

Malaria immunity in the spotlight

February 23 2012

(Medical Xpress) -- Mothers who are treated for malaria may pass on lower levels of natural immunity to their young, animal studies show.

University scientists investigated the impact of anti-malarial drugs on the levels of antibodies passed from [female mice](#) to their offspring.

This helps protect the young from disease in the first months of life.

Female mice which had been treated with drugs for a [malaria infection](#) before becoming pregnant passed on fewer anti-malarial antibodies to their young.

These are transferred in the [womb](#) and via the mother's milk.

Scientists say being exposed to a full-blown bout of malaria may give the mother's immune system the chance to produce protective [antibodies](#) to pass on to offspring.

Drug treatment cuts this process short.

Researchers say their results highlight the need to look at how treatment might be tailored most effectively for women and their babies.

It could have important implications for public health in areas where malaria is prevalent.

Malaria affects millions of people, mainly in developing countries, and

in Africa the disease kills one child every minute.

Scientists studied babies born to mice which had been exposed to malaria, some of which had been given drugs to treat their infection.

They found that female mice which had been treated with drugs had babies that were 25 per cent more likely to die of the disease than [offspring](#) from mothers which had experienced full-blown malaria.

Female mice that had not been treated for malaria gave birth to newborns with a 75 per cent lower risk of [malaria](#) death compared with babies from females which had not been infected.

Researchers say their discovery suggests a trade-off between the health of mothers and infants.

It gives valuable insight into how drug treatments affect immunity passed from one generation to the next.

"How an infection plays out in an individual can impact on the immunity of the next generation. Some treatments against disease before or during pregnancy might be beneficial for maternal health but impair infant survival." said Dr Vincent Staszewski, School of Biological Sciences, University of Edinburgh.

The study, published in *Proceedings of the Royal Society B*, was funded by the Wellcome Trust and the Royal Society.

Provided by University of Edinburgh

Citation: Malaria immunity in the spotlight (2012, February 23) retrieved 1 May 2024 from <https://medicalxpress.com/news/2012-02-malaria-immunity-spotlight.html>

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