

Is the 'Impossible Burger' Safe?



By *Chuck Dinerstein* — August 12, 2019



Courtesy of Tony Webster [1]

Having jumped all the appropriate FDA hurdles to ensure safety, the Impossible Burger in its uncooked form is coming to supermarket shelves this fall. That has not silenced its critics who now consider the Impossible Burger “unhealthy” and continue to raise concerns.

What is actually in an Impossible Burger?

The top five ingredients begin with water, soy protein that replaced an earlier version made from wheat protein (perhaps a nod to the gluten-free crowd), coconut oil now reduced with sunflower oil to reduce saturated fats, and natural flavors. It also contains methylcellulose, not to worry, it is a plant-based binder creating the right mouthfeel, and of course, heme or soy leghemoglobin. This last ingredient is tasty, a feat of genetic engineering and the one ingredient getting the evil eye of safety concerns.

From a nutritional lens, the complaint is that Impossible Burgers have too much fat and salt. In comparison to equal size (roughly 4 ounces) and equal caloric lean beef hamburger, it has 1 gram more fat, 9 grams of carbohydrate, and 16% rather than beef’s 1% of our “daily value” of salt. It also contains 10 grams less protein, but three gms of fiber. But none of this is surprising; you are eating a plant, not a cow. And all the variations of protein, carbs, fiber, and like the percentages you would find in the oft-cited plant-based diet. As for fat and salt, the increased fat is 1.5% of the recommended daily amount, and the salt can be easily managed by most individual's kidneys who have been doing it far longer than the USDA.

The Impossible Burger also contains a number of vitamins some of which are needed when strictly following a plant-based diet. The most important, and controversial, is the iron found in that genetically engineered soy leghemoglobin.

Is the Impossible Burger Frankenfood?

Having demonstrated or at least suggest that the nutritional value is comparable and compatible with a plant-based diet, critics contend that the soybean, the plant at the heart of the burger is tainted – it is a GMO crop. Impossible Burger acknowledges that and contends, as do the majority of scientists that GMOs are safe; how could they not, since the secret sauce of the burger is industrially created soy leghemoglobin? They also acknowledge that there isn't enough non-GMO soy available (it is about 6% of our total crop production), and they point out that cattle, the food they are replacing, contains quite a bit more GMO grain.

Soy leghemoglobin is a new molecule in our food chain; well, that is not quite true.

Leghemoglobin, the leg is for legume, is found in plants and is their source, albeit low, of iron. The change to the food chain is in the amount of this soy leghemoglobin that we might eat; and yes, the dose is the poison. The [safety data](#) [2] comes, as always from our rodent friends. When you feed the little critters the equivalent of 12 pounds of Impossible Burgers a day, for 28-days, it “raise[d] no questions of toxicological concern.” Again, for the critics, this is insufficient, since we might eat Impossible Burgers for longer than 28 days, although the chance of me eating the equivalent of 3 hamburgers a day for a year is very low.

Where does all this leave us?

To the extent that eating an Impossible Burger will get people to reconsider their food choices, more plants, less meat, it is a win. And if that is insufficient, then at least it is tasty, certainly way ahead of many vegetable mixtures masquerading as a hamburger. While eating them will not save the planet, they won't kill you either. Like Frankenstein's monster, the Impossible Burger is a bit misunderstood and just wants your love.

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[1]

https://upload.wikimedia.org/wikipedia/commons/3/3a/Impossible_Burger_at_Hell%27s_Kitchen%2C_Minneapolis_-_Vegan_Meat_%2841303643735%29.jpg

[2] <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5956568/>