

# For Polio Vaccines, a Worldwide Switch to New Version

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*Jamal Tarakai/European Pressphoto Agency*

Starting on Sunday, more than 150 countries and territories will switch to a new oral [polio vaccine](#). It will be the first worldwide vaccine change ever attempted.

[Polio](#) is [on the edge of eradication](#). There were only 74 cases last year, all in Pakistan and Afghanistan. This year, there have been only nine, also in those two countries.

“This changeover is unprecedented,” said Dr. [Walter A. Orenstein](#), who oversaw the United States’ [immunization](#) program for 11 years at the Centers for Disease Control and Prevention and is now associate director of the vaccine center at Emory

University School of Medicine.

Although it will be a huge logistical operation, polio experts hope to finish the switch within two weeks. The developing world, including many populous countries like India, China and Indonesia, uses up to 1.8 billion doses of oral polio vaccine each year.

By May 1, the [Global Polio Eradication Initiative](#) hopes, hundreds of millions of new vaccine doses will be moved to refrigerated warehouses all over those countries, while millions of old doses are gathered and destroyed.

Approved disposal methods include incineration, boiling, autoclaving, bleaching or burying in concrete-sealed containers. Each has drawbacks, like the possibility that glass vials will explode.

Adding to the possibility of confusion, the old and new vials and boxes are almost identical. Warehouse managers are supposed to mark the old vaccine with an “X” and bag it for disposal.

The new and old vaccines both require refrigeration and are formulated as drops.

The new vaccine is bivalent instead of trivalent — that is, it contains vaccine [against two polio strains](#), Type 1 and [Type 3](#). Type 2 polio was eradicated in 1999.

The old vaccine works against all three strains, but the new one is stronger because it does not contain a useless component. The new one is also less dangerous.

All oral polio vaccines are made with live, weakened strains of the virus. About once in every million vaccinations, a weak vaccine strain will mutate to become more dangerous and begin to spread.

There were 32 cases of [paralysis](#) in the world last year caused by circulating vaccine strains. In the last few years, more than 90 percent of those were caused by mutant Type 2 strains.

Every bit of the old trivalent vaccine must be removed simultaneously around the world and disposed of, Dr. Orenstein said, because the new, bivalent kind gives children no protection against an epidemic of mutant Type 2 polio.

“This is going to be hard,” he said. “For a long time, we’ve driven people to think of vaccine as valuable. Now we’re asking them to destroy it.”