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Trans fatty acids, cardiovascular health, and policy implications

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Consumption of industrially produced trans-fatty acids (TFA) is associated with substantial risk of coronary heart disease, and possibly diabetes and sudden cardiac death. TFA intake has adverse effects on multiple lipid and nonlipid risk pathways (Fig. 1), with an overall constellation of effects that is unique among dietary fats (Fig. 2). Both individual-level and policy-level initiatives to reduce the global consumption of industrial TFA intake should be a priority (Table 1).

Table 1 Essential dietary habits for CVD health

- 1. Seafood/ n-3 fatty acids
- 2. No trans fat
- 3. Whole grains
- 4. Vegetables, fruits
- 5. n-6 polyunsaturated fats
- 6. Legumes, nuts
- 7. Lower salt
- 8. Smaller portion sizes
- 9. Rare sweetened drinks

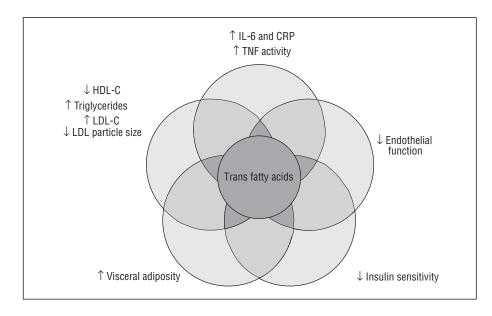
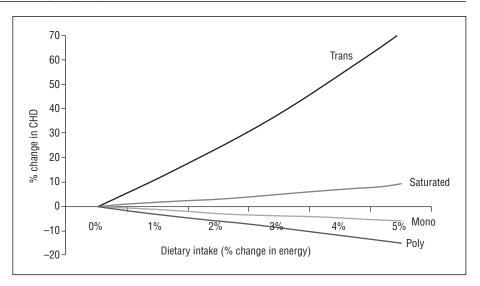


Figure 1 Trans fats. A unique cardiometabolic imprint? Mozaffarian D, Willett WC. Trans fatty acids and cardiovascular risk: a unique cardiometabolic imprint? Curr Atheroscler Pep. 2007;9:486-93. Peview. With kind permission from Springer Science+Business Media B.V.

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Figure 2 Risk of CHD with isocaloric replacement of carbohydrate with different dietary fats. Based on meta-analysis of 4 prospective cohorts (for TFA) and 2 prospective cohorts (for SFA, MUFA, and PUFA). Micha R, Mozaffarian D. Trans fatty acids: effects on metabolic syndrome, heart disease and diabetes. Nat Rev Endocrinol. 2009;5:335-44. With kind permission from Nature Publishing Group (Macmillan Publishers Ltd. Holding U).



Conflict of interest

The author declares he has not any conflict of interest.

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