

## **Cotrimoxazole plus antiretroviral therapy reduces HIV mortality**

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By Victoria Stern

NEW YORK (Reuters Health) - Cotrimoxazole reduces mortality when HIV patients take the drug at the start of antiretroviral therapy, according to a study from South Africa.

The researchers found a 36% reduction in mortality in patients who received cotrimoxazole preventive therapy (CPT) at combination antiretroviral therapy (cART) initiation versus those who received only cART.

In resource-limited settings, CPT helps prevent severe disease from malaria, bacterial pneumonia, sepsis, and diarrhea, and reduces morbidity and mortality. The World Health Organization (WHO) recommends prophylaxis with CPT for adolescents and adults who have a CD4 cell count below 350 cells/ $\mu$ l or WHO clinical stage 3 or 4 disease and who live in areas where malaria and bacterial infections are prevalent.

Although WHO guidelines don't limit the use of cotrimoxazole, they do promote its use in regions with a higher malaria burden and lower resistance to cotrimoxazole.

"Unfortunately, the interpretation of this caveat has contributed to the spotty uptake of cotrimoxazole in South Africa where over 5 million are infected with HIV," lead investigator Dr. Christopher J. Hoffman, from Johns Hopkins University, Boston, told Reuters Health in a phone interview.

This cohort study, published online May 21 in *AIDS*, compared mortality during the first 12 months after cART initiation among 14,097 patients who received CPT and those who did not.

Patients who started cART between January 2003 and January 2008 were recruited from 231 community and workplace-based ART clinics in South Africa.

In the adjusted multivariate model, CPT reduced mortality overall (adjusted HR 0.64,  $P < 0.001$ ). The mortality benefit of CPT was similar for patients with CD4 cell count below 200 cells/ $\mu$ l (adjusted HR 0.64) and between 200 and 350 cells/ $\mu$ l (adjusted HR 0.62).

Patients with CD4 above 350 cells/ $\mu$ l also appeared to benefit from CPT (adjusted HR 0.80), but these results were not statistically significant.

"Even in a country with low prevalence of malaria and diarrhea disease and high levels of bacterial resistance to cotrimoxazole, the drug is still extremely effective in reducing mortality in HIV patients with CD4 counts below 350 cells/ $\mu$ l and in individuals who have initiated cART," Dr. Hoffmann said.

However, no studies have addressed the optimal time to discontinue CPT use. "Until this question is answered, I would advocate keeping people on CPT until CD4 count is at least 350 cells/ $\mu$ l," Dr. Hoffmann said.

[http://journals.lww.com/aidsonline/Abstract/publishahead/Reducing\\_mortality\\_with\\_cotrimoxazole\\_preventive.99500.aspx](http://journals.lww.com/aidsonline/Abstract/publishahead/Reducing_mortality_with_cotrimoxazole_preventive.99500.aspx)

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