Smallpox Vaccine Is Linked to Decrease in HIV Cases

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Researchers believe the smallpox vaccine used to eradicate the disease worldwide offered some protection against HIV, according to a study published in the journal *BMC Immunology* and reported by BBC News. When immunization efforts ended, HIV cases increased, experts say.

For the study, researchers examined the white blood cells of people recently immunized against smallpox and tested their response to HIV. They found the smallpox vaccine cut the virus' replication rate by five times in the blood cells compared to those who were unvaccinated.

Smallpox vaccinations were gradually withdrawn from the 1950s to 1970s. Since then, HIV rates have skyrocketed. Currently, only scientists and medical professionals working with smallpox are vaccinated.

According to the article, researchers believe the vaccination could protect against HIV by offering long-term alterations to the immune system including the expression of the CCR5 receptor on the surface of white blood cells used by smallpox and HIV.

"Further studies into the role receptor cells play are needed, and even then any discoveries are likely to be just one part of the solution. Until we find a way to eradicate the virus from the body, the focus should remain on stopping it being passed on in the first place," said Jason Warriner, clinical director for the Terrence Higgins Trust.

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