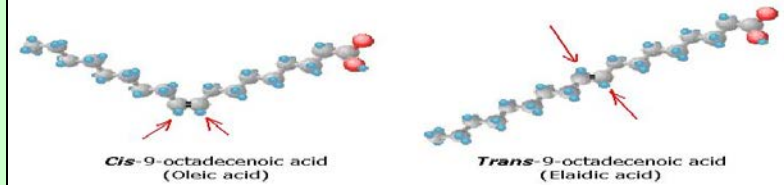


Structured Lipids for *trans*-Free Fats

Partial hydrogenation: a common industrial process of solidifying oils and increasing their stability. It is the predominant source of dietary *trans*-fatty acids (TFA).

TFA: Increases LDL (bad) cholesterol
Decreases HDL (good) cholesterol
Increases total: HDL cholesterol



Dietary Guidelines for Americans, 2010

TFA consumption should be as low as possible



FDA Consumer Health Information
www.fda.gov/consumer

November 2013

FDA Targets *Trans* Fat in Processed Foods

More than a decade ago, a sea change began in the American diet, with consumers starting to avoid foods with *trans* fat and companies responding by reducing the amount of *trans* fat in their products.



Lipase-catalyzed interesterification is a possible alternative to partial hydrogenation to obtain *trans*-free fats. Structured lipids are synthesized by reacting stearic acid or a stable fat with liquid oils in the presence of lipase. Stearic acid is considered to have neutral effect on serum cholesterol levels. This enables formulation of margarines, spreads, and shortenings with desired texture, solid fat, stability, and zero *trans*-fat.