WHAT IS SALMON POISONING?

At this time of year the streams and rivers as well as Puget Sound are teeming with salmon. Because of this and the fact that we have had a lot of flooding right now, we must be aware of the risks of salmon poisoning.

So what is salmon poisoning?

Dogs that consume raw salmon can develop a severe illness called Salmon Poisoning Disease (SPD). Dogs should never be allowed to eat fresh salmon or even some forms of the fish that have been cold smoked or frozen and thawed within 158 days. They should also not eat steelhead, a rainbow trout that has made the long journey to the salt water and back. It has even been reported that the Pacific giant salamander can carry the microorganism.

SPD occurs in all canids, wild and domestic. The disease is actually not a poison at all but is caused by a microorganism that arrives in a parasitic fluke through a complex life cycle.

The life cycle of the fluke requires two intermediate hosts, a species of snail and usually a salmonoid fish, and with the fish eating mammal or bird being the definitive host. Throughout its lifecycle, the fluke is home to the causative microorganism called a rickettsiae (pronounced reh-KEET-see-uh). Life stages of the fluke are passed from the snail to the fish. Dogs ingest the flukes carried in the flesh of the salmon or even licked from the slime on the skin of the fish. In this way, dogs become infected with the rickettsial that causes SPD.

The snail that serves as an intermediate host for the fluke is found in fresh or brackish waters of the coastal regions of Washington, Oregon and Northern California thus SPD is very unique to this area. Salmon and nonsalmonoid fish, such as steelhead, left dead or dying by floods pose a hazard to dogs that would otherwise not have ready exposure. Dogs may also become susceptible to SPD if they consume domestic trash containing salmon carcasses.

The flukes can develop in other mammals including bears, raccoons and birds, but they usually do not show clinical signs of the disease from the rickettsiae.

Once the fluke cysts make their way inside the dog they mature and attack the lining of the intestine. The rickettsiae are released and they multiply and spread to the lymph nodes, tonsils, spleen, thymus, liver, lungs and brain. Secondary bacterial infections can also set in.

]The signs of SPD have a 5 to 7 day incubation period followed by a sudden fever that peaks at 104 to about 108 degrees F. Gradually the fever drops over the next week and the dogs that are untreated usually die by day 14. During the course of the disease dogs show no appetite, may vomit and have diarrhea progressing to bloody diarrhea and show an extreme thirst. Nasal discharges and drainage from the eyes is also seen. Lymph nodes throughout their body can be enlarged.

SPD is diagnosed most commonly by finding fluke eggs on a fecal examination. Results of blood testing can provide further support for the diagnosis. Rarely are the rickettsiae seen on aspirates from lymph nodes.

The generalized signs and symptoms of SPD could be confused with a parvovirus infection unless there is a record of vaccination.

Dogs usually do well when treated for SPD. Most often if left untreated the disease is fatal. Specific antibiotics and supportive care, including intravenous fluid therapy during hospitalization, are the best treatments for SPD.

There is no vaccine for SPD. Dogs are generally considered immune to infection.

The best thing an owner can do is prevent their dog from eating salmon or steelhead. If a dog is seen eating, or even licking a salmon carcass, the owner should contact their veterinarian to see if prophylactic treatment is warranted.