

## **Supplemental Material**

### **“Saturated fat as compared to unsaturated fats and sources of carbohydrates in relation to risk of coronary heart disease: A prospective cohort study.”**

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**eTable 1.** Categories of fatty acids and carbohydrates used in the present study, and their major food sources.

**eTable 2.** Multivariable hazard ratios of coronary heart disease with isocaloric (percent of energy) substitutions of one dietary component for another in NHS (1980–2010) and HPFS (1986–2010).

**eFigure 1.** Average 2-to-4-year changes in fatty acid and carbohydrate source intakes according to deciles of concurrent changes in saturated fatty acid intake, as percentages of energy intake. To interpret this figure by way of example, participants in the decile with the greatest reduction in SFA intake (-5.25% of total energy, red columns) over 2–4 years also reduced energy intake from MUFAs in that timeframe by nearly 3.9%, suggesting overall decreasing fat intake as a percentage of energy; however, they concurrently increased their intake of carbohydrates from refined starches/sugars by approximately 4.3% of total energy.

**eFigure 2.** Estimated percent changes in the risk of coronary heart disease associated with isocaloric substitutions of one dietary component for another, in NHS (1980–2010) and HPFS (1986–2010). Changes in risk are derived from hazard ratios and represented as solid bars; I bars represent 95% confidence intervals. The multivariate model was adjusted for total energy intake, the energy contribution from protein, cholesterol intake, alcohol intake, smoking status, body mass index, physical activity, use of vitamins and aspirin, family history of myocardial infarction and diabetes, and presence of baseline hypercholesterolemia and hypertension.

**eTable 1.** Categories of fatty acids and carbohydrates used in the present study, and their major food sources.

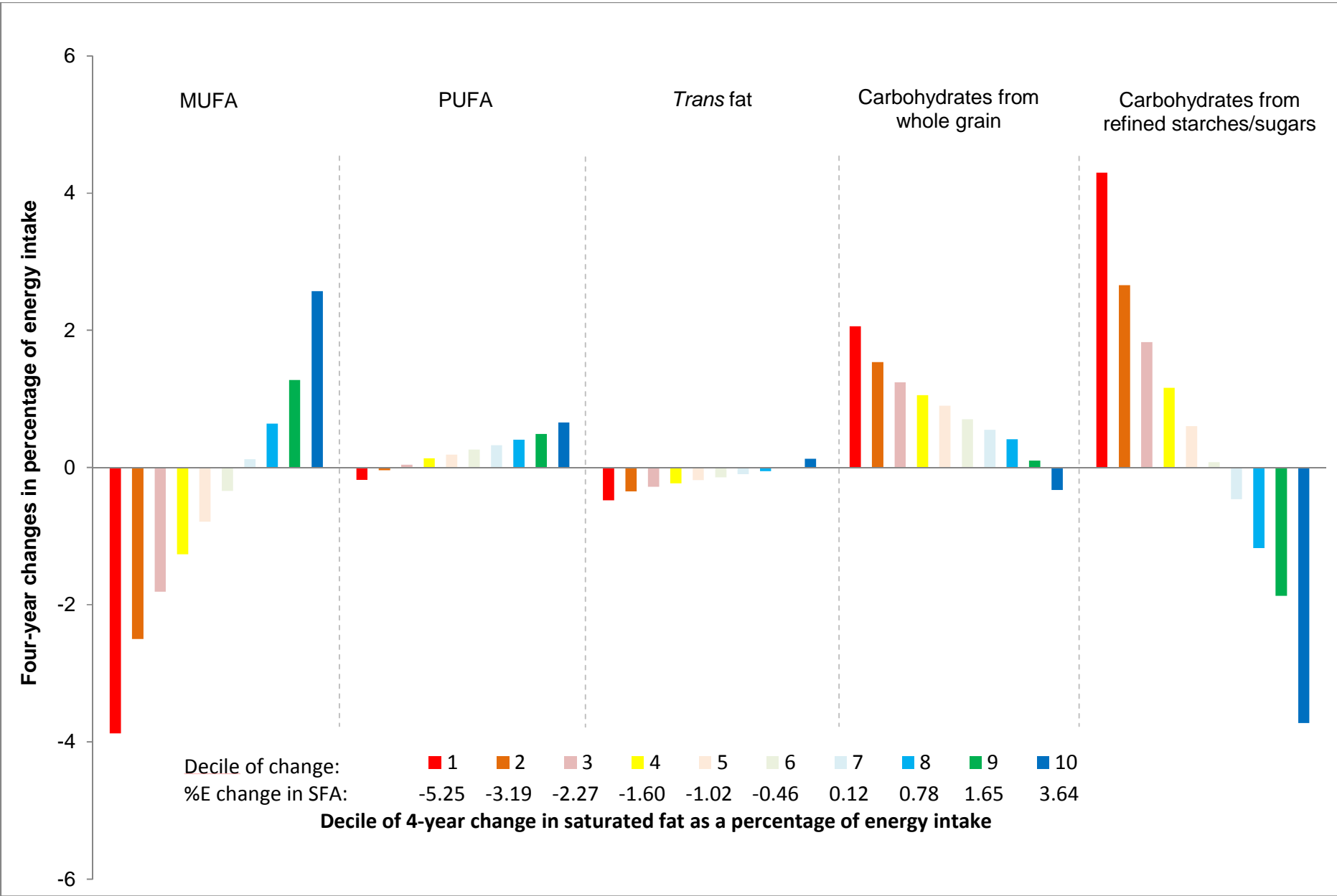
<b>Category</b>	<b>Major Food Sources</b>
Saturated fatty acids	Beef, ham, pork, chicken, processed meats, butter, cheese, milk, ice cream, eggs, salad dressings.
Monounsaturated fatty acids	Beef, processed meats, chicken, nuts, peanuts and peanut butter, pork, ham, crackers, salad dressing, butter, milk, and olive oil.
Polyunsaturated fatty acids	Vegetable oil, oil and vegan salad dressings, nuts, chicken, cabbage or Cole slaw, and soft margarines.
Carbohydrates from refined starches/sugars	White rice, white bread including pitas, pasta, bagels, English muffins or rolls, pizza, pretzels, plain pancakes, crackers, pastries, muffins or biscuits, tortillas, cookies, sweet rolls, coffee cakes, plain donuts, pies, cakes, brownies, chocolate chip cookies, potato chips, potatoes, and French fries.
Carbohydrates from whole grains	Oatmeal, oatmeal/oat bran/whole bran bread, brown rice, popcorn, dark bread, whole-wheat bread, whole-wheat crackers, rye bread, oat-based cold cereals, Metamucil, fat-free oatmeal cookies, raw oat or wheat bran, and bran muffins.

**eTable 2.** Multivariable hazard ratios of coronary heart disease with isocaloric (percent of energy) substitutions of one dietary component for another in NHS (1980–2010) and HPFS (1986–2010).

	Pooled	NHS	HPFS
<b>Isocaloric substitutions of SFA by energy from...</b>			
<i>Trans</i> fats (2% of energy)	1.05 (0.93–1.19), <i>P</i> =0.41	0.97 (0.82–1.14), <i>P</i> =0.69	1.16 (0.97–1.38), <i>P</i> =0.10
MUFA (5% of energy)	0.85 (0.74–0.97), <i>P</i> =0.02	0.76 (0.62–0.93), <i>P</i> =0.008	0.93 (0.77–1.11), <i>P</i> =0.41
PUFA (5% of energy)	0.75 (0.67–0.84), <i>P</i> <0.0001	0.70 (0.59–0.83), <i>P</i> <0.0001	0.80 (0.68–0.93), <i>P</i> =0.003
Carbohydrates from refined starches/sugars (5% of energy)	1.01 (0.95–1.06), <i>P</i> =0.81	1.01 (0.94–1.09), <i>P</i> =0.79	1.00 (0.93–1.08), <i>P</i> =0.95
Carbohydrates from whole grains (5% of energy)	0.91 (0.85–0.98), <i>P</i> =0.01	0.93 (0.83–1.04), <i>P</i> =0.20	0.90 (0.83–0.99), <i>P</i> =0.02
<b>Isocaloric substitutions of carbohydrates from refined starches/sugars by energy from...</b>			
<i>Trans</i> fats (2% of energy)	1.03 (0.93–1.14), <i>P</i> =0.62	0.97 (0.84–1.11), <i>P</i> =0.62	1.10 (0.95–1.27), <i>P</i> =0.22
SFA (5% of energy)	0.99 (0.94–1.05), <i>P</i> =0.81	0.99 (0.92–1.07), <i>P</i> =0.79	1.00 (0.92–1.08), <i>P</i> =0.95
MUFA (5% of energy)	0.95 (0.90–1.00), <i>P</i> =0.06	0.93 (0.83–1.04), <i>P</i> =0.045	0.98 (0.91–1.05), <i>P</i> =0.52
PUFA (5% of energy)	0.78 (0.71–0.85), <i>P</i> <0.0001	0.71 (0.62–0.82), <i>P</i> <0.0001	0.83 (0.73–0.94), <i>P</i> =0.002
Carbohydrates from whole grains (5% of energy)	0.89 (0.84–0.94), <i>P</i> <0.0001	0.91 (0.81–1.01), <i>P</i> =0.08	0.88 (0.82–0.94), <i>P</i> =0.0003

*Hazard ratios were adjusted for total energy intake, the energy contribution from protein, cholesterol intake, alcohol intake, smoking status, body mass index, menopausal status and hormone therapy (women only), physical activity, use of vitamins and aspirin, family history of myocardial infarction and diabetes, and presence of baseline hypercholesterolemia and hypertension. Abbreviations as in Table 1.*

**eFigure 1.** Average 2-to-4-year changes in fatty acid and carbohydrate source intakes according to deciles of concurrent changes in saturated fatty acid intake, as percentages of energy intake.



**eFigure 2.** Estimated percent changes in the risk of coronary heart disease associated with isocaloric substitutions of one dietary component for another, in NHS (1980–2010) and HPFS (1986–2010).

