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PROMISING RESULTS FROM PRECONCEPTION MALARIA VACCINE STUDIES

Malaria during pregnancy has severe maternal and **fetal** effects, and in Africa, it is believed to cause up to 50,000 maternal deaths and 200,000 newborn deaths each year.

While tools like bed nets and intermittent therapy have proven ineffective, immunizing women before **pregnancy** is emerging as a promising new strategy.

Researchers from the National Institutes of Health (NIH) and their partners in Mali tested this strategy using PfSPZ, an experimental vaccine based on attenuated *Plasmodium falciparum* sporozoites. Previous clinical trials in Africa showed that the vaccine was safe and **effective**.

In Mali, researchers enrolled 300 women who planned to become pregnant within a year. The participants were divided into three groups: two groups received either a low dose or a high dose of the vaccine, while the third group received a placebo with normal saline.

The participants were given three doses, spaced one month apart, and were monitored over two

malaria seasons across two years. The vaccine was found to be safe for both women and children.

In the first year of the study, 55 women became pregnant within six weeks of receiving the third dose of the vaccine. The vaccine's efficacy was 65% in those who received the lower dose and 86% in those who received the higher dose.

Among the 155 women who became pregnant across both years of the study, the efficacy was 57% for the lower dose and 49% for the higher dose.

In the future, the research team will assess the safety of the PfSPZ vaccine during pregnancy and design a larger study on its use before conception.

The vaccine showed **durable** protection for two years without a booster, in contrast to other malaria vaccines.

The prenatal vaccination study provides a foundation for evaluating the vaccine in pregnant women, who are often excluded from such trials.

Adapted after Lisa Schnirring, 15 august 2024

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