Factors affecting the hatching of human pinworm ova.

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Abstract
Parasite life-history traits reflect past environmental and host selective pressure that act to produce strategies that maximize successful transmission. Pooled human pinworm eggs were pretreated with 0.9% NaCl, acid digestive enzyme, and alkaline solutions (pH 9.0) and then incubated in 0.9% NaCl at room temperature and 37 degrees C both with and without 5% CO2. Eggs pretreated with both acid and base had the same hatching pattern, which was markedly different to that of the untreated eggs. At room temperature (RT), hatching of the pretreated eggs occurred on the first day and reached its peak rate (>90%) on day 3; at 37 degrees C hatching occurred on the second day and was more than 80% by day 5. Hatching of the untreated eggs was evident on day 2 at RT and between days 3-5 at 37 degrees C although in smaller numbers (<20%). The CO2 did not affect the hatching of larvae. The larvae could survive after hatching in 0.9% NaCl for 2 and 4 days at 37 degrees C and 25 degrees C, respectively. The present investigation gives a different information that human pinworm ova can hatch into larvae with or without exposure to acid digestive enzyme or alkaline solutions.

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