

## Does treating worms in people with HIV slow progression to AIDS?

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Of the 25 million people infected with HIV-1 in Africa, as many as half are thought to be co-infected with worms (helminths), and there is evidence that these worms may result in a more rapid progression of HIV infection to AIDS. Does treating these worms ("de-worming") slow down this progression?

In a new study published in the open access journal *PLoS Neglected Tropical Diseases*, Judd Walson and Grace John-Stewart at the University of Washington, Seattle, USA set out to answer this question. Their study found that there were simply not enough data to make any firm conclusions, and they call for larger, well-designed studies to help come to a definitive answer.

In their study, the investigators did an exhaustive search (known as a systematic review) to find every study ever conducted examining the link between being infected with worms and the progression of HIV to AIDS. In their final analysis, they included only those studies that met the researchers' pre-specified quality criteria.

There were five studies in the final analysis. All five were limited by short follow up times. Only one of these was a randomized controlled trial (RCT)—it compared the effects of treating worms in people with HIV against no treatment. The trial did find some benefit from the deworming treatment. In patients with HIV who did not receive the deworming treatment, their viral load (a measure of the amount of HIV in their bloodstream) went up. In contrast, the viral load of patients who



were de-wormed remained stable. However, de-worming was not associated with improvements in the patients' immune status (as measured by the CD4 count) or in their clinical condition.

The four other included studies, which were observational studies rather than RCTs, also suggested that treating worms could have a beneficial effect as measured by a patient's viral load. But again these studies showed no benefit in terms of a patient's immune status or clinical condition.

"After a comprehensive review of the available literature," say the authors, "we conclude that there is not enough evidence to determine whether treating helminth infections in people with HIV is beneficial."

"There is a need for large randomized controlled trials with longer followup duration in order to assess the impact of de-worming on HIV-1 progression in populations with a high prevalence of both helminth and HIV-1 infection."

In a linked Expert Commentary entitled "Helminth-HIV Co-Infection: Should We De-Worm", Professor Zwi Bentwich (Ben Gurion University, Israel) and colleagues, who were not involved in the study, examine the evidence that helminth infections play a major role in the pathogenesis of HIV-1 infection in Africa.

"Helminth infections have an ongoing prolonged and wide negative effect on the health of the population, irrespective of their effects on HIV and possibly other infections as well," say Bentwich and colleagues. "Thus, control of helminths should be pursued in large parts of the developing world without delay and should not await the results of studies on the impact of helminths on HIV or on other infections."

Source: Public Library of Science



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