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NATIONAL SURVEILLANCE OF COMMUNICABLE DISEASES

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HEPATITIS B VIRUS INFECTION ON FOREIGN TRAVEL

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In EPI-NEWS 22a+b/02, the proposal for vaccination against hepatitis B for a number of countries is extended to also include travellers in group 3, i.e. individual travel of some months' duration, for example back-pack travellers and immigrants visiting family. The geographic demarcation has been carried out in accordance with information from WHO about which countries are thought to present a moderate to severe risk of infection with hepatitis B virus (HBV). This applies to a few countries in the Caribbean, certain Eastern European countries, most of the countries in Central and South America and Asia, as well as the whole of Africa and Oceania.

Occurrence of hepatitis B virus
The occurrence of chronic HBV infection in various parts of the world is shown in table 1. WHO estimates that approx. 350 million people are chronically infected with HBV, and that the prevalence is more than 20% in certain highly endemic areas of Africa and Asia.

Table 1. Geographic occurrence of chronic hepatitis B virus infection (HBsAg)

Low	Moderate to severe
<2% HBsAg prevalence	>2% HBsAg prevalence
Scandinavia	Eastern Europe
Western Europe	Central America
North America	Tropical S. America
Australia	Asia
Japan	Africa
Turkey	Greenland
	Arctic Canada

In Denmark, the incidence of acute HBV infection is around 1.6 per 10^5. Of these, 25-30% are thought to have been infected sexually, and all in all, less than 10% have been infected while travelling. In Denmark as well as in most other western countries, the mode of infection for approx. 1/3 of notified cases of acute HBV infection is stated as unknown.

Risk of HBV infection on travel
No good study has recently been made of the real risk of HBV infection for travellers. Only rarely do vaccinated persons become ill, while it is not uncommon for non-immune persons who spend time in highly endemic areas to seroconvert. Older studies suggest that 1 out of 2,500 non-immune travellers develop symptomatic HBV infection after travel of longer duration to areas with medium or highly endemic occurrence. This risk is probably about three times less than the risk of hepatitis A virus infection. The incidence of asymptomatic HBV infection is estimated to be around 360 per 10^5 travellers to Asia per month and 60 per 10^5 travellers to Africa and Latin America per month. The risk of acquiring HBV infection during travel depends not just on the prevalence of HBsAg in the local population, but primarily on the traveller's behaviour. Infection can occur through blood transfusion, e.g. after traffic accidents, tattoos, acupuncture and not least through unprotected sex. How great a proportion of Danish travellers to highly endemic areas are vaccinated, and how great a proportion are actually exposed to HBV, is not known. Studies from other western countries have shown that ¼-½ of relevant travellers are vaccinated. There may be several reasons for lack of vaccination. It is important to discuss routes of infection with the person travelling, including particularly sexual transmission and the condom's protective effect. Furthermore, travellers should be informed that the risk of accidents that may lead to local medical treatment is relatively great. If, on the basis of this conversation, there is indication for vaccination, this should be recommended.

Vaccination and protection against HBV infection
The ordinary vaccination regime consists of three vaccinations given at time 0, 1 and 6 months. In principle, all three vaccinations should be given before departure. However, time constraints often preclude the implementation of this regime, for which reason an accelerated regime with vaccination day 0, 7 and 21 can be used for adults. In this case, a booster should be given after one year. After the full series, protection is achieved against infection for at least 10 years, and possibly life-long protection against illness, primarily because of acquired cellular immunity. Current studies will contribute to clarifying this, including whether the number of vaccinations can possibly be reduced.

Vaccination and protection against hepatitis A and B virus infection
For many travellers where there is an indication for vaccination against HBV, there will also be an indication for immunoprophylaxis against hepatitis A virus (HAV). In these cases, the combined hepatitis A and B vaccine may be used. For adults, both of the regimes for HBV vaccination mentioned may be used. However, on vaccination with pure hepatitis A vaccine, the traveller will be protected against HAV already after the first vaccination. To ensure protection against both diseases, the combination vaccine should be given in three doses, whether the ordinary or the accelerated regime is used.
(P. Andersen, E. Smith, Department of Epidemiology)

REVISED HEPATITIS GUIDELINES
The National Board of Health's "Guidelines for the prophylaxis of hepatitis" from 1996, has been revised and is now in print. The new guidelines will be issued to general practitioners and others at the end of June 2002. The guidelines will be discussed in more detail in a later issue of EPI-NEWS.
(National Board of Health)

UNCERTAIN VACCINATION STATUS IN ADOPTED CHILDREN FROM CHINA
Recent studies have raised doubt about vaccination status among adoptive children from China. In a Dutch study, it was found that approx. 30% of adoptive children from China, in contrast to adoptive children from other countries, did not have protective antibodies for tetanus, diphtheria and polio, despite a complete vaccination card. The Department of Epidemiology has found the same tendency in a small study of Chinese children adopted to Denmark. For all adopted children from China, it is therefore recommended to follow the guidelines in EPI-NEWS 50/01 concerning children of uncertain vaccination status. For small children, a choice can be made between starting from scratch with the vaccination programme or measuring antibodies to diphtheria and tetanus. Older children, above 4-5 years old, can be given one diphtheria-tetanus revaccination plus one IPV vaccination, and antibodies to diphtheria and tetanus can be measured after one month. The Chinese adoption authorities are aware of the problem, and the Danish adoption agents have informed the affected families.
(P. Andersen, Department of Epidemiology)

19 June 2002

Patients with laboratory-confirmed pertussis

1st quarter of 2002

	January	February	March	Total
< 2 years	39	16	21	76
2-17 years	109	95	80	284
≥ 18 years	20	21	13	54
Total	168	132	114	414

From 01.01.1999 figures comprise all pertussis cases demonstrated by culture or PCR.

(Dept. of Respiratory Infections, Meningitis and STIs)