



## WORLD HEALTH ORGANIZATION USES CONTROVERSIAL INSECTICIDE TO COMBAT MALARIA

September 18, 2006

*The World Health Organization (WHO) has fully endorsed the use of one of the most powerful insecticides ever developed, DDT, to fight malaria, a deadly disease carried by mosquitoes.*

For the past 30 years the WHO, the United Nation's health agency, has rejected the use of DDT because it causes genetic problems in animals and has been linked to cancer in humans.

However, it is one of the most effective chemicals when it comes to killing the Anopheles mosquito, which carries the deadly malaria parasite.

Malaria kills more than one million people each year and 90 percent of those deaths occur in sub-Saharan Africa.

### **Using DDT in a controlled manner**

According to the WHO's plan, DDT will be used in a controlled manner, sprayed on the walls and roofs of houses only, instead of mass spraying outdoors.

This technique, called indoor residual spraying, is tentatively endorsed by environment groups like the Environmental Defense, the Sierra Club and the Endangered Wildlife Trust.

"Reluctantly, we do support it," said Ed Hopkins, the director of the Sierra Club's environmental quality program.

"Malaria kills millions of people and when there are no other alternatives to indoor use of DDT, and where that use will be well-monitored and controlled, we support it."

Indoor spraying can reduce malaria transmission by up to 90 percent, the WHO claims. During a press conference on September 15, Dr. Arata Kochi, director of the WHO malaria department, called DDT "one of the best tools" available to fight the disease.

A group called Beyond Pesticides opposed the new policy, saying that DDT "causes greater long-term problems than those that are being addressed in the short-term."

## **The malaria epidemic**

Malaria is one of the most common and deadly diseases in the world. It is preventable and treatable, but can be deadly if left untreated.

Humans contract malaria from the bite of a malaria-infected mosquito. Parasites travel from the saliva in the mosquito's mouth into the human blood.

The parasites then travel to the person's liver, where they grow and multiply. The parasites also enter the bloodstream and invade red blood cells, where they multiply again.

Eventually, the red blood cells burst, releasing toxins that cause symptoms such as fever and lack of energy. Malaria may also damage the nervous system and vital organs such as liver and kidney.

There are at least 300 million serious cases of malaria each year worldwide, resulting in more than one million deaths. It is especially deadly to women and children. The disease causes one in every five child deaths in Africa.

## **Stopping the spread**

African nations located south of the Sahara Desert face a series of problems that make the malaria epidemic hard to control. The Anopheles mosquitoes flourish in the region's climate, and countries are economically unable to pay for all the medication needed.

There are some cheap malaria drugs available, but when the same drug is used in a widespread manner to combat a disease, strains of the disease develop resistance to that drug.

As supplying medications that will work becomes more difficult, prevention becomes critical.

Prevention includes mosquito netting placed around beds and draining stagnant water, where the mosquitoes live and lay their eggs.

But these efforts alone have not been enough, which is why the WHO has turned to DDT now.

"Indoor spraying is like providing a huge mosquito net over an entire household for around-the-clock protection," said U.S. Senator Tom Coburn, R-Okla., a doctor who attended the press conference.

## **The rise and fall of DDT**

DDT was discovered as a powerful insecticide in the late 1930s. At the time, it was celebrated as a miracle insecticide.

The chemical was used in mass quantities in the United States, sprayed in homes and over fields and marshes, to combat malaria.

The spraying eliminated the disease in the United States by 1949 and farmers continued to use DDT to protect their crops from insects.

However, in 1962, biologist Rachel Carson wrote a book called “Silent Spring,” which helped set off the environmental movement in America by documenting how mass spraying of DDT entered the food chain, causing cancer and genetic damage and threatening to wipe out some bird species, including bald eagles.

The effects on humans are still being debated, but in 1969, the National Cancer Institute released findings suggesting that DDT could cause cancer. The United States banned DDT in 1972, and many other countries followed the example.

In 2004 the global treaty on Persistent Organic Pollutants banned DDT worldwide, except for use in controlling diseases like malaria.

-- *Compiled by Talea Miller for NewsHour Extra*

© 2006 MacNeil/Lehrer Productions