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Replacements for Trans Fats—Will There Be an Oil Shortage?

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Abstract

Manufacturers use the process of hydrogenation to create trans fats in order to increase the shelf life of baked and fried foods. Ingestion of trans fats is associated with an increased risk of cardiovascular disease. A groundswell of public sentiment is causing regulatory bodies to ban the use of trans fats in foods. Alternatives to trans fats are needed now in order to preserve the freshness and provide an appealing texture of many packaged foods. As trans fats become phased out, there are eight types of approaches currently being developed to substitute for these fats as ingredients for baked and fried foods: (1) modified hydrogenation, (2) genetically modified seeds, (3) interesterification, (4) fractionation and blending, (5) butter and animal fat, (6) natural saturated oils, (7) natural unsaturated oils, and (8) fat substitutes. These alternatives to trans fats will require close scrutiny to ascertain whether they will also turn out to be linked with cardiovascular disease.

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Abbreviations: (DAG) diacylglycerides, (FDA) Food and Drug Administration, (HDL) high-density lipoprotein, (LDL) low-density lipoprotein

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