

MEDICAL BREAKTHROUGHS **RESEARCH SUMMARY**

TOPIC: GAME-CHANGING GARMENTS: MOSQUITO-FREE
REPORT: **MB #5101**

BACKGROUND: Mosquitoes are common, flying insects that live in most parts of the world. Over 3,500 types of mosquitoes can be found worldwide. Over 200 types of mosquitoes live in the continental United States and US territories; of these 200, about 12 types spread germs that can make people sick. According to World Health Organization (WHO) estimates, mosquito-borne diseases kill some 725,000 people a year. Malaria alone accounts for 600,000 of that number.

(Sources: <https://www.cdc.gov/mosquitoes/about/what-is-a-mosquito.html>
<https://www.cdc.gov/mosquitoes/about/mosquitoes-in-the-us.html>
https://www.pfizer.com/news/articles/mosquito_as_deadly_menace#:~:text=According%20to%20World%20Health%20Organization,for%20425%2C000%20deaths%20a%20year.)

DIAGNOSING: Mosquito bites are caused by female mosquitoes feeding on your blood. Female mosquitoes have a mouthpart made to pierce skin and siphon off blood. Males lack this blood-sucking ability because they don't produce eggs and so have no need for protein in blood. Mosquito bite signs include a puffy, white, and reddish bump that appears a few minutes after the bite, a hard, itchy, reddish-brown bump, or multiple bumps, appearing a day or so after the bite or bites, small blisters instead of hard bumps, and dark spots that look like bruises. Children are more likely to develop a severe reaction than are adults, because many adults have had mosquito bites throughout their lives and become desensitized.

(Source: <https://www.mayoclinic.org/diseases-conditions/mosquito-bites/symptoms-causes/syc-20375310>)

NEW TECHNOLOGY: The one thing worse than a buzzing mosquito is its bite – and those affected know that the itching is enough to drive one almost insane. Up to now, most remedies have focused on alleviating the itchiness. However, a start-up company has now developed a wristband that prevents mosquitoes from biting in the first place. The core component of the Nopixgo wristband is the module containing bio pulse technology. It operates using low-power electromagnetic pulses and waves that influence the biting behavior of mosquitoes. The insects perceive these impulses through their hair-like sensory organs. An instinct embedded in their DNA immediately triggers a protective reaction that inhibits the mosquitoes' biting behavior or causes them to flee. In this way, the wristband drastically reduces the risk of a mosquito bite within a radius of two meters.

(Source: <https://www.rutronik.com/article/detail/News/new-technology-prevents-mosquito-bites-no-more-itching-for-me/#:~:text=The%20core%20component%20of%20the,their%20hair%2Dlike%20sensory%20organs.>)

FOR MORE INFORMATION ON THIS REPORT, PLEASE CONTACT:

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If this story or any other Ivanhoe story has impacted your life or prompted you or someone you know to seek or change treatments, please let us know by contacting Marjorie Bekaert Thomas at mthomas@ivanhoe.com