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## **FLOTAC:** a new sensitive technique for the diagnosis of hookworm infections in humans.

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Hookworms infect more than 10% of the world's population, but current diagnostic tools have drawbacks. Our objective was to compare the diagnostic performance of three methods (Kato-Katz, ether concentration and FLOTAC techniques) for hookworm diagnosis. Stool samples were obtained from 102 schoolchildren in Côte d'Ivoire. First, a duplicate 41.7mg Kato-Katz thick smear was prepared. Next, a small portion of stool (mean weight 1.8g) was preserved in sodium acetate-acetic acid-formalin and forwarded to a European laboratory. These samples were split in three parts, one processed by an ether concentration technique and two by the FLOTAC technique. All samples were examined by experienced technicians for hookworm eggs using light microscopy. The observed hookworm prevalences as assessed by the FLOTAC, Kato-Katz and ether concentration techniques were 65.7%, 51.0% and 28.4%, respectively. Considering the combined results as the diagnostic 'gold' standard, the FLOTAC technique had a sensitivity of 88.2% compared with 68.4% for the Kato-Katz and 38.2% for the ether concentration techniques. The Kato-Katz method resulted in a significantly higher mean number of eggs per gram of stool (155.8 EPG) compared with the FLOTAC (37.7 EPG) and ether concentration (5.7 EPG) methods. The FLOTAC method shows promise as an important new tool for individual hookworm diagnosis and for rigorous monitoring of helminth control programmes. [Clinical Trial No. ISRCTN21782274].

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