



Mosquito repellents



Our brave tester spent hours subjecting himself to mosquito bites to find out which repellents work best

Which? tests always go the extra mile – and when it comes to finding the best mosquito repellents, that means our tester spent hours with one arm in a box full of hungry mosquitoes. We tried out 20 repellents to see which were best at keeping the mozzies at bay.

Insects bites are never pleasant, but with some carrying diseases such as malaria, a good repellent could save you from something much worse than an itch.

Around 2,000 malaria cases are brought into the UK each year – all caused by mosquito bites – so it is essential that you use a good repellent in countries where there's a malaria risk. Even if you're staying closer to home, a decent repellent will stop bites spoiling your holiday.

Repellents containing DEET

DEET is a chemical mosquito repellent that was developed by the US Army and is one of the most common and effective repellents available. You should opt for a product that contains at least 30% DEET in areas where malaria is endemic.

In areas where there's a lower malaria risk, you could opt for a milder alternative, saving you from being overwhelmed by the strong smell of DEET. Our test results should help you to decide which repellents are suitable for your holiday destination.

If you are pregnant, then advice from the Health Protection Agency (HPA) is to avoid malarial areas, as the risk of

infection is greater because your immune system is weaker. If you must travel, then the HPA recommends using products containing 50% DEET, which it says are also safe to use while breastfeeding and on infants over two months old.

You should be careful to ensure plastics, such as rucksack clips or sunglasses, don't come into contact with DEET as it may damage them – we sprayed 100% DEET on some sunglasses and it totally destroyed them.

Do alternative repellents work?

It may be tempting to try an electronic buzzer that's claimed to scare away mosquitoes, but our previous tests in 2005 showed these to be ineffective. To check again, we tested a buzzer that has just been released, but it failed to scare away any mosquitoes. The test results confirm our view that these devices offer nothing apart from a false sense of security – a view backed by the HPA.

Some people swear by Avon's Skin So Soft as a repellent, even though Avon makes no such claims, and there's even a website (which isn't connected with Avon) that sells it as a repellent. We thought we'd see whether the rumours are true; sadly they aren't – it didn't deter the mozzies.

Reapply for best protection

Many people feel that they get bitten no matter what, but this is probably a result of poor repellents or a failure to reapply.



ONLINE

Watch our tester getting attacked by mosquitos

www.which.co.uk/repellent

One application in the morning will not protect you all day; just as sun cream needs to be reapplied, so does mosquito repellent.

Some people may be more attractive to mosquitoes, but a Best Buy repellent will always deter mosquitoes if you use it correctly.



How we test

Our mosquito repellent tests really have bite



Our tester started with no repellent on his arm and put it into a box full of hungry mosquitoes to see how many landed on him. We then applied the repellent, gradually upping the dose until no mosquitoes landed.

We put the same arm back in the box every hour to check the repellents' effectiveness over time.

Though the mosquitoes bit, we ensured they didn't take up any blood so that they were still hungry.

Between tests, the tester used his other arm to check the mozzies were still hungry.

The right choice for your holiday

There are malarial regions in South America, Central America, Africa and Asia. Specific information on individual countries can be found at The National Travel Health Network and Centre (www.nathnac.org).

If you are planning to travel, check with your doctor, as you may have to take anti-malaria medication as well as using a good repellent.

You should use a ★★★★★ or ★★★★ product where there is a moderate to very high risk. Where there is a low risk then you can opt to use a ★★★ product if you don't want to use DEET. ★★ and ★ products should be used only where there is no risk of insect-borne disease.

STAR RATINGS EXPLAINED

The repellents are rated according to the level of protection they offer. Longevity is a guide only and will be affected by conditions and activities.

★★★★★ Maximum protection for where malaria is endemic, with a longevity of more than six hours

★★★★ Very high level of protection for use in high risk areas, and should last four-and-a-half to six hours before reapplication is needed

★★★ Good protection where there is a low malaria risk. Lasts three to four-and-a-half hours

★★ Should not be used to protect from insect-borne infectious diseases. Lasts between two and three hours

★ Minimal protection. Lasts less than two hours.

NATURAL PATCH BITES

Natural Patch

Five patches, £4.99

Despite its apparent convenience, the Natural Patch failed to repel any mosquitoes in our tests – it was like using nothing at all, which is why we advise that you steer clear of it. Design Go Bug Guards would be a better option if you wanted to avoid applying lotions.



which? **DON'T BUY**



HIGH/MODERATE-RISK AREAS | LOW-RISK AREAS

If you are visiting an area where malaria is endemic – or just really want to avoid being bitten – then you should opt for one of our Best Buy DEET-based products which will give you the protection you need. Our Best Buys give you the best possible protection at the lowest price.

Boots Repel Extra Strength

120ml, £5.37 (9p per application) ★★★★★

This is a 50% DEET repellent so, as you would expect, it performs well. It also represents excellent value-for-money protection. Its high DEET concentration means that you'll have to apply only a small amount about every six hours.



which? **BEST BUY**

Jungle Formula Extra Strength

125ml, £6.84 (10p per application) ★★★★★

This is another 50% DEET product that will offer you the best protection at only 10p per application. The manufacturer claims that it will be effective for 10 hours, but we'd recommend leaving it no more than six hours before you reapply.



which? **BEST BUY**

ALSO TESTED Lifesystems Expedition Plus £8.99 ★★★★★ Ultrathon Insect Repellent £9.99 ★★★★★ Superdrug Buzz Off £4.30 ★★★★★

In areas where there is a low risk – or no risk – of malaria or other insect-borne diseases, you might prefer a gentler, DEET-free option. Or you may prefer to use natural products. These products will have to be reapplied more regularly than our Best Buys.

Jungle Formula Family

175ml, £6.99 (14p per application) ★★★

The family lotion from Jungle Formula has no strong odours and is remarkably good at deterring the mosquitoes. If you want protection, but want to avoid the chemical smells associated with other repellents, then this is a good choice.



Superdrug Buzz Off Kids

100ml, £3.42 (15p per application) ★★★

This DEET-free repellent comes in a handy pump spray and will be perfect for you and your kids alike. It gives excellent protection without a strong smell, but you will have to reapply every three to four hours.



ALSO TESTED Autan Protection Plus £5.86 ★★★ Boots Repel £5.37 ★★★ Boots Repel Kids £5.37 ★★★ Design Go Bug Guards £6.99 ★★★ Eco Guard DEET-free repellent £7.99 ★★★ Lifesystems Children's Natural Plus £5.99 ★★★ Mosi-guard Natural £5.57 ★★★ Mosiband Natural Wrist/Ankle Band £3.67 ★★ PreVent Repellent & Room Spray £4.50 ★★★ Avon Skin So Soft £3.99 ★ MozzOff Midge & Mosquito Repellent £9.99 ★