CHOLERA INFORMATION FOR THE AUSTRALIAN TRAVELLER

Adapted from Health Information for International Travel and The Australian Immunisation Procedures Handbook, 5th edition.

Cases of cholera in Australia almost always occur in individuals who have been infected in Asia, Africa, the Middle East, South America and parts of Oceania.

Despite the prevalence of cholera in some tourist destinations, vaccination with the currently available cholera vaccine is not recommended due to its low efficacy and short duration of action. The careful selection of food and water while overseas is of far greater importance to the traveller.

In places where the standard of hygiene is less reliable than in Australia, travellers should be advised to take the following precautions with food and drink.

- Avoid eating cold meat, salads, raw or cold seafood (including shellfish), precooked food, unpasteurised milk and dairy products. Ice made from contaminated water is not sterilised by freezing, so avoid ice in drinks, ice-cream and flavoured ice blocks. Fruit that you have peeled yourself is usually safe.
- Boiling for a minimum of ten minutes is the most reliable method of ensuring that water of uncertain purity is made safe for drinking. Alternative methods of water purification include chemical disinfection with iodine or chlorine. Filters are not recommended as none can remove all pathogenic viruses.

In general, the following beverages are usually safe from contamination:

- tea and coffee made with freshly boiled water, and
- commercially canned or bottled carbonated beverages, beer and wine.

At all times, personal hygiene is of the utmost importance, and travellers should be advised to be scrupulous about washing their hands after using the toilet and before eating.

CHOLERA

Adapted from World Health Organization Fact Sheet N107 of March 1996

Cholera is an acute intestinal infection caused by the bacterium *Vibrio cholerae*. It has a short incubation period, from less than one day to five days, and produces an enterotoxin that causes a copious, painless, watery diarrhoea that can quickly lead to severe dehydration and death if treatment is not promptly given. Vomiting also occurs in most patients.

Most persons infected with *V. cholerae* do not become ill, although the organism is present in their faeces for 7 to 14 days. When illness does occur, more than 90% of episodes are of mild or moderate severity and are difficult to distinguish clinically from other types of acute diarrhoea. Less than ten per cent of ill persons develop typical cholera with signs of moderate or severe dehydration.

Background

The vibrio responsible for the seventh pandemic, now in progress, is known as *V. cholerae* O1, biotype El Tor. The pandemic began in 1961 when the vibrio first appeared as a cause of epidemic cholera in Celebes (Sulawesi), Indonesia. The disease then spread rapidly to other countries of eastern Asia and reached Bangladesh in 1963, India in 1964, and the USSR, Iran and Iraq in 1965-1966.

In 1970, cholera reached West Africa, which had not experienced the disease for more than 100 years. The disease quickly spread to a number of countries and eventually became endemic in most of the continent. In 1991, cholera struck Latin America, where it had also been absent for more than a century. Within the year it spread to 11 countries, and subsequently throughout the continent.

Until 1992, only *V. cholerae* serogroup O1 caused epidemic cholera. Some other serogroups could cause sporadic cases of diarrhoea, but not epidemic cholera. Late that year, large outbreaks of cholera began in India and Bangladesh that were caused by a previously unrecognised serogroup of *V. cholerae*, designated O139, synonym Bengal. Isolation of this vibrio has now been reported from ten countries in South Asia. It is still unclear whether *V. cholerae* O139 will extend to other regions, and careful epidemiological monitoring of the situation is being maintained.

Transmission

Cholera is spread by contaminated water and food. Sudden, large outbreaks are usually caused by a contaminated water supply. Only rarely is cholera transmitted by direct person-to-person contact. In highly endemic areas, it is mainly a disease of young children, although breastfed infants are rarely affected.

Marine shellfish and plankton are the main reservoirs of *V. cholerae*. The El Tor strain can also survive in fresh water for long periods. Persons with asymptomatic infections play an important role in carrying *V. cholerae* from place to place, causing epidemics to spread.

Treatment

When cholera occurs in an unprepared community, case-fatality rates may be as high as 50%, usually because there are no facilities for treatment, or because treatment is given too late. In contrast, a well organised response in a country with a well established diarrhoeal disease control program can limit the case-fatality rate to less than one per cent.

Most cases of diarrhoea caused by *V. cholerae* can be treated adequately by giving a solution of oral rehydration salts. During an epidemic, 80 to 90% of diarrhoea patients can be treated by oral rehydration alone, but patients who become severely dehydrated must be given intravenous fluids.

In severe cases, an effective antibiotic can reduce the volume and duration of diarrhoea and the period of vibrio excretion. Tetracycline is the usual antibiotic of choice, but resistance to it is increasing. Other antibiotics that are effective when *V. cholerae* are sensitive to them include cotrimoxazole, erythromycin, doxycycline, chloramphenicol and furazolidone.

Epidemic control and preventive measures

When cholera appears in a community, it is essential to ensure three things: hygienic disposal of human faeces, an adequate supply of safe drinking water, and good food hygiene. Effective food hygiene measures include cooking food thoroughly and eating it while it is still hot; preventing cooked foods from being contaminated by contact with raw foods, contaminated surfaces or flies; and avoiding raw fruits or vegetables unless they are first peeled.

Routine treatment of a community with antibiotics or mass chemoprophylaxis has no effect on the spread of cholera, nor does restricting travel and trade between countries or between different regions of a country. Setting up a cordon sanitaire at frontiers uses personnel and resources that should be devoted to effective control measures, and hampers collaboration between institutions and countries that should unite their efforts to combat cholera.

The only cholera vaccine that is widely available at present is killed vaccine administered parenterally, which confers only partial protection (50% or less) and for a limited period of time (three to six months maximum). Use of this vaccine to prevent or control cholera outbreaks is not recommended because it may give a false sense of security to vaccinated subjects and to health authorities who may then neglect more effective measures.

In 1973, the World Health Assembly deleted from the International Health Regulations the requirement for presentation of a cholera vaccination certificate. Today, no country requires proof of cholera vaccination as a condition for entry, and the International Certificate of Vaccination no longer provides a specific space for recording cholera vaccinations.