

Tuesday, October 20, 2009 by: Mike Adams, the Health Ranger, NaturalNews Editor

Key concepts: [HFCS](#), [Food](#) and [Honey](#)

(NaturalNews) If you know anything about the food supply, you know that honey bees are a crucial part of the food production chain. In the United States, they pollinate roughly one-third of all the crops we eat, and without them, we'd be facing a disastrous collapse in viable food production.

That's why, when honey bees started to disappear a few years ago, scientists scrambled to find the root cause of the phenomenon, which has since been dubbed "Colony Collapse Disorder."

The name is a bit of a misnomer, though. It's not really a "disorder." It's more of a poisoning. Or at least that's what we may be learning from new research that's just been published in the *ACS' Journal of Agricultural and Food Chemistry* (<http://pubs.acs.org/stoken/presspac...>).

It's been difficult, of course, trying to determine the cause of colony collapse disorder. Some of the suggested theories for explaining the phenomenon included chemical contamination from [pesticides](#), genetic contamination from genetically modified [crops](#), changes in the Earth's magnetic field, climate change and air pollution. In an attempt to nail down some scientific answers, researchers from the [USDA](#) Agricultural Research Service in Tucson, Arizona joined with other researchers in New Orleans and the University of Wisconsin to check out another possible culprit: **High-fructose corn syrup** (HFCS).

HFCS, as you may already know, is a processed, liquid sweetener used in disturbingly large amounts throughout the global [food supply](#). You can find it in not just sodas, but pizza sauce, salad dressings and even whole wheat bread. It's in breakfast cereals, [food](#) bars, peanut butter, ketchup and a thousand other products.

There are two reasons why you find [HFCS](#) in so many food products: 1) It's sweet. 2) It's cheap.

It is for these same two reasons that [high-fructose corn syrup](#) is fed to honey bees. It provides them the sugar calories to stay active without resulting in a huge cost for the beekeeper. That's why HFCS has been used for decades as a food source for [honey](#) bees.

But this very food source may, in fact, be *poisoning the bees*.

### HFCS forms hydroxymethylfurfural

What these USDA researchers discovered is that when HFCS is heated, it forms **hydroxymethylfurfural** (HMF), a chemical that can kill honey bees. The production of HMF during [cooking](#) rose in parallel to the temperatures to which HFCS was exposed.

To put it plainly, **when you cook HFCS, it becomes contaminated with HMF**. And according to the research, levels of HMF "jumped dramatically" when temperatures rose above 120 degrees Fahrenheit (which isn't very hot, by the way).

This is similar to the way in which browning or frying carbohydrates produces *acrylamides*, a cancer-causing chemical that's also ubiquitous in the food supply. (<http://www.naturalnews.com/acrylami...>)

The upshot is that HMF could be part of the reason why honey bees are dying off. Feeding a chemical contaminant to your bees, after all, doesn't sound like a good way to support their long-term [health](#). But if HFCS has been fed to honey bees for decades, why the sudden collapse of bee populations in just the last few years?

We don't know the answers to that yet, but HMF is likely only part of the picture. It could be that honey bees are already stressed from pesticides, GM crops and other environmental sources. With their chemical burdens already maxed out, one additional dietary stressor might have just pushed them over the edge. There's a limit, of course, to how much chemical stress any biological organism can tolerate, and honey bees appear to have been pushed *one chemical too far*.

Perhaps hydroxymethylfurfural will one day be known as "the chemical that killed the honey bees."

You can read a bit more about this chemical on [Wikipedia](#): (<http://en.wikipedia.org/wiki/Hydrox...>).

Could HMF harm humans, too?

Beyond the issue of honey bees, this research on HFCS and HMF raises some potentially serious questions about the use of the ingredient in the *human food supply*:

### Is HMF toxic to humans?

If it kills honey bees, could it damage the brains of children? Could it disrupt normal neurological function in the human body? And if so, might this help explain why so much research links HFCS to [diabetes](#) and obesity?

The researchers from this particular study stated that "...the data from this study are important for human health as well." They also went on to state two very important facts you need to be aware of:

Fact #1) HMF has been linked to [DNA damage](#) in humans. (See citation below.)

Fact #2) When HMF breaks down in the human body, it breaks down into substances that may be even more harmful than the HMF itself. (Similar to the way in which aspartame breaks down into formaldehyde, formic acid and other potentially harmful [chemicals](#).)

These are bombshell revelations about the potential dangers of high-fructose [corn](#) syrup. There's no such thing as "raw" or "cold-pressed" HFCS. It's all subjected to high temperatures during processing, meaning that all HFCS may be generating some level of the HMF contaminant before it's even put into [foods](#).

And then, once it's added to manufactured food items, *it's often cooked again!* This second cooking could theoretically generate even more HMF, further contaminating the food with potentially dangerous chemicals.

Perhaps when you eat HFCS, you're consuming a chemical that "scrambles" health intracellular communication, causing physiological disruptions that, if allowed to continue for long enough, are expressed as diseases like "diabetes" or "[obesity](#)." We don't know this for sure, but it's a question that clearly needs to be asked... especially given the tremendous quantities of HFCS currently consumed in the diets of mainstream consumers.

### How to protect yourself

There are two ways to protect yourself from all this:

#1) Don't eat (or drink) high-fructose corn syrup! This is seemingly the easiest way to avoid the potential danger here, but it does require a level of vigilance with the reading of food labels. HFCS is found in many products you would never suspect, so you've got to watch for it carefully.

#2) Don't eat cooked, processed foods! Work more raw foods into your diet and greatly reduce your consumption of factory foods.

And finally, don't believe the spin of the HFCS industry. Those lobbying groups will always insist HFCS is perfectly safe, regardless of what research concludes otherwise. They act a lot like Big Tobacco, in my opinion, criticizing good research while promoting a product that can contribute to the decline of health among those who consume it.

The sooner we get HFCS out of the diet of both humans and honey bees, the better off we'll all be in the long run. In my view, eating raw, dehydrated cane juice crystals is far better for you than eating cooked, contaminated HFCS.

### Sources for this story include:

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**About the author:** Mike Adams is a natural health researcher and author with a mission to teach personal and planetary health to the public. He is a prolific writer and has published thousands of articles, interviews, reports and consumer guides, impacting the lives of millions of readers around the world who are experiencing phenomenal health benefits from reading his articles. Adams is an honest, independent journalist and accepts no money or commissions on the third-party products he writes about or the companies he promotes. In 2007, Adams launched EcoLEDs, a manufacturer of [mercury-free, energy-efficient LED lighting products](#) that save electricity and help prevent global warming. He's also a successful software entrepreneur, having founded a well known [email marketing software company](#) whose technology currently powers the NaturalNews email newsletters. Adams volunteers his time to serve as the executive director of the [Consumer Wellness Center](#), a 501(c)3 non-profit organization, and pursues hobbies such as Pilates, Capoeira, nature macrophotography and organic gardening. Known on the 'net as 'the Health Ranger,' Adams shares his ethics, mission statements and personal health statistics at [www.HealthRanger.org](http://www.HealthRanger.org)

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