

Oral vaccine could prevent half of cholera cases, but less effective in kids

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Oral vaccines could prevent up to 60 percent of cholera cases in the first two years after vaccination, according to a new review of vaccine studies.

The vaccines have been shown to provide protection within one month of vaccination, but data from studies of older versions of the vaccines suggest that protection is unlikely to last more than three years, say David Sinclair, M.D., of the Liverpool School of Tropical Medicine in the United Kingdom, and colleagues at the [International Centre for Diarrheal Disease](#) Research in Bangladesh.

“Booster doses in line with the manufacturers’ recommendations will be required,” Sinclair said, “and the vaccines appear to be safe and not linked to any serious side effects.”

[Cholera](#) infection can lead to severe diarrhea that causes dehydration and death if not treated promptly. Linked to poverty and poor sanitary conditions, the disease made headlines in 2010 with outbreaks in the temporary camps of Haitian earthquake survivors and among refugees fleeing devastating floods in southern Pakistan.

For the review, authors looked at 40 studies that examined the effect of cholera vaccinations incorporated into a routine vaccination schedule in areas of the world where the disease is prevalent.

They calculated how effective vaccines were using data from the four

largest studies, which included 249,935 participants.

In these studies of vaccines made from killed, whole-cell cholera, the number of cholera cases among all participants dropped by 52 percent in the first year after vaccination, falling even further to 62 percent in the second year after vaccination. Among children under five, however, the number of cases dropped by only 38 percent.

Their review appears in the latest issue of *The Cochrane Library*, a publication of the Cochrane Collaboration, an international organization that evaluates medical research. Systematic reviews draw evidence-based conclusions about medical practice after considering both the content and quality of existing medical trials on a topic.

“There is little direct evidence on the use of these vaccines once an epidemic has actually started,” Sinclair said, “but it is likely that cholera vaccines would have an important impact on reducing disease in epidemics, especially where access to clean water and sanitation is difficult to achieve.”

Countries such as Angola and Zimbabwe have suffered recently from months-long cholera outbreaks that have spread in some cases to nearby countries, said Peter Hotez, M.D., president of the American Society of Tropical Medicine and Hygiene and an infectious disease researcher at The George Washington University.

“Given the protracted nature of cholera outbreaks globally, this affords an opportunity to reconsider use of cholera vaccines in so-called ‘reactive’ situations, such as the one now in Haiti,” Hotez said.

The studies included in the Cochrane review do not report a reduction in deaths from cholera, and the authors stressed that countries should look at the “prevalence of cholera, the frequency of epidemics and local

access to basic services providing rapid rehydration therapy” before they decide to include an oral cholera [vaccine](#) in their routine vaccination recommendations.

Hotez said countries must also look into the cost-effectiveness of adding the vaccine, “as well as logistical considerations of creating cholera [vaccine](#) stockpiles.”

More information: Sinclair D, et al. Oral vaccines for preventing cholera. *Cochrane Database of Systematic Reviews* 2011, Issue 3.

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