **Booster (duration)** :
 - 5-15y (~lifelong validity)
 - USA : need for booster not yet determined
- **Price in Euro (€)** :
 - 25 € x 3
 - 25 € x 4
- **Side effects (SE)** : Local reaction/fever : rarely
- **Other preventive measures ?** (behaviour)
- **Treatment ? /post-exposure treatment (PET)** :
 - PET : immunoglobulins in case of exposure <48h;
 - <14d in case of sexual contact
 - USA : use HBIG as soon as possible after exposure; give vaccine within 7d of exposure

HEPATITIS A + B

- **Indication for vaccination - Vaccination schedule - Vaccine : Twinrix®**
 - Indication for combined vaccine HA + HB
- **Protection : A : 100%, B : >95%**
- **Immunity is complete after ... (appears on ...) :**
 - **Classic schedule 3 inj. : 0-30-180d**
 - A : 1m > 95%
 - B : 1m 35% / **B : 2m 84%**
 - Lower if $\geq 40y$
 - **Accelerated schedule 4 inj. : 0-7-21-360d**
 - **B : 1 m 82% / B : 3m 97%**

All the figures vary according to age !!!
- **Price in Euro (€) : 40 € x 3, 40 € x 4**
- **Side effects (SE) : Local reaction/fever : rarely**

BUIKTYFUS



TYPHOID FEVER

- **Risk : frequency,severity/⊕ :**
 - 3 to 30/100.000/m (depending on the region and circumstances)
 - ⊕ 1%, relapses
- **Incubation :** 1-9 w (or more) minimum 3d
- **Indication for vaccination - Basic Vaccination schedule**
 - Short stay (<3weeks) : travelling in poor hygienic conditions
 - Long stays (≥ 3 weeks) : developing countries
 - USA : travellers to endemic areas with prolonged stays or adventurous eating habits;
children and adults-one dose Typhim Vi>one week before exposure
- **Other preventive measures ? (Hygienic measures)**
- **Treatment ? /post-exposure treatment (PET) :** Antibiotics

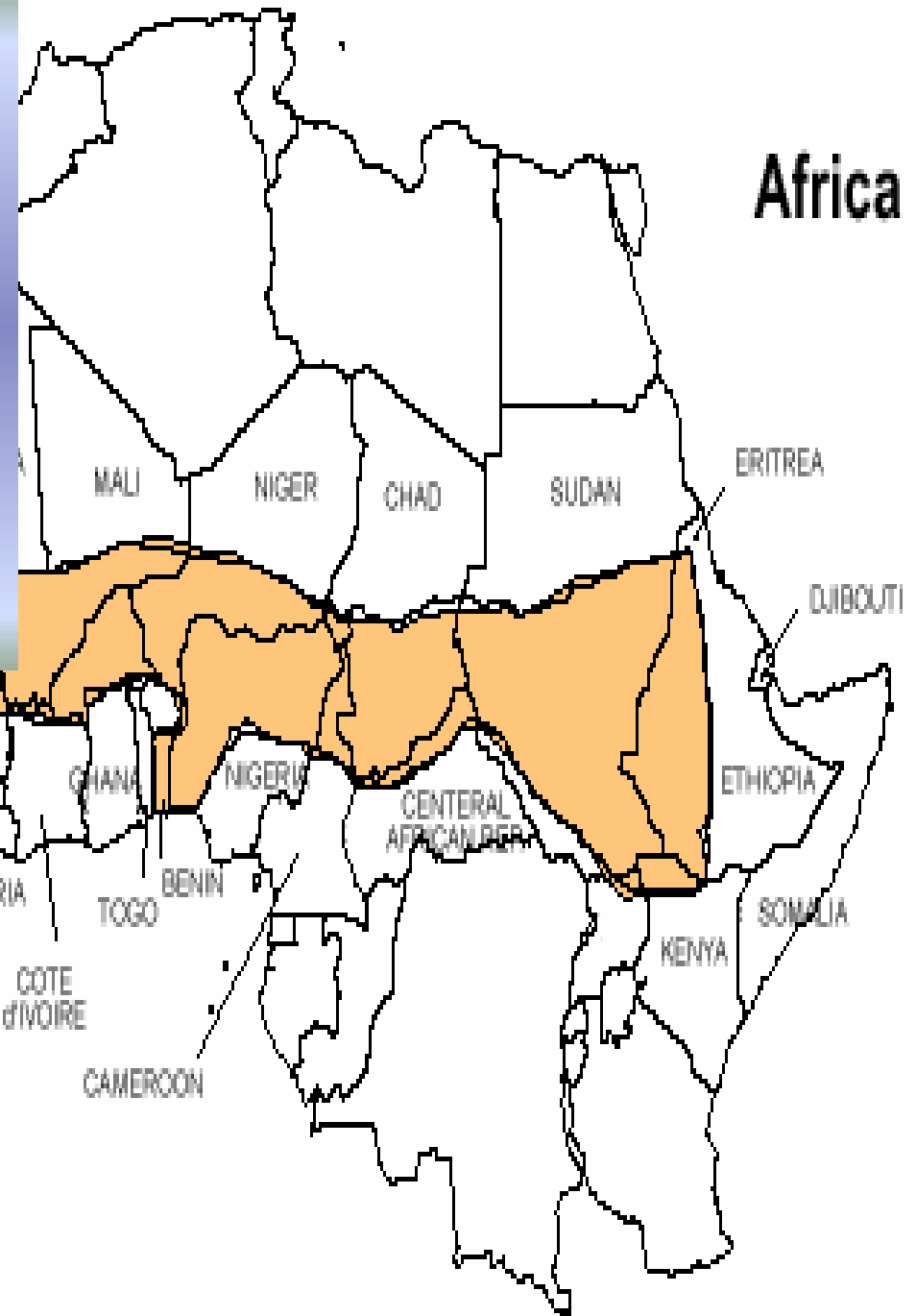
TYPHOID FEVER

Vaccine : oral : Vivotif

- **Vaccination schedule**
 - 3 capsules at 48 hours interval - on an empty stomach
 - to avoid : antibiotics and Proguanil
 - USA : not available
- **Protection** : ~50% (- 70 ?) %
- **Immunity is complete after ... (appears on ...)** : 10-14d
- **Booster (duration)** : 1-3y
- **Price in Euro (€)** : 18 €
- **Side effects (SE)** : Abdominal discomfort : very rare

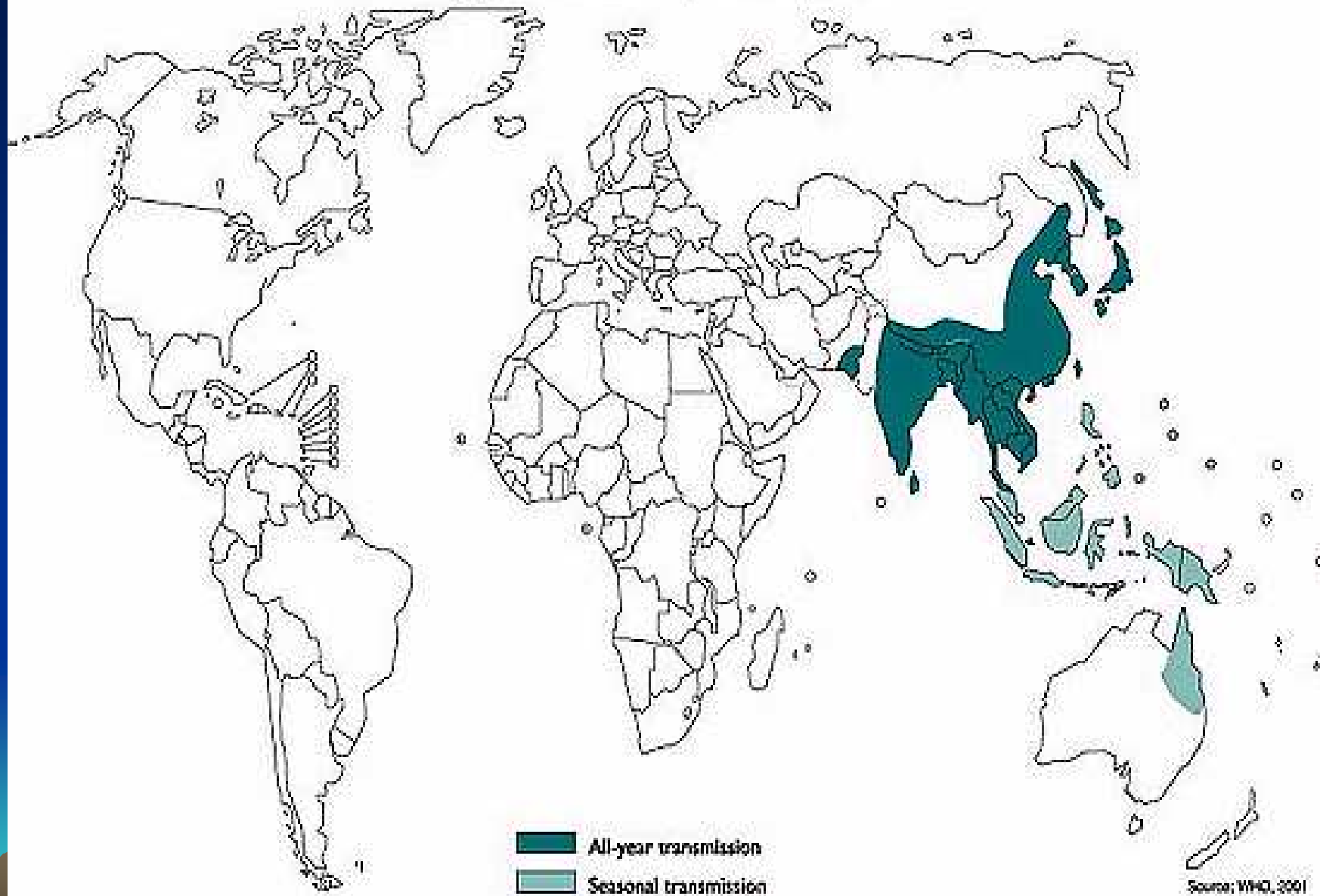
Vaccine : injectable : Vi Ag

- **Vaccination schedule** : 1 injection
- **Protection** : 50-70%
- **Immunity is complete after ... (appears on ...)** : 2-3w
- **Booster (duration)** : 1-3y , USA : 2y
- **Price in Euro (€)** : 18 €
- **Side effects (SE)** : Local reaction + fever rarely

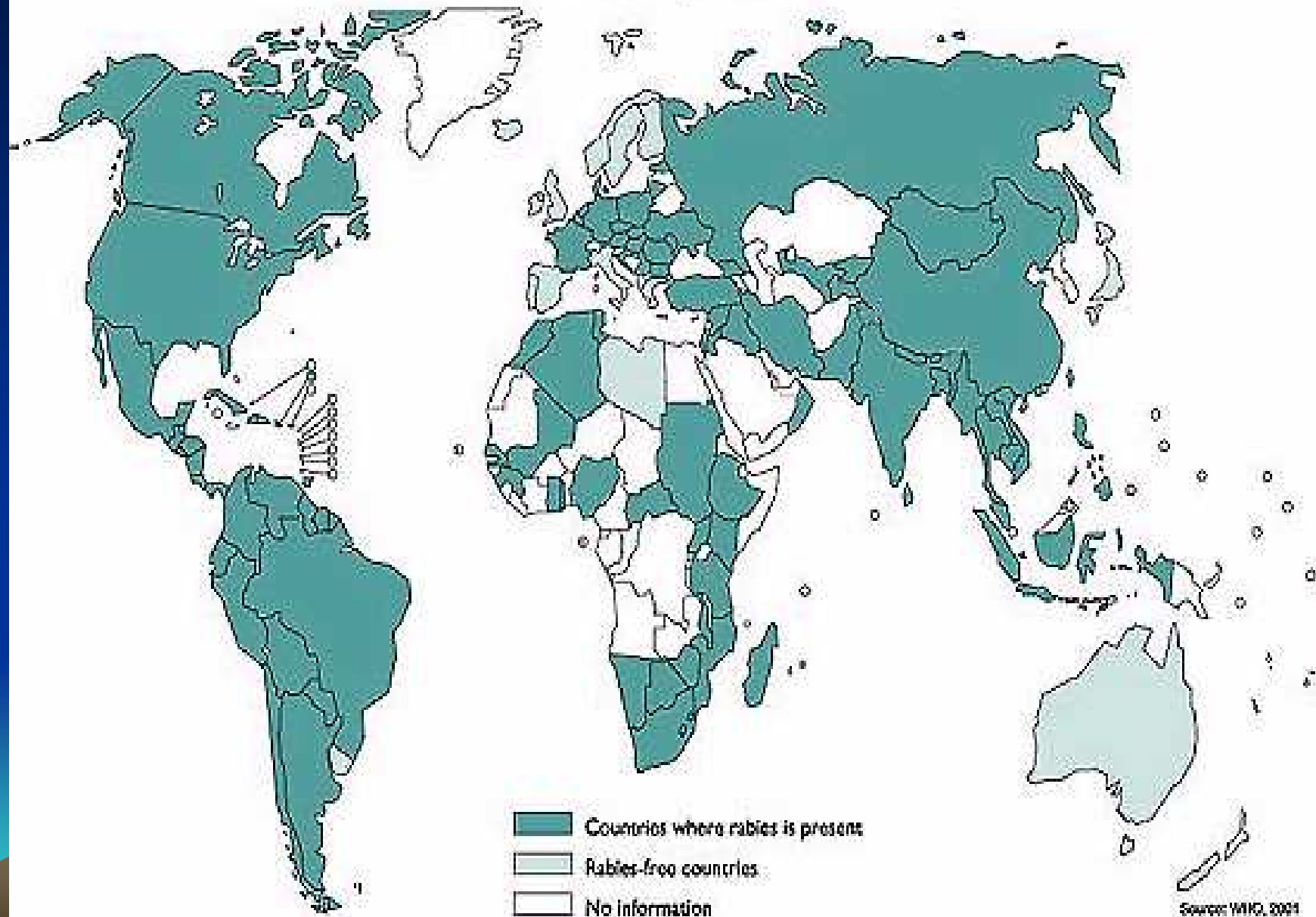


Source: WHO, 1998

Japanese encephalitis, 2001

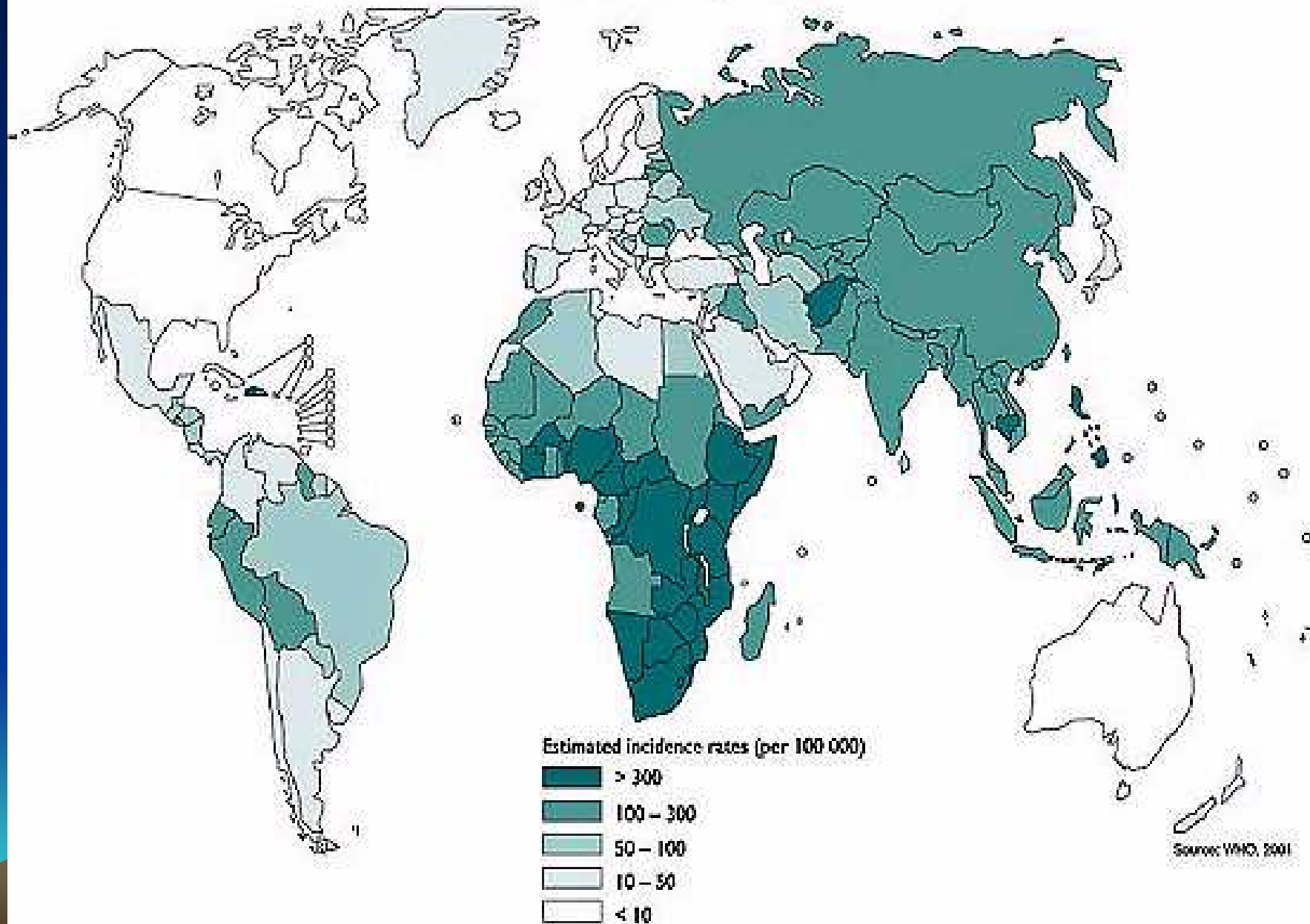


Rabies, 2001



Source: WHO, 2001

Tuberculosis, 2000



Een woordje over malaria

- Omdat er nog vele mensen ziek van reis terugkomen
- Omdat de ziekte zeer snel tot de dood kan leiden
- Omdat gezond verstand, basiskennis over de ziekte en eenvoudige maatregelen, malaria kunnen doen voorkomen
- Omdat 'de muggen bijten me niet' NIET juist is (cfr casus piloot)



Malaria Burden

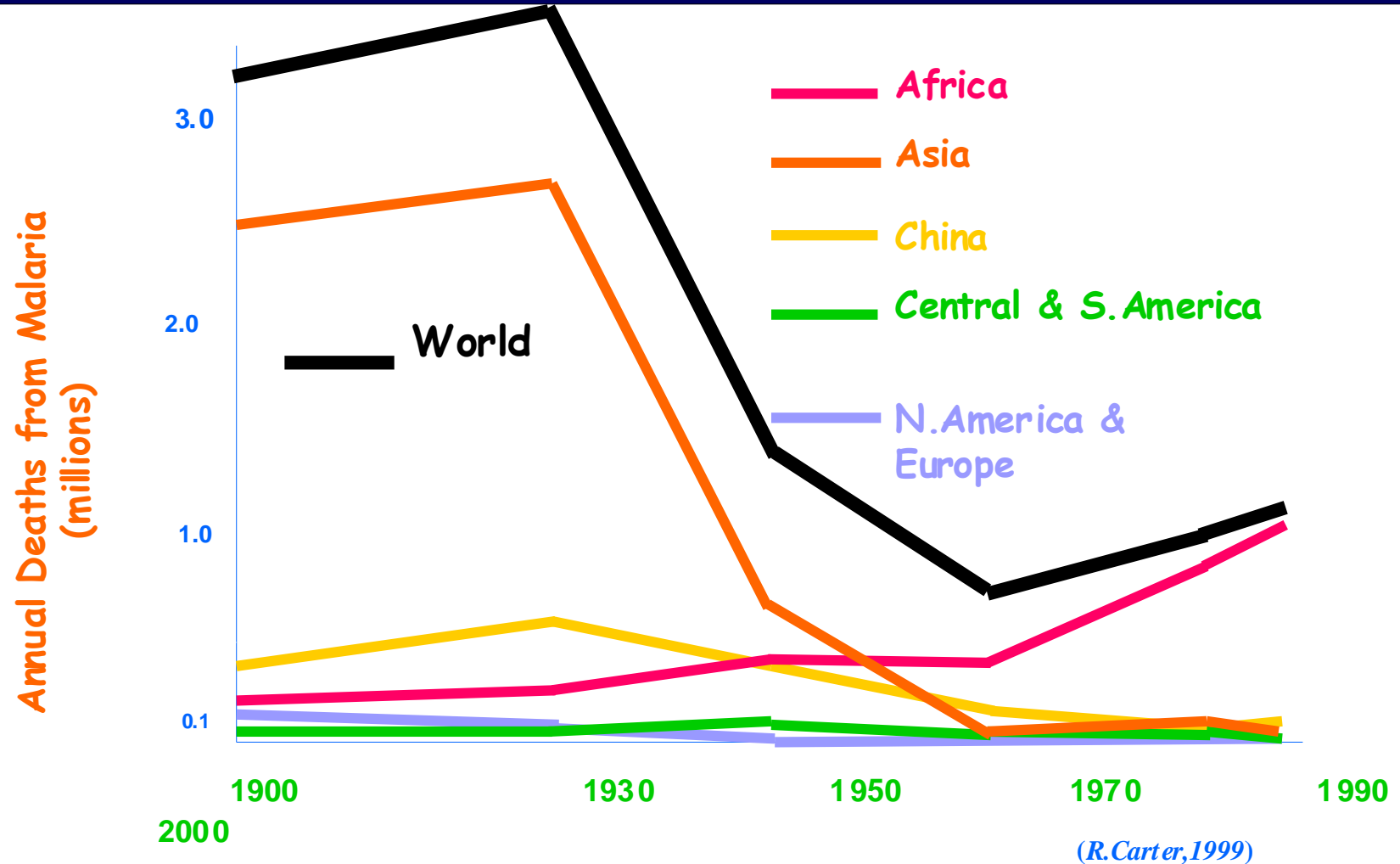
■ Disease Burden

- 300-500 million clinical cases per year
 - 80% of cases in Africa
- 1 million deaths per year
 - > 90% of deaths in Africa
- Disability from severe form of the disease
- 40 million DALYs lost annually



The Malaria Challenge

- Death rates reduced in Asia but rising in Africa



MALARIA als importziekte

- Wordt schromelijk onderschat en geminimaliseerd (soms ook door reisbureaus, cfr 'last minutes').
- Zeer ernstige en voor ons levensbedreigende aandoening.
- Eenvoudige maatregelen en basiskennis van besmetting kunnen al veel leed voorkomen: bijtcyclus van de mug, netten, repellants, medicatie, ...
- CAVE: resistentie (zeker in bepaalde streken!); link met HIV.

