

Peanut Blog

An ounce of information



'Group 1 carcinogen' survives even when frozen.

SVO – Refrigerators and freezers only slow down the spoilage of food. They are not 'safes' that can eliminate mold toxins (mycotoxins) that have already formed.

You open a jar of jam to spread on toast and discover a layer of white mold growing on the surface. Instead of throwing it all away wastefully, you just skim off the top layer, including the mold, and eat the rest.

The same thing happens with peanuts tucked away in the back of the freezer. Even though they smell musty instead of their usual aroma, you might still be tempted to eat them, assuming that freezing them has kept them safe.

However, refrigerators and freezers only slow down the spoilage of food; they are not "safe havens" that can eliminate pre-formed mycotoxins. The World Health Organization (WHO) notes that many mycotoxins are chemically persistent and can remain even after food undergoes normal processing.

Peanuts, corn, and some other nuts are among the foods that require caution regarding the risk of aflatoxin contamination. According to the U.S. Food and Drug Administration (FDA), aflatoxin-producing fungi can develop at various stages, from cultivation and harvesting to storage. Factors such as temperature, humidity, and rainfall also affect the risk of contamination.

Aflatoxin is a potent mycotoxin naturally produced by mold species of the genus *Aspergillus* (primarily *Aspergillus flavus* and *Aspergillus parasiticus*). This substance is commonly found in moldy agricultural products in tropical regions with hot, humid climates, notably peanuts, corn, cereals, and oilseeds.

In South Korea, there have also been actual cases of product recalls. On July 23rd last year, the Ministry of Food and Drug Safety ordered the suspension of sales and recall of a roasted peanut product due to the detection of aflatoxin levels exceeding the prescribed limit.

The International Agency for Research on Cancer (IARC) classifies aflatoxin as a "Group 1 carcinogen". The causal link between aflatoxin and hepatocellular carcinoma (liver cancer) has been clearly demonstrated.

Of course, this doesn't mean that consuming it just once will immediately cause cancer, or that this substance is more dangerous than all other carcinogens. The actual risk depends on factors such as the amount and duration of exposure to the toxin.

Freezing is also not a guarantee of safety. While freezing slows down mold growth, it cannot eliminate aflatoxin that has already formed. If you see moldy nuts or nuts with a distinctly unusual smell or taste, it's best to discard the entire product rather than trying to pick out the spoiled parts. The U.S. Department of Agriculture's Food Safety and Inspection Service (USDA FSIS) also recommends discarding nuts and peanut butter showing signs of mold.

The U.S. Department of Agriculture's Food Safety and Inspection Service (USDA FSIS) explains that mold can grow even at refrigerator temperatures and is more tolerant of sugary or salty environments than other microorganisms. This is why mold is sometimes seen in refrigerated jams or fruit jellies. A common mistake people make when they see a little mold on the surface of jam is to just skim off the top layer and eat the rest. The visible mold is not the entire structure of the fungus. In soft, high-moisture foods, the hyphae can spread deep below the surface. Additionally, there is a risk of toxins produced by the mold.

Source: <https://www.vietnam.vn/en/chat-gay-ung-thu-nhom-1-van-song-sot-ngay-ca-khi-cap-dong>