

## Malaria - Spoonful of sugar could save thousands of children

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A boy wears a miniature mosquito net on his head to raise malaria awareness in Matam, Senegal in 2004. A teaspoon of moistened sugar under the tongue could save the lives of thousands of children suffering from hypoglycemia caused by malaria, a researcher who conducted clinical trials said Thursday.

PARIS (AFP) - - A teaspoon of moistened sugar under the tongue could save the lives of thousands of children suffering from hypoglycemia caused by malaria, a researcher who conducted clinical trials said Thursday.

### ADVERTISEMENT

Malaria claims more than a million lives a year -- 800,000 of them African children aged under five -- and sickens hundreds of millions more, according to the World Health Organisation (WHO).

The rapid drop in blood sugar that frequently accompanies severe malaria kills many children in remote parts of Africa before they can reach a clinic for an intravenous dose of glucose, the proven treatment for hypoglycaemia.

Hubert Barennes, a French doctor who worked with public health services in several sub-Saharan countries from 1987 through 2002, saw the devastating affect of sudden sugar loss nearly every day.

He reasoned that a bit of the sweet stuff taken orally might at least help relieve the life-threatening symptoms.

"But at the time we didn't have any studies proving that it would be effective," he said by e-mail from Laos, where he is a physician at the Francophone Institute of Tropical Medicine.

"Only techniques that have been proven through scientific research are accepted, so-called 'evidence-based medicine,'" he explained.

"That's a good thing. But sometimes these studies are hard to do -- there were not a lot of resources available for researchers working in Africa."

Barennes decided to put his idea into practice anyhow and -- in cooperation with local doctors -- began sugar treatments in Niger in the late 1990s. It seemed to work.

In the following decade, he tried repeatedly to get various public health authorities to fund trials.

It took far longer than he would have liked but in 2006 Barennes led a team of a dozen researchers in conducting clinical research in Mali that provided the first solid evidence that a spoonful of sugar can, in fact, save lives.

In the study, 23 children with severe malaria and dangerously low blood glucose concentrations were randomly assigned to two different treatments.

One was given the standard therapy of intravenous glucose, and the other received a bit of moistened sugar under the tongue every 20 minutes.

The results were unambiguous -- the sugar doses worked just as well as the IV treatment, despite several cases in which children swallowed the sugar rather than letting it dissolve slowly under the tongue, thus reducing its effectiveness.

"This study was performed in the field conditions of a busy West African paediatric ward during the malaria season," the authors cautioned. The number of participants was also less than optimal.

But even with these limitations, "the results indicate sufficient safety and efficacy to justify the use of sublingual (under the tongue) sugar at the community level and to justify a larger trial," they concluded.

The benefits of sugar treatment might extend beyond malaria to other conditions that provoke a potentially lethal drop in blood sugar, such as malnutrition and poisoning, they noted.

Malaria-related hypoglycemia is more critical in children, who have fewer reserves on which to draw when sugar levels drop.

"But there is a good chance that sugar under the tongue would work as quickly with adults too. We will need another study to verify that," Barennes said.

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