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Baby Food and Bee Pollen — Two Food Sources That Are Loaded with Pesticides

Analysis by Dr. Joseph Mercola | November 12, 2024

STORY AT-A-GLANCE

- Access to clean, safe food is vital for our survival, yet conventional farms still use pesticides linked to health risks and environmental harm, endangering pollinators and even compromising children's health
- An investigation conducted by Friends of the Earth revealed the presence of 21 highly hazardous pesticides, including neonicotinoids and organophosphate, in Target's Good & Gather baby food
- A review published in Trends in Analytical Chemistry also detected over 300 pesticides in bee pollen, emphasizing the need for better monitoring and regulations to protect both bee populations and human consumers
- University of Illinois Urbana-Champaign research found that bees fed high-quality, natural pollen had significantly better survival rates when exposed to viral infections and pesticides, compared to those given artificial pollen
- Breastfeeding is the healthiest option for infants. When transitioning to solid foods, consider preparing homemade baby food using organic, locally sourced ingredients. Below are some helpful tips to guide you in creating nutritious meals for your baby

Access to clean, safe food is a fundamental right, especially when it comes to nourishing your children. Parents across the U.S. trust food manufacturers to provide products free from harmful chemicals. Yet, a variety of synthetic pesticides associated

with health risks and environmental harm continue to be used in non-organic agriculture, contaminating the very foods meant to nourish the younger generations.

This issue extends far beyond baby food. Bee pollen, known for its health benefits, has been found to contain pesticides as well, likely stemming from the exposure of bees to these chemicals. People taking this supplement believe they are enhancing their health, but instead, they could be unknowingly introducing harmful substances into their bodies.

Recent studies[1,2] on these products that we expect to be safe and healthy have revealed some brands are actually loaded with harmful chemicals. These findings demonstrate the widespread pesticide contamination in our food supply and raise serious concerns about the safety of the products we consume daily.

Parents Beware — 21 Pesticides Found in Baby Food

A recent investigation[3] conducted by Friends of the Earth showed there are alarming levels of pesticide contamination in Target's Good & Gather baby food. The testing, conducted by an independent laboratory, evaluated samples of Good & Gather Baby Apple Fruit Puree and Good & Gather Baby Pear Fruit Puree purchased from various Target stores and online.

A total of 21 different pesticides were detected in the baby food samples, 12 of which are classified as highly hazardous to the environment and human health. Additionally, eight of these pesticides have already been banned in the European Union. Among the most concerning findings was the ubiquitous presence of neonicotinoid pesticides in all tested samples. As noted in Friends of the Earth's report:[4]

> *"We found neonicotinoid pesticides — including acetamiprid, imidacloprid and thiacloprid — in 100% of the baby food samples that we tested. Neonics are a class of insecticides that have been linked to human health impacts, particularly on developing fetuses and children, including learning disorders,*

> *ADHD and autism spectrum disorder, impacts to the nervous system, endocrine disruption and congenital heart defects and neural tube defects."*

The investigation[5] also revealed the presence of organophosphate metabolites in all samples tested. Organophosphates are known for their neurotoxic properties and have been associated with reduced IQ, attention disorders and delayed motor development in children. The presence of these metabolites indicates significant usage of organophosphate pesticides in Target's supply chain.

While the levels of these pesticides were below the limits set by the U.S. Environmental Protection Agency (EPA), Friends of the Earth stresses that these standards are outdated and inadequate for protecting children's health. The EPA's policies have faced long-standing criticism for failing to incorporate the latest scientific research and for being swayed by the pesticide industry.

> *"Children are more vulnerable to the harms of pesticides because their brains and bodies are developing so rapidly. Early exposure can impact children for life. The latest science is clear that small exposures to pesticides can have significant impacts and that cumulative exposure from the many pesticides found in a typical non-organic diet can add up to harm children's health."*[6]

This investigation serves as a wake-up call for both consumers and policymakers, underscoring the urgent need for more stringent regulations on pesticide use in food production, especially in products intended for our most vulnerable population — infants and young children.

Other Known Health Hazards of Pesticides

In addition to the previously discussed health effects of pesticides on infants, chronic exposure to these chemicals has been linked to a wide range of health problems, including:

Endocrine disruption — Pesticides, particularly those classified as endocrine-disrupting chemicals (EDCs), interfere with the body's hormone systems. This disruption has been linked to a variety of health issues, including reproductive disorders, early puberty, thyroid dysfunction and an increased risk of cancers such as breast and prostate cancer.[7,8,9]

Neurological damage — Some pesticides impair brain function, leading to memory problems, cognitive decline and neurodegenerative diseases like Parkinson's. Children exposed to these pesticides are also at risk of developmental issues, including ADHD and learning disabilities.[10,11]

Respiratory problems — Pesticides can cause or exacerbate respiratory issues, such as asthma, chronic bronchitis and reduced lung function. Long-term exposure, especially among farmers, has been shown to increase the likelihood of developing more severe respiratory conditions.[12,13]

Metabolic disorders — Pesticides interfere with the body's regulation of fat and sugar, contributing to insulin resistance and increasing the risk of metabolic disorders like Type 2 diabetes. This disruption also contributes to weight gain and difficulty losing weight.[14]

Immune system suppression — Certain pesticides have been found to weaken the immune system, making individuals more susceptible to infections and diseases. This immunosuppression results in more frequent illnesses and slower recovery times, particularly in vulnerable populations such as children and the elderly.[15,16,17]

Gut dysbiosis — Chemicals like glyphosate, commonly used in herbicides, have been found to disrupt the balance of gut bacteria, leading to gut dysbiosis. This imbalance contributes to digestive issues, reduced nutrient absorption and an increased risk of inflammatory conditions such as irritable bowel syndrome (IBS) and autoimmune diseases.[18]

Reproductive problems — Pesticides interfere with the reproductive system of both men and women, leading to hormonal imbalances, reduced fertility, miscarriages and birth defects. Some pesticides are also associated with developmental abnormalities in fetuses, further underscoring their potential dangers to future generations.[19,20]

Neonicotinoids and Organophosphates Also Harm Pollinators

In their report,[21] Friends of the Earth noted that neonicotinoids are among the most ecologically disastrous pesticides since DDT. They affect the central nervous system of insects, which leads to paralysis and death.[22] Unlike other pesticides that are sprayed onto crops, neonicotinoids are absorbed by plants[23] and affect not only target pests but also nontarget species, including beneficial insects.

Their widespread use in conventional farms has rendered U.S. agriculture nearly 48 times more toxic to insects, particularly to important pollinators like bees.[24] This dramatic increase in toxicity correlates with the decline of over 200 endangered species, pushing them toward extinction, as reported by the EPA.[25]

Similarly, organophosphates have devastating consequences for bees.[26] When bees are exposed to these pesticides, their nervous systems are severely affected, resulting in impaired motor skills and increased mortality rates, ultimately compromising the survival of bee colonies.[27] Because bees are essential for pollinating various plants, compromising their populations threatens our food security, agricultural economy and ecological balance as a whole.

More Than 300 Pesticides Found in Bee Pollen

Aside from neonicotinoids and organophosphates, other pesticides have also negatively impacted bee population, as evidenced by a comprehensive review published in Trends in Analytical Chemistry,[28,29] which detected over 300 different pesticides in bee pollen. The authors stated:[30]

> *"Bee pollen is a food supplement that is receiving increasing attention for its nutraceutical and therapeutic properties. However, several uncertainties on the safety of this beekeeping product still exist. The present work addressed this issue through the critical evaluation of 61 studies, published over the 2014 to 2024 period."*

Bee pollen is produced by honeybees as they collect pollen from flowers, storing it on their hind legs in specialized structures called pollen baskets or corbiculae. Once back at the hive, the pollen is mixed with nectar and salivary secretions, forming small pellets known as bee pollen.[31]

The review[32] analyzed bee pollen from various regions, including Europe, North and South America, Africa and Asia. Although the composition of bee pollen varies depending on the geographical location and the types of flowers visited by the bees, the studies have consistently identified harmful contaminants in the samples.

A staggering 358 pesticides were detected in bee pollen samples across 53 of the studies, while the remaining eight studies identified seven mycotoxins. The identified pesticides encompassed a wide range of chemical classes, including insecticides (40%), fungicides (28%), herbicides (21%), metabolites (6%), miscellaneous compounds (3%) and veterinary treatments (1%).

Among the detected pesticides were several compounds that have been banned in other countries due to their toxicity, such as dimethoate, methomyl and propargite. In addition to the chemical contamination itself, the review emphasized the need for improved monitoring and regulation of bee pollen as a consumable product.

Although there are guidelines that regulate pesticide levels in many foods, bee pollen remains largely overlooked in these frameworks. This regulatory gap underscores the need for stricter regulations to address safety concerns and protect both bees and humans from pesticide exposure, especially as the bee pollen market, valued at $756 million in 2022, is expected to grow by 5.5% annually over the next decade.[33]

There's Hope for Increasing Honey Bee Survival

A groundbreaking study[34] from the University of Illinois Urbana-Champaign found that by providing bees with high-quality, natural pollen, their ability to withstand viral infections and pesticide exposure improved significantly, offering a promising strategy for protecting bee populations.

One of the key takeaways from this research is that nutrition acts as a buffer against the harmful effects of pesticides and viruses. When bees were fed artificial pollen, they had a much higher mortality rate when exposed to viruses, especially when pesticides were also present. However, when bees consumed natural pollen from diverse flowers, their resilience increased.

While pesticides and viral infections still caused harm, the presence of better nutrition mitigated the overall impact of the chemicals, reducing the number of deaths. These findings highlight the importance of restoring natural habitats and offering bees access to diverse, pesticide-free flowers.

Restoring prairie lands, planting pollinator-friendly crops and reducing pesticide usage near these areas are some actionable strategies to protect pollinators, and in turn, our food security. I urge you to read my article, "Save the Bees," for more information on how you can help save one of the world's most important pollinators.

Breastmilk Is Still the Healthiest Food for Infants

Going back to baby food, this is not the first time contaminants have been detected in commercially available products. Previous research has also found heavy metals, such as lead, arsenic and cadmium, in popular baby food brands.[35]

In 2022, the U.S. Food and Drug Administration (FDA) shut down Abbott Nutrition's facility in Sturgis, Michigan, after five infants were reportedly sickened with Cronobacter and Salmonella infections. Two of the babies died. As a result of this shutdown, a severe formula milk shortage was experienced across the U.S.[36]

If breastfeeding were the norm, parents would feel less anxious over these incidents, and many children would have improved health. Unfortunately, numerous mothers still opt for formula milk, not only for the freedom it offers but also due to the lingering stigma surrounding breastfeeding. For years, public breastfeeding has been viewed unfavorably, often labeled as "shameful."

As a result, many mothers choose to use bottles instead of facing criticism for "exposing themselves" in public — a truly absurd notion, considering that breastfeeding is the most natural and healthiest source of nutrition for infants. It's time to change the narrative surrounding breastfeeding and support mothers in making choices that promote the well-being of their babies.

Consider Making Your Own Baby Food at Home

While prepackaged baby foods offer convenience especially for traveling parents, there are safer alternatives to minimize the risk of exposure to heavy metals and other toxins. One option is to make baby food at home using organically grown and locally sourced fruits and vegetables.

Preparing homemade baby food allows you to have greater control over the ingredients that go into your child's food, enabling you to select higher-quality produce that offers better nutrient value while avoiding harmful preservatives, additives and processed sugars. It also allows you to control the thickness of the puree, helping your baby transition more smoothly from eating purees to solid foods as they grow.

Making homemade baby food also reduces food waste and saves you money in the long run. All you need to get started is a vegetable peeler, a steamer basket, and a blender or food processor. To make the process easier, portion the pureed food into ice cube trays, cover them, and freeze for at least five hours before transferring the cubes to a freezer-safe container.

When it's time to use the food, simply remove a cube the day before and place it in the refrigerator to thaw. You can also warm the pureed food on the stovetop over medium to

low heat, ensuring to stir thoroughly to avoid hot spots. Always test the food yourself to ensure it's safe for your baby, preventing any risk of burning their tongue.

For new mothers who are still lactating, most pediatricians recommend exclusively breastfeeding for at least six months before introducing solid foods. However, those who didn't start breastfeeding from the beginning or who have taken a break for weeks or months may find it challenging to resume breastfeeding, as lactation cannot be restarted at will.

In such cases, a suitable alternative is to make your own infant formula using raw milk. You'll find a helpful video tutorial on preparing homemade infant formula, along with my recommended recipe, in my article "**Is Your Baby's 'First Food' Loaded with Toxic Heavy Metals?**"

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