

It's true: Mosquitoes prefer to bite some people over others

February 11 2020, by Cameron Webb



Credit: Photo by Eric Nopanen on Unsplash, CC BY

It's always you, isn't it? The person busy swatting away buzzing backyard mosquitoes or nursing an arm full of itchy red lumps after a weekend camping trip.

You're not imagining it—[mosquitoes](#) really are attracted to some people more than others.

Why do mosquitoes need blood?

Only female mosquitoes bite. They do it for the nutrition contained in [blood](#), which helps develop their eggs.

Mosquitoes don't just get blood from people. They're actually far more likely to get it from biting animals, birds, [frogs](#) and reptiles. They even [bite earthworms](#).

But some mosquitoes specifically target people. One of the worst culprits is the *Aedes aegypti* species, which spreads [dengue](#) and [yellow fever](#) viruses.

Another that prefers humans are the Anopheles mosquitoes, responsible for spreading the parasites that cause [malaria](#).

How do mosquitoes find us?

Most mosquitoes will get their blood from whatever is around and don't necessarily care if they're biting one person or another.

Although it's our blood they're after, there is no strong indicator they prefer a particular blood type over another. Some studies have [suggested they prefer people with type O blood](#) but that's unlikely to be the case for all types of mosquitoes.

Whether we're picked out of a crowd may come down to heavy breathing and skin smell.

When they need blood, mosquitoes can pick up on the [carbon dioxide](#) we exhale. Around the world, [carbon dioxide](#) is one of the most common "baits" used to attract and collect mosquitoes. If you're exhaling greater

volumes of carbon dioxide, you're probably an easier target for mosquitoes.

When the mosquito gets closer, she is [responding to a range of stimuli](#).

Perhaps it's [body heat and sweat](#): exercise that increases body temperature and perspiration can attract mosquitoes.

Perhaps it's [body size](#): studies indicate [pregnant women are more likely to be bitten](#) by mosquitoes.

How hairy are you? Mosquitoes may have a tough job finding a path through to your skin if there is an abundance of body hair.

More than anything else, though, it's about the smell of your skin. Hundreds of chemicals are sweated out or emitted by our body's bacteria. The [cocktail of smells they create](#) will either attract or deter mosquitoes.

It's not just who they bite but where

Mosquitoes could also have a preference for different parts of the body.

One study showed mosquitoes are more attracted to hands and feet [than armpits](#), but that just turned out to be because of deodorant residues.

Mosquitoes may also be more attracted to our feet: studies have shown cheese sharing similar bacteria to that [found between our toes](#) attracts mosquitoes!

Who is to blame for this misery?

It's not your diet. There is no evidence that what you eat or drink will prevent mosquito bites. Some food or drink may subtly change how many mosquitoes are likely to bite you but it won't make that much difference.

[Eating bananas](#) or [drinking beer](#) has been shown to marginally increase the attraction of mosquitoes but the results aren't enough to suggest any dietary change will reduce your [mosquito bites](#). That's why our supermarket shelves aren't full of "mizzie repellent" pills.

Your irresistibility to mosquitoes may not be your fault. Blame your parents. Studies have shown the chemicals responsible for the "[skin smell](#)" that attracts mosquitoes has [a high level of heritability](#) when twins are exposed to biting mosquitoes.

What can you do about it?

We have to be careful about generalizations. There are thousands of types of mosquitoes around the world and all will have a different preference for what or who to bite. And the attraction of individuals and the scenario that plays out in one part of the world may be much different in another.

Remember, it only takes one mosquito bite to transmit a pathogen that could make you sick. So whether you're a mosquito magnet or feeling a little invisible because you're not bitten so often, don't be complacent and use insect repellents.

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Provided by The Conversation

Citation: It's true: Mosquitoes prefer to bite some people over others (2020, February 11)
retrieved 4 May 2024 from <https://phys.org/news/2020-02-true-mosquitoes-people.html>

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