

Honey bees could be shielded by probiotics from toxic effects of pesticide exposure, study finds

In a new study from Lawson Health Research Institute and Western University, researchers have shown that probiotics can potentially protect honey bees from the toxic effects of pesticides.

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The researchers utilized [fruit flies](#) as a well-known model for studying pesticide toxicity in honey bees. Both insects are affected similarly by neonicotinoids, have very similar immune systems, and share many common microbes present in their microbiota – the collection of microorganisms found in each insect.

The researchers found that fruit flies exposed to one of the world's most commonly used pesticides, imidacloprid (IMI), experienced changes to their microbiota and were more susceptible to infections. The flies were exposed to a comparable amount of pesticide as honey bees in the field.

By administering a specific strain of probiotic lactobacilli, survival among fruit flies exposed to the pesticide improved significantly. The mechanism involved stimulating the immune system through a pathway that insects use to adapt to infection, heat and other stresses.

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[L]actobacilli could be easily administered through pollen patties, which are used by beekeepers to provide nutritional support and anti-pesticide effects to honey bees.

[Read the full study [here](#) (behind paywall)]

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [Probiotics could improve survival rates in honey bees exposed to pesticide, study finds](#)