

Travel away from Hepatitis A

Worried about acquiring diseases when travelling abroad? Thinking that travel to first world countries should be germ free? Think again, for just as people travel, so do pathogens! In 2013 there was an outbreak of Hepatitis A virus (HAV) disease in the United States. The perplexing issue was that the 165 infected patients were spread over 10 different states, and involved an unusual strain not common to that country. Investigations led to the association of the outbreak with the consumption of a frozen berry blend purchased at a large supermarket chain and the source was traced to pomegranate seeds used in the particular blend that were imported from Turkey. In 2014 there were a number of outbreaks in different European countries associated with food consumption. A similar situation arose in Australia early in 2015 when again frozen mixed berries, this time imported from China and sold in a number of chain stores, were implicated in an outbreak there. Yet none of them can compare with the outbreak recorded in 1988 in Shanghai when 300 000 mostly young adults contracted Hepatitis A after consuming contaminated shellfish, and close to 30 million were infected in some way.

Hepatitis A is considered one of the most common vaccine preventable diseases that can be acquired during travel. It initially was considered a disease associated with lower socio-economic strata; in South Africa 80% of adolescents in lower socio-economic groups had previous exposure compared to 24% in the higher groups. Inadequate hygiene and poor access to clean water are also known risk factors but

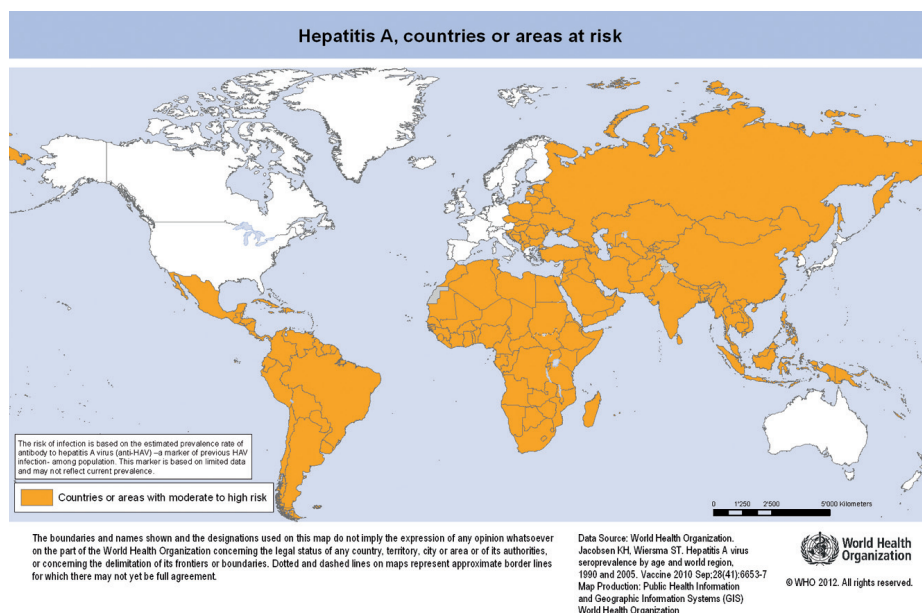
the emerging situation is much more complex. In Africa and Asia the disease is highly endemic and outbreaks are rare. Hepatitis A is frequently acquired in childhood on these continents and tends to be asymptomatic. In children under the age of six, 70% of infections are asymptomatic and even in those children who do not feel well, the hallmark jaundice is uncommon. Most adults in these highly endemic areas would have acquired the disease during childhood and would have lifelong immunity against subsequent infections.

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In the more affluent countries the situation is completely different. Non-exposure during childhood leads to a more severe disease in adolescents and adults, and

outbreaks can occur. The incubation period after ingesting the virus, which is spread by the faecal-oral route (direct person to person), via contaminated food and water which includes inadequately cooked or frozen food, is about one month, but can be as short as 2 weeks and as long as 2 months. The abrupt onset of nausea, fever, anorexia, malaise and abdominal discomfort normally heralds the clinical onset of the disease with jaundice following a few days later. In older children and adults the course usually last less than 2 months, but a protracted course lasting nine months can occur in up to 15% of cases. The infection does not lead to chronic liver disease. The morbidity and mortality increases with age, and fulminant hepatitis and liver failure can occur, with mortality close to 2.7% in the over 50 age group. It is estimated that over 100 000 deaths were due acute liver failure caused by HAV in 2010

HAV is mostly shed during the two weeks before the clinical onset of



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Jaundice is absent in most children who contract Hep A

symptoms and the risk of transmission and concentration of virus in stool and serum decreases markedly with the onset of liver dysfunction manifestations. This is also the time that circulating antibodies start appearing. Young children can shed HAV for up to six months in their stools. It is thus clear that an infected person can potentially spread the virus to a whole community before the first case is actually detected.

In countries such as the USA the factor most commonly associated with Hepatitis A outbreaks happens to be travel. This has led some specialists in that country to advise any prospective international traveller to consider vaccinating against HAV irrespective of their destination. Asian, African, rural and remote destinations spring to mind first, but even first world areas such as Puglia in Italy and Catalonia in Spain had outbreaks a few years ago! In the past the risk of HAV infection in unvaccinated travellers was previously about 3 per 1,000 individuals per month of travel to a developing country with relatively good standards of accommodation. This rose to 20 per thousand individuals per month who travelled and were exposed to poor sanitary conditions and exhibited riskier culinary habits or travelled to rural areas. Presently, with improvements in sanitary conditions and increasing awareness, the risk of infection for nonimmune travellers visiting high- and medium-endemic areas has been reduced to 6 to 30 per 100,000 individuals per month travelled.

Prevention through vaccination is of course the mainstay of ensuring not to have an overseas holiday spoilt. No matter how much we preach 'boil it, cook it, peel it or forget it,' the maxim of 'easy to say, impossible to do' probably holds true! The Hepatitis A vaccine is one of the safest and most effective vaccines around. It can be administered anytime before departure, even for the last minute traveller, but

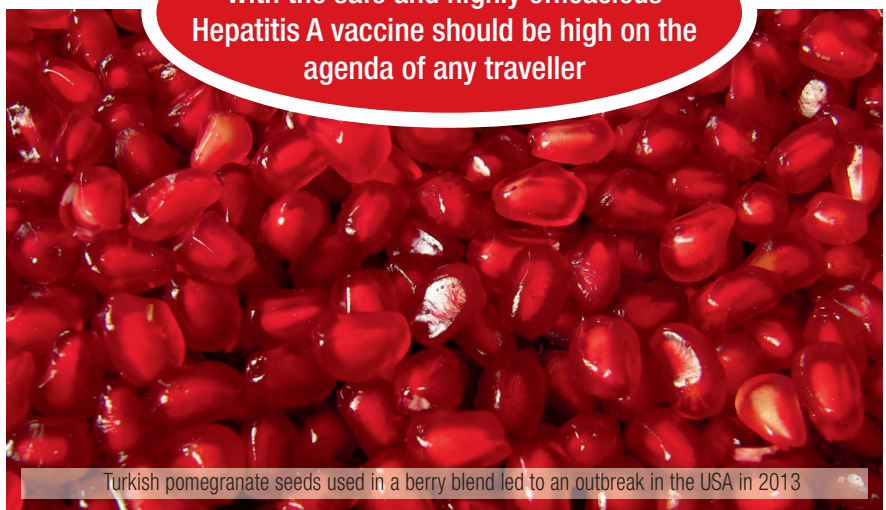
should be done about a month before travel. Protective antibody levels are found in 80% of adults after two weeks and 99% after one month in adults after one single dose. Levels in children over the age of two also approach 100%. Children under the age of one often have acquired circulating maternal antibodies that

may interfere with the induced immune response to the vaccine. The protective levels persist for about a year after the first dose. To induce long term protection a second dose is given 6-12 after the first and it is considered that protection is for at least twenty years after the primary series and possibly lifelong.

Hepatitis A vaccine can be found in combination with others for convenience. A formulation exists that includes Hepatitis A and Hepatitis B and this can be used in a specific schedule and even an accelerated one. Hepatitis A in combination with a typhoid vaccine is a convenient formulation for travellers to areas where risks of the two diseases co-exist. Considering vaccination with the safe and highly efficacious

Hepatitis A vaccine should be high on the agenda of any traveller. **d**

Considering vaccination with the safe and highly efficacious Hepatitis A vaccine should be high on the agenda of any traveller



Turkish pomegranate seeds used in a berry blend led to an outbreak in the USA in 2013



Consumption of shellfish led to 300 000 mostly young people acquiring Hep A in Shanghai in 1988