



V 17 Survival of *Ixodes ricinus* under water and after laundering in an automatic washer

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After visiting a tick habitat, ticks can remain on clothes and thus be transported home. While washing of clothes in an automated washer was believed to remove or kill ticks, a study from North America indicated that this procedure may not always be effective. In the present study, *I. ricinus* larvae, nymphs, and adults were exposed to regular washing cycles in an automatic washer. We also determined whether anoxia might be a cause of mortality by keeping ticks under water with low or high oxygen content for different time periods. Depending on tick stage and oxygen content, *I. ricinus* could survive under water for several days up to weeks, and some engorged larvae even molted to nymphs during that time. This suggests that oxygen deprivation should not limit survival of submerged ticks in the short term. As ticks could survive laundering at 40°C, but not at 60°C, we also determined the upper lethal temperature of submerged specimens. The results suggest that temperature rather than lack of oxygen is the main factor killing *I. ricinus* during laundering.