

## RATINGS: Insect Repellents That Battle Disease-Carrying Bugs

Of the 16 repellents we tested, those with 20 percent picaridin, 30 percent oil of lemon eucalyptus, or 15 to 30 percent deet worked best. We don't recommend repellents above 30 percent deet because they may pose greater risks, and lower concentrations can provide excellent protection.

CR Best Buy  Recommended

● Excellent ● Very Good ○ Good ● Fair ● Poor

Recommended	Rank	PRODUCT	PRICE		SCORE	Effectiveness, Aedes Mosquitoes (Hrs.)	Effectiveness, Culex Mosquitoes (Hrs.)	Effectiveness, Deer Ticks (Hrs.)	Avoids Damage to Materials	Active Ingredients	Type
				Cost Per Oz. (\$)							
<input checked="" type="checkbox"/>	1	<b>Sawyer Picaridin</b>	\$8.25	\$2.06	<b>96</b>	8	8	8.5	○	Picaridin 20%	Pump Spray
<input checked="" type="checkbox"/>	2	<b>Ben's 30% Deet Tick &amp; Insect Wilderness Formula</b>	\$8	\$1.33	<b>93</b>	7.5	8	8.5	○	Deet 30%	Aerosol
<input checked="" type="checkbox"/>	3	<b>Repel Lemon Eucalyptus</b>	\$7.50	\$1.88	<b>87</b>	7	8	7	●	Oil of lemon eucalyptus 30% (Approx. 65% p-menthane-3,8-diol)	Pump Spray
<input checked="" type="checkbox"/>	4	<b>Repel Scented Family</b>	\$7	\$1.08	<b>82</b>	5	8	8.5	○	Deet 15%	Aerosol
<input checked="" type="checkbox"/>	5	<b>Natrapel 8 Hour</b>	\$9	\$1.50	<b>81</b>	8	8	6	○	Picaridin 20%	Aerosol
<input checked="" type="checkbox"/>	6	<b>Off Deepwoods VIII</b>	\$6.50	\$1.63	<b>74</b>	8	8	5	○	Deet 25%	Aerosol
	7	<b>Coleman SkinSmart</b>	\$8	\$1.33	<b>69</b>	3	6	8	○	3-(N-Butyl-acetyl)-amino propionic acid ethyl ester IR3535 20%	Aerosol
	8	<b>Avon Skin-So-Soft Bug Guard plus Picaridin</b>	\$14	\$3.50	<b>62</b>	3	8	7	○	Picaridin 10%	Pump Spray
	9	<b>Cutter Skinsations</b>	\$4.50	\$0.75	<b>33</b>	1	3	6	○	Deet 7%	Pump Spray
	10	<b>HOMS Bite Blocker BioUD Mini Trigger</b>	\$8.95	\$1.49	<b>31</b>	3	3.5	3	●	2-Undecanone (CAS # 112-12-9) 7.75%	Pump Spray
	11	<b>Cutter Natural</b>	\$5	\$0.83	<b>29</b>	1.5	.5	8	●	Geraniol 5%, soybean oil 2%, sodium lauryl sulfate 0.4%, potassium sorbate 0.1%	Pump Spray
	12	<b>Burt's Bees Herbal</b>	\$8	\$2	<b>28</b>	1	1.5	6	●	Castor oil 10%, rosemary oil 3.77%, lemongrass oil 2.83%, cedar oil 0.94%, peppermint oil 0.76%, citronella oil 0.57%, clove oil 0.38%, geranium oil 0.19%	Pump Spray
	13	<b>All Terrain Kids Herbal Armor</b>	\$10	\$2.50	<b>23</b>	.5	1	6.5	○	Oil of soybean 11.5%, oil of citronella 10%, oil of peppermint 2%, oil of cedar 1.5%, oil of lemongrass 1%, oil of geranium 0.05%	Pump Spray
	14	<b>California Baby Natural Bug Blend</b>	\$15.80	\$2.43	<b>22</b>	.5	.5	7	●	Pure essential oils of cymbopogon nardus (citronella) 5%, cymbopogon schoenanthus (lemongrass) 0.5%, cedrus atlantica (cedar) 0.5%	Pump Spray
	15	<b>Off FamilyCare II Clean Feel</b>	\$6	\$1	<b>18</b>	.5	1	5	●	Picaridin 5%	Pump Spray
	16	<b>EcoSmart Organic</b>	\$7	\$1.17	<b>7</b>	.5	.5	1.5	●	Geraniol 1.0%, rosemary oil 0.5%, cinnamon oil 0.5%, lemongrass oil 0.5%	Pump Spray

### DO 'NATURAL' REPELLENTS WORK?

Many of them don't, so choose carefully.

It might seem like a good idea, especially if you're pregnant or hoping to be: Choose a "natural" bug repellent. But five of the six plant-oil-based repellents we tested lasted an hour or less against Aedes mosquitoes, the kind that can spread Zika.

The exception was Repel Lemon Eucalyptus (30%), which warded off Aedes mosquitoes

for 7 hours. Several other repellents also did well and are safe for pregnant women: those with 20 percent picaridin (a synthetic compound resembling a chemical in the black pepper plant) and those with 15 to 30 percent deet.

But even those products can cause side effects, especially if you apply too much or too often.

For example, they can all cause rashes and skin irritation, and deet may cause disorientation.

So use all repellents with care. Apply just enough to cover exposed skin. Don't use it on wounds or broken skin, or under clothes. For your face, spray it on your palms, then rub it in, avoiding your eyes and mouth. Adults should put it on children.