

Is reusing cooking oil safe? ^[1]

Alice,

I am trying to convince my good friend not to save the grease she cooks with for re-use. Instead of draining grease out of a pan after frying it, she saves and stores it to use again. It seems to me that grease that is cooked once is bad enough, twice must be horrible. Am I unjustly picking on her, or am I right that there is an even greater health risk when you cook with pre-cooked oil/grease?

Answer

Dear Reader,

Although re-using cooking oil and/or grease is a somewhat common practice, it can pose some serious health hazards. The most common danger when recycling cooking oil is that it becomes rancid or spoiled. In addition to having strange flavors and odors, rancid oil may contain possibly carcinogenic free radicals. These pesky molecules are then absorbed into the fried food and ingested by an unlucky eater.

Using fresh oil every time you cook is the healthiest option. However, if that is not a viable option and it must be re-used, here are some helpful (and healthful) tips:

- Strain it through a few layers of cheesecloth to catch any food particles before storing. Be careful with hot oil, though, because you can easily get burned.
- Shake off excess batter from food before frying it.
- Use a good thermometer to fry foods at a maximum of 375°F (or 190°C).
- Turn off the heat after you are done cooking. Exposing oil to prolonged heat accelerates rancidity.
- Don't mix different types of oil.
- Store oil in a cool, dark place.
- Avoid iron or copper pots or pans for frying oil that is to be reused. These metals also accelerate rancidity.

Here's another tip on oil safety. Frying foods at or above 375°F can lead to the accumulation of 4-hydroxy-2-trans-nonenal (HNE) in the oil. What's that, you ask? HNE is a toxic substance that

has been associated with an increased risk of stroke, atherosclerosis, elevated levels of LDL cholesterol (the "bad" cholesterol), Alzheimer's, Parkinson's, and various liver diseases. It only takes one use to create HNE in the oil, and reusing oil at too high of a heat can cause even more HNE to build-up.

How to avoid HNE? When heating oil to very high temperatures, use a thermometer to ensure that you're not heating the oil above 375°F. This is the ideal temperature for frying. Also, stick to oil low in linoleic acid, such as olive oil and canola oil. Researchers found that HNE is more likely to build up in oils with high levels of linoleic acid. Oils with the highest percentage of linoleic acid are safflower oil, grape seed oil, sunflower oil, and corn oil, so you may want to stay away from those if you enjoy a deep fryer.

Alice!

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Published date:

Dec 31, 1969

Last reviewed on:

Apr 22, 2014

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