

# IN FOCUS...

## ELIMINATING TRANS FATS

### ELIMINATING TRANS FATS: A GLOBAL PERSPECTIVE

By Dana Angelo White, MS, RD

In the newly released World Health Organization (WHO) Scientific Update on *trans* fatty acids, WHO recommends significantly reducing or virtually eliminating industrially-produced *trans* fatty acids (TFAs) from the food supply.<sup>1</sup>

The main source of artificial TFAs comes from partially hydrogenated vegetable oils (PHVO) found primarily in foods fried in partially hydrogenated oils, commercial baked goods, stick margarine and snack foods. Since detrimental health effects are associated with their consumption, the review group considered TFAs from PHVO as “industrial food additives” that should be avoided.

### TRANS FATS AND HEALTH

Review of the evidence from randomized controlled trials and observational studies has reinforced previous findings that dietary TFAs have adverse effects on lipoprotein profiles, causing an increase in LDL cholesterol and decrease in HDL cholesterol. TFAs also promote inflammation and endothelial dysfunction, creating an overall increased risk of CHD events. Other possible effects associated with TFA consumption include compromised coagulation, insulin resistance and displacement of essential fatty acids from membranes. Further studies are also needed to assess the possible effects on weight gain and diabetes incidence.

Removal of PHVO from the food supply would result in significant health benefits, including a decrease in CHD risk—although the magnitude of the predicted benefit varies. Replacing PHVO with unsaturated fat has the greatest benefit, and the affect is primarily accounted for by its impact on blood lipids, lipoproteins and C-reactive protein.

The review acknowledges that while natural sources of TFA (found primarily in dairy products and meats) cannot be removed from the diet entirely, they do not appear to pose a significant public health risk as their intake is low in most populations.

### GLOBAL EFFORTS

Countries including Denmark, Canada, Argentina, India and the United States have begun efforts to reduce and eliminate TFA from the food supply. In order to facilitate this effort, these countries have put in place nutrition recommendations, public awareness programs, labeling laws and legislative programs to educate consumers. Incentive opportunities for food manufacturers have been effective in large cities like New York where they have begun to eliminate *trans* fats in restaurants, schools, hospitals and other institutions. A report on their progress is due out in the near future.

The Oil Replacement and Environmental Implications Findings Study indicates that using alternative fats and oils to replace PHVO would lower CHD risk by reducing TFA intake through mechanisms beyond changes in blood lipid levels. Currently there is not an adequate global supply of suitable substitute vegetable oils with zero or low TFA to meet the demands of replacing all PHVO in the global food supply. The WHO recommends that agricultural experts need to begin to plan and prepare for the increased demands.

Food manufacturers around the world recognize the fact that the demand for the elimination of TFA is inevitable and have begun to reformulate their products to make them healthier for consumers.

### REFERENCE

1. Uauy R, Aro A, et al. WHO Scientific Update on *trans* fatty acids: summary and conclusion; *Eur J Clin Nutr.* 2009;63:S68-S75.



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