

Are you a mosquito magnet? Swatting really can deter them, study shows

Researchers have discovered why mosquitoes prefer some people over others – and how a swat teaches them to avoid you

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DA QUI >>>> Researchers have found a solution for those plagued by mosquitoes: thrash about, and the insects will learn to give you a wide berth.

While it has long been known that mosquitoes favour some individuals over others – and can shift those preferences when availability is scarce – it was not clear what was behind the switch.

Now researchers say they have not only found why mosquitoes find some people more tasty, but that the scent-based system means they can learn to dodge individuals if a swat is likely.

~~“If you are at a party or a barbecue and you are swatting the mosquitoes, make sure that your friend next to you is active in talking and they will probably avoid you and go [for] your friend,” said Dr Jeffrey Riffell, co-author of the study, from the University of Washington.~~

Writing in the journal *Current Biology*, Riffell and colleagues reveal that when they exposed mosquitoes to a choice between sleeves bearing human odours and those bearing no odour, the mosquitoes preferred the human scents, although some were favoured more than others. But when the test was repeated again, this time using mosquitoes that had been exposed to human odours coupled with mechanical vibrations (captured from someone slapping their arm), the mosquitoes showed no preference for sleeves that smelled of humans. “Once they learned that association, they really suppressed their responses,” said Riffell.

The team found that certain humans are more attractive to mosquitoes than others, probably down to the composition of their scent, and that the insects learned to dodge these odours more easily.

Indeed, when the team exposed mosquitoes to vibrations coupled with a component of human scent known as octenol, the smell was as big a deterrent as 40% DEET insect repellent on “untrained” mosquitoes.

Further work revealed that the ability for the insects to associate odours with the possibility of being squashed is down to a chemical messenger in the brain called dopamine. Mosquitoes whose dopamine system was impaired by the team were less motivated by odours, and less able to learn to avoid them. <<<<<< **FIN QUI**

The authors say the revelation could be important in public health efforts, for example by producing genetically modified mosquitoes that lack the ability to detect dopamine levels. Technologies such as gene drives could be used to boost the spread throughout wild populations.

(294 words)

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