



Diphyllobothrium Fact Sheet

What is *Diphyllobothrium*?

Diphyllobothrium is a genus of tapeworm (the fish or broad tapeworm) that causes diphyllobothriasis, a parasitic infection of the human gastrointestinal tract. The *Diphyllobothrium* species are the largest tapeworms that can infect people and can grow up to 30 feet long.

How is *Diphyllobothrium* spread?

People get infected by eating raw or undercooked fish. Examples of fish include salmon, trout, perch, walleyed pike, and other species -- usually freshwater fish. Some fish such as salmon live in both fresh and salt water and can harbor *Diphyllobothrium* larvae. Lightly salted, smoked, or pickled fish also may contain infectious organisms.

Who is at greatest risk of infection?

Diphyllobothrium infection generally occurs in the Northern Hemisphere but has been reported in Uganda and Chile. Fish infected with *Diphyllobothrium* larvae may be transported to and consumed in any area of the world. People who eat raw or undercooked fish from these areas are at risk.

What are the signs and symptoms of *Diphyllobothrium* infection?

Most infections are asymptomatic. However symptoms can include abdominal discomfort, diarrhea, vomiting, and weight loss. Vitamin B12 deficiency leading to pernicious anemia may occur. Complications include intestinal obstruction and gall bladder disease caused by migration of proglottids.

What should I do if I think I might be infected?

See your health care provider.

How is infection with *Diphyllobothrium* diagnosed?

Diagnosis is made by identification of eggs or segments of the tapeworm in a stool sample with a microscope. Eggs are usually numerous, but more than one stool sample may be needed to find them.

How is *Diphyllobothrium* infection treated?

Safe and effective medications are available to treat *Diphyllobothrium* infection. The recommended drug in the US is praziquantel.

How can I prevent *Diphyllobothrium* infection?

Do not eat raw or undercooked fish that has not been properly frozen. The FDA recommends the following for fish preparation or storage to kill parasites:

- **Cooking**
 - Cook fish adequately (to an internal temperature of at least 145° F [~63° C]).
- **Freezing**
 - At -4°F (-20°C) or below for 7 days (total time), or
 - At -31°F (-35°C) or below until solid, and storing at -31°F (-35°C) or below for 15 hours, or
 - At -31°F (-35°C) or below until solid and storing at -4°F (-20°C) or below for 24 hours.