

## **Intestinal parasites in a rural community in Kenya: cross-sectional surveys with emphasis on prevalence, incidence, duration of infection, and polyparasitism**

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### **Abstract:**

A cross-sectional survey of intestinal parasitic infection in a rural community, Nderu, in Kiambu District, Kenya, was carried out in 1985 by examining 1129 individuals from 203 households (about 25% of the total population). This was followed by 3 more cross-sectional surveys, in January, May and October 1986, of 56 families comprising 461 individuals, who had also participated in the first survey. In the first survey, 81.4% of the sample was positive for at least one intestinal parasite and 78% was positive for intestinal protozoa. 72.7% of those infected had multiple infections. The prevalence of most of the protozoa increased with age but that of *Giardia lamblia* peaked in the 0 to 4 year class at 35.5%. Females were infected more often with several of the protozoa, but males with *Ascaris*. People living in larger households were more often infected with *Entamoeba histolytica* and *Iodamoeba butschlii*, while the opposite was true of *H. nana* and tended to be for *Giardia*. Significant positive associations between parasite species were common at all surveys, especially among the amoebae. The majority of negative associations were for *Giardia*. Unformed stools were significantly associated with *Giardia*, *Blastocystis*, and trophozoites of *Trichomonas hominis* and *Chilomastix mesnili*. *Endolimax nana* and *Entamoeba coli* were found more often in formed stools. Estimates of daily incidence, and duration of infection in days, were calculated for 11 parasites. The longest mean estimated duration of infection for any species was 237 +/- S.D. 151.4 days for *H. nana* and the shortest was 41.6 +/- S.D. 0.4 days for *T. hominis*.