

Olive oil more stable and healthful than seed oils for frying food

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Frying is one of the world's most popular ways to prepare food -- think fried chicken and french fries. Even candy bars and whole turkeys have joined the list. But before dunking your favorite food in a vat of just any old oil, consider using olive. Scientists report in ACS' Journal of Agricultural and Food Chemistry that olive oil withstands the heat of the fryer or pan better than several seed oils to yield more healthful food.

Mohamed Bouaziz and colleagues note that different oils have a range of physical, chemical and nutritional properties that can degrade oil quality when heated. Some of these changes can lead to the formation of new compounds that are potentially toxic. By-products of heating oil can also lower the nutritional value of the food being fried. Bouaziz's team wanted to find out which cooking oil can maintain its quality under high heat and repeated use.

The researchers deep- and pan-fried raw potato pieces in four different refined oils -- olive, corn, soybean and sunflower -- and reused the oil 10 times. They found that olive oil was the most stable oil for deep-frying at 320 and 374 degrees Fahrenheit, while sunflower oil degraded the fastest when pan-fried at 356 degrees. They conclude that for frying foods, olive oil maintains quality and nutrition better than seed oils.

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Journal Reference:

1. Akram Zribi, Hazem Jabeur, Felix Aladedunye, Ahmed Rebai, Bertrand Matthäus, Mohamed Bouaziz. **Monitoring of Quality and Stability Characteristics and Fatty Acid Compositions of Refined Olive and Seed Oils during Repeated Pan- and Deep-Frying Using GC, FT-NIRS, and Chemometrics.** *Journal of Agricultural and Food Chemistry*, 2014; 62 (42): 10357 DOI: [10.1021/jf503146f](https://doi.org/10.1021/jf503146f)

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