



Bulletin No. 13

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Fishermen's Uphappy Catch - Giardiasis

Nine individuals in four separate groups were documented to have contracted giardiasis in the past two weeks after fishing trips or float trips on Clear Creek, Alexander River and Deshka River. All individuals drank untreated river water during their trips. All cases developed typical symptoms of giardiasis with severe abdominal bloating, cramps, excessive gas, diarrhea, and malaise. The incubation period was between one and two weeks. All individuals recovered after being treated with Flagyl and Atabrine, although symptoms lasted as long as two weeks. In recent years an increasing number of outbreaks of diarrheal illness have occurred in people who have visited the Deshka and Alexander Rivers and have drunk untreated surface water.

Giardiasis is caused by a flagellated intestinal protozoan and is readily transmitted by contaminated surface water. Illness is contracted by ingesting the giardia cyst. Passage of the cyst through the acid stomach initiates the process of excystation. The trophozoite emerges and divides in the intestine where it attaches to the luminal wall. Reproduction continues and symptoms appear, usually one to four weeks after exposure. As trophozoites dislodge themselves and move downstream, some of them secrete a capsule to form cysts; others remain unencysted. Both forms may be discovered in stool specimens, but only the cyst remains viable outside of the human or animal host. Diagnosis is made by stool examinations for cysts or trophozoites.

Cysts may survive freezing and chlorination at usual levels used in water supplies (0.5 ppm of free chlorine). Iodine compounds have not been shown to reliably kill giardia cysts. Cysts are killed effectively by boiling.

Treatment of giardiasis is generally recommended even for asymptomatic carriers. Quinacrine (Atabrine) is the drug of choice at a dosage of 2 mg/kg three times a day by mouth to a maximum of 300 mg/day for seven days. Although not currently approved for giardiasis by the FDA, Metronidazole (Flagyl) is commonly used and is effective at a dose of 5 mg/kg three times a day by mouth to a maximum of 750 mg/day for ten days. Furazolidone (a liquid suspension) is also effective at a dose of 1.25 mg/kg four times a day by mouth for seven days.

The Section of Communicable Disease Control and Department of Environmental Conservation are currently working together to inform tourists and Alaskans of the risks of giardiasis. A "boil water" order has been issued for Clear Creek, Alexander River, and Deshka River. (Reported by Jim Allen and Bob Martin, Alaska Department of Environmental Conservation)

#### **NEW RABIES VACCINE NOW AVAILABLE FOR PRE-EXPOSURE VACCINATION**

The Rabies Control Program is delighted to be able to announce that the new rabies vaccine, Human Diploid Cell Vaccine (HDCV) is now available in sufficient quantities that it will completely replace Duck Embryo Vaccine (DEV). The vaccine is available through the Rabies Control Program, Section of Communicable Disease Control, in Anchorage or through the Virology-Rabies Unit, Section of Laboratories, in Fairbanks. The Division of Public Health will now supply the vaccine free of charge for pre-exposure vaccination as well as for post-exposure vaccination.

HDCV replaces Duck Embryo Vaccine (DEV) as the vaccine of choice for all rabies vaccinations. Pre-exposure vaccination requires three 1.0 ml injections of HDCV given intramuscularly, one dose on each of the days 0, 7, and 21 or 28. All persons receiving pre-exposure vaccination should have serum for rabies antibody testing collected 2-3 weeks after the last injection.

Testing for rabies antibody is available through the State Section of Laboratories. If the antibody titer is not adequate, a booster dose is given and serum collected for antibody testing two to three weeks later.

Because HDCV (\$45.00 per dose) is much more expensive than Duck Embryo Vaccine (DEV), all orders will be processed individually at the Section of Communicable Disease Control in Anchorage, 272-7534, or by the Virology-Rabies Unit in Fairbanks, 479-7017.