

Nutella-Cancer Story Gives 'Fake News' a Bad Name



By Alex Berezow, PhD — January 12, 2017



Cancer with a side of cancer! (Credit: Shutterstock) [1]

Anyone who searches long enough can find that pretty much [everything has been linked to cancer](#) [2]. Bacon. Cell phones. Wi-fi. [Looking at Ana Dolaskie](#) [3]. At some point the insanity has to stop. Unfortunately, we have yet to reach that point.

Variations of the headline "Nutella may cause cancer" are going viral. As usual, there is almost no support for such hysteria. According to [Reuters](#) [4]:

The European Food Safety Authority (EFSA) said in May that palm oil generated more of a potentially carcinogenic contaminant than other vegetable oils when refined at temperatures above 200 degrees Celsius. It did not, however, recommend consumers stop eating it and said further study was needed to assess the level of risk.

The controversy started in May 2016, when EFSA released a [report](#) [5] that warned of the alleged dangers of contaminants that form during the processing of vegetable oils, particularly palm oil. Many different foods contain palm oil, but food activists and chemophobes have designated Nutella to be the whipping boy in this latest faux scare.

Two of the contaminants of potential concern are 3-MCPD and glycidol. Let's focus first on 3-MCPD. The panel wanted to determine the "tolerable daily intake." Here's the team's explanation:

The CONTAM Panel established a tolerable daily intake (TDI) of 0.8 µg/kg bw per day for 3-MCPD. This was based on a chronic study in rats in which the lowest BMDL₁₀ of 0.077 mg/kg bw per day for renal tubular hyperplasia in males was derived and application of an overall uncertainty factor of 100.

Translation: "A rat study showed that a dose of 77 µg/kg of body weight per day caused a 10% increased risk (i.e., BMDL₁₀) that the rat's kidneys would contain too many cells (i.e., renal tubular hyperplasia), which may indicate cancer. Because we are uncertain about this finding, we divided the number by 100, just to be safe. Therefore, the tolerable daily intake (TDI) for a human is 0.8 µg/kg of body weight."

In other words, the EFSA pulled the number out of thin air. But let's assume, for sake of argument, that they are spot-on. How much 3-MCPD are people getting in their diet? The EFSA estimates that most adults consume less than that amount, but that infants, toddlers, and children may consume anywhere from 0.8 to 3.2 µg/kg. And while Nutella (the report refers to "chocolate spreads") is a source of 3-MCPD, potentially greater sources of the chemical include infant formula, cookies, fried or baked potatoes, margarine, and pastries and cakes (Table B.5).

The EFSA's analysis of glycidol was similar, but even more absurd:

A T25 of 10.2 mg/kg bw per day for peritoneal mesothelioma in male rats was used as the reference point. In view of the genotoxic and carcinogenic potential of glycidol, a margin of exposure (MoE) approach was applied. MoE estimates were calculated by dividing the reference point of 10.2 mg/kg bw per day by the exposure levels. A MoE of 25,000 or higher was considered of low health concern.

Translation: "At a dose of 10.2 mg/kg, glycidol caused abdominal membrane cancer in 25% of rats (i.e., T25). We divided that number by 25,000 to determine the safe level of consumption." Once again, adults consumed less than this, and children consumed more. And as with 3-MCPD, Nutella contains glycidol, but other foods contributed just as much if not more glycidol to the average person's diet (Table B.7).

So, why pick on Nutella? The only sensible explanation is that palm oil-free alternatives to Nutella see an opportunity to steal market share.

Putting this all together, here's what the headlines should have said: "A European study invented arbitrary safety standards for chemicals found in many different foods and, despite this, found that most people consumed even less than that arbitrary standard."

Notice that there's no mention of Nutella because it played essentially no substantive role in the report's findings. Even EFSA's [press release](#) [6] mentions neither Nutella nor chocolate spreads.

This Nutella-cancer story is so ludicrous that it gives "fake news" a bad name.

Source [5]: EFSA Panel on Contaminants in the Food Chain (CONTAM). "Risks for human health related to the presence of 3- and 2-monochloropropanediol (MCPD), and their fatty acid esters, and glycidyl fatty acid esters in food." *EFSA Journal* 14(5). Published: 3-May-2016. DOI: 10.2903/j.efsa.2016.4426

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[1] <https://www.shutterstock.com/image-photo/three-chocolate-hazelnut-spread-nutella-crepes-336080225>

[2] <http://www.realclearscience.com/blog/2013/04/everything-causes-cancer.html>

[3] <https://www.youtube.com/watch?v=Znk6h-AGEIM>

[4] <http://mobile.reuters.com/article/idUSKBN14V0MK>

[5] <http://onlinelibrary.wiley.com/doi/10.2903/j.efsa.2016.4426/full>

[6] <https://www.efsa.europa.eu/en/press/news/160503a>