Nairobi Fly *(Paederus Beetle)*

**Introduction**

Nairobi fly (also known as ‘acid fly’ or ‘champion fly’) is in fact not a fly, but a type of rove beetle. It lives in hot and damp climates all over the world and of the 600 species, 50 can cause contact dermatitis. They particularly thrive in marshes, irrigated croplands and wetland areas surrounding freshwater.

**What is Nairobi Fly?**

The Nairobi Fly does not bite or sting. It only causes problems for humans when crushed onto the skin. The body fluids from the beetle (haemolymph) contain a chemical called pederin and this is toxic to the skin causing a burn-like sore (lesion). Nairobi Flies have the ability to fly and are strongly attracted to artificial lights at nocturnal times. They do however prefer to crawl and often irritate humans by landing and crawling over the skin.

**Where do cases of Nairobi Fly occur?**

Nairobi Fly occurs in many countries and regions which have a warm and damp climate with a marked wet season. Cases have been reported from: West Africa, Central Africa, East Africa, the Middle East, India, Pakistan and Afghanistan, Southern Turkey, South America and Okinawa (Japan).

**What are the symptoms?**

Once the beetle has released the haemolymph fluid onto the skin you will not notice anything for 12-72 hours. After this time an eruption will occur on the skin where the pederin was released. The resulting lesion is called paederus dermatitis. Initially a reddish rash appears, and this develops into blisters which can then develop a secondary infection. The lesion can last for up to 3 weeks.

The most commonly affected parts of the body include the face, neck, shoulders, arms and the waist area. If the pederin reaches the eyes it can cause intense pain and temporary sight loss in a few cases.

**How should a Nairobi Fly sore be treated?**

The lesion should be cleaned, cold wet compresses applied, followed by a topical steroid. A topical antibiotic such as flamazine can also be used to avoid concurrent bacterial infection.
that can occur from pseudomonas the beetle carries.

In a few cases, a permanent change in the pigmentation of the skin will occur in the affected area. In most cases, full healing without any long-term complications will take place within two to three weeks.

The application of toothpaste is a commonly recommended treatment for the lesion. The basis and effectiveness is unknown, however anecdotally it has been recorded to be effective.

How can I avoid Nairobi Fly?

Nairobi Flies live in decomposing leaves and organic material. They are most frequently seen at the end of the rainy season. If the beetle lands on your skin gently shake or blow them off. Do not be tempted to use your hands, and avoid crushing the beetle. If you do crush the beetle onto your skin, wash the area with soap and water to remove as much pederin as possible. Pederin slowly penetrates the skin so the more you can remove by washing the milder the effects will be.

Advice for humanitarian workers and international travellers

If you are travelling to endemic regions, the risk of contracting Nairobi Fly is low as long as you take sensible precautions. These include:

· Closing all doors and windows before it gets dark, when the Nairobi Fly is most prevalent e.g. during the rainy season. Using window screens will stop the flies from travelling towards light sources indoors while providing ventilation in hot weather conditions.

· Avoiding working or resting under bright lights when adult beetles are most active.

· Sleeping under a mosquito net.

· Wearing appropriate clothing i.e. long-sleeved tops and long trousers if outdoors during the high risk season.

· Blowing beetles off skin, rather than brushing them away as this reduces the risk of crushing them. You can also place a piece of paper next to the beetle to encourage it onto the paper and thus remove it safely.

· If you crush a Nairobi fly, avoid touching your eyes. Immediately wash your hands and the affected area with water and soap.

· Before going to bed check the ceilings in your bedroom and the areas around beds for beetles.

· Clear excess and decomposing plants and foliage around your accommodation and work areas.

Sources

· World Health Organization

· Dermatology Online Journal
• U.S. Army Public Health Command


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