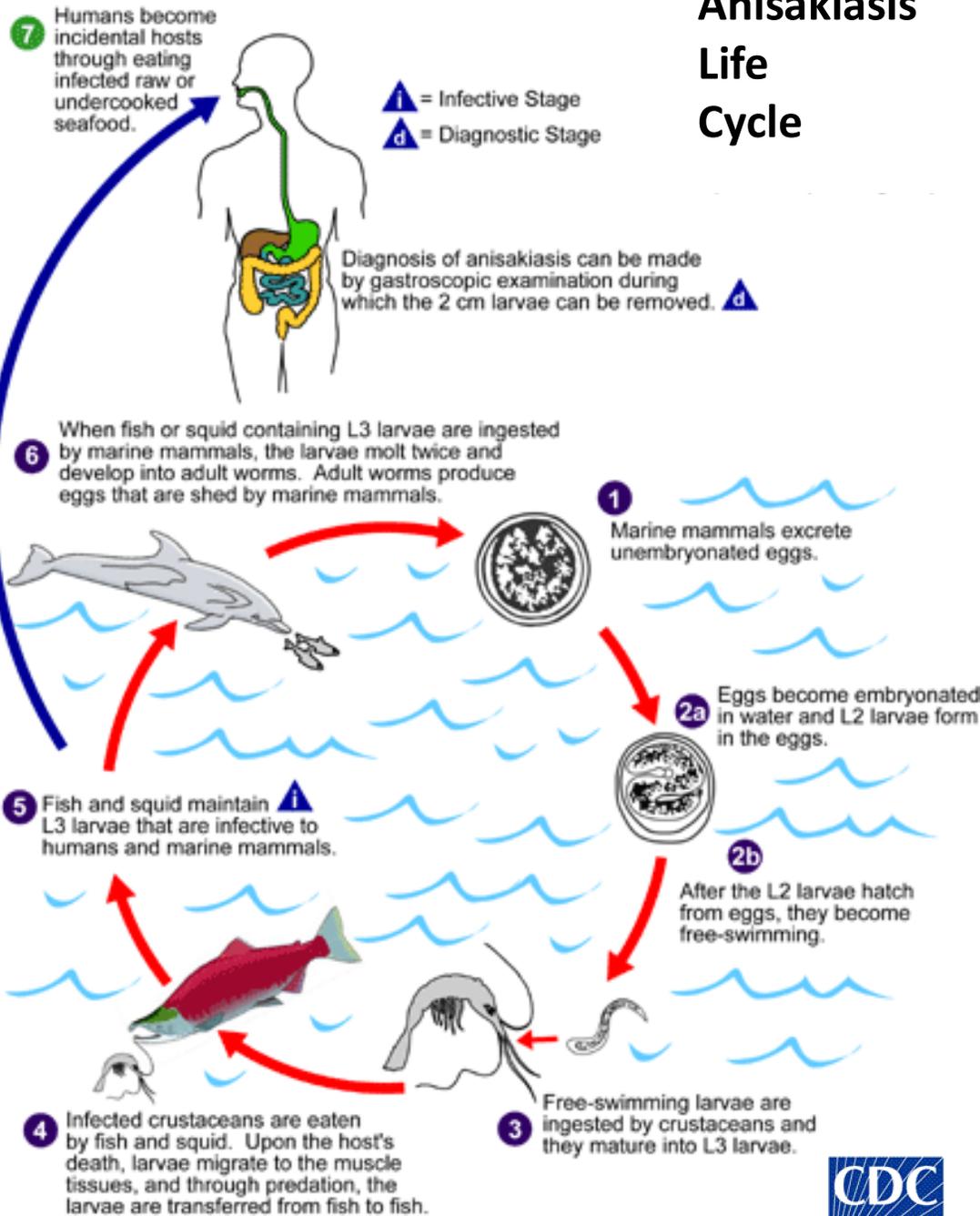


# Anisakiasis Life Cycle



Causal Agent: Anisakiasis is caused by the accidental ingestion of larvae of the nematodes (roundworms) *Anisakis simplex* and *Pseudoterranova decipiens*.

Adult stages of *Anisakis simplex* or *Pseudoterranova decipiens* reside in the stomach of marine mammals, where they are embedded in the mucosa, in clusters. Unembryonated eggs produced by adult females are passed in the feces of marine mammals **1**. The eggs become embryonated in water, and first-stage larvae are formed in the eggs. The larvae molt, becoming second-stage larvae **2a**, and after the larvae hatch from the eggs, they become free-swimming **2b**. Larvae released from the eggs are ingested by crustaceans **3**. The ingested larvae develop into third-stage larvae that are infective to fish and squid **4**. The larvae migrate from the intestine to the tissues in the peritoneal cavity and grow up to 3 cm in length. Upon the host's death, larvae migrate to the muscle tissues, and through predation, the larvae are transferred from fish to fish. Fish and squid maintain third-stage larvae that are infective to humans and marine mammals **5**. When fish or squid containing third-stage larvae are ingested by marine mammals, the larvae molt twice and develop into adult worms. The adult females produce eggs that are shed by marine mammals **6**. Humans become infected by eating raw or undercooked infected marine fish **7**. After ingestion, the anisakid larvae penetrate the gastric and intestinal mucosa, causing the symptoms of anisakiasis. *Life cycle image and information courtesy of DPDX.*

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*Life cycle image and information courtesy of [DPDx](#).*