

Revising fats and oils in the FNDDS: approaches and impact

Jaspreet KC Ahuja
Food Surveys Research Group
BHNRC, ARS, USDA



**Beltsville Human Nutrition
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Purpose

- To describe changes made in fats/oils ingredients in the FNDDS
- To evaluate the impact of these changes in the FNDDS on national intake estimates



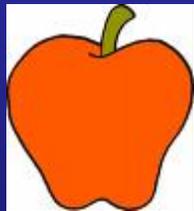
FNDDS – Food and Nutrient Database for Dietary Studies

- Energy and 63 nutrients for about 7,000 foods
- ~30,000 portion weights
- Used to code foods and calculate nutrient intakes for national survey

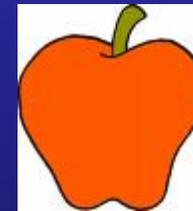
SR and FNDDS

2800 SR ingredients  7000 FNDDS foods

1/3 FNDDS foods have 1 SR ingredient



Apple in SR



Apple in FNDDS



Tortilla chips



Tortilla chips

SR and FNDDS

2/3 FNDDS foods have more than 1 ingredient



boiled beans



veg oil



salt



cooked beans
in FNDDS

Changes in FNDDS nutrient values

- Selection of SR ingredients for foods in FNDDS
- SR nutrient values for these ingredients

Approaches

- Review of fats/oils ingredients in FNDDS
- Info collection from multiple sources
 - Food manufacturers
 - Literature
 - Trade organizations
 - Responses from NHANES
 - Fast food chains
- Joint consultations between nutritionists
in NDL & FSRG for changes in major categories

Fats/Oils in commercial foods

	1.0	3.0
Cheese puffs	Corn oil, soy oil (PHO), cottonseed oil	Corn, industrial mid oleic sunflower oil
Chocolate flavored sprinkles	Coconut oil	Industrial coconut oil
Pizza with meat	Institutional shortening	Soy oil- 40% soy oil (PHO)– 40% Corn oil – 20%

Fats/Oils in home or restaurant prepared foods

	1.0	3.0
Cooked vegetables	margarine, 80% fat	spread, 60% fat
Fried fish	household shortening	Industrial shortening for frying - soy (PHO), corn
Cooked beans	animal fat	vegetable oil

Results

Fats and oil ingredients changed for ~2000 multi-ingredient foods

- 1/3 due to changes in type of fats/oil ingredient used
- 2/3 due to change in SR nutrient value of fats/oils ingredients

Impact of Changes in Fats/Oils between FNDDS 3.0 and FNDDS 1.0 on Selected Nutrient Intake Estimates

- 24- hour dietary recalls from *What We Eat in America*, National Health and Nutrition Examination Survey (NHANES) 2001-04, Day 1, N=18,594
- FNDDS 1.0 nutrient values
- FNDDS 3.0 nutrient values for foods where fat/oil ingredients changed

Clarification

The following slides do not represent changes in national intakes

Not considered

- Changes in food consumption
- Changes in SR for foods other than fats/oil ingredients
- Modifications made to foods to match foods reported by respondents

Impact of Changes in Fats/Oils between FNDDS 3.0 and FNDDS 1.0 on Selected Nutrient Intake Estimates

No significant change

- food energy
- carbohydrates
- total fat
- saturated fat
- cholesterol
- 18:0 (stearic)
- 22:5

Source: What we Eat in America, NHANES 2001-2004, day 1, all individuals

Impact of Changes in Fats/Oils between FNDDS 3.0 and FNDDS 1.0 on Selected Nutrient Intake Estimates

Intake estimates decreased

less than 1%

- 14:0 (myristic), 16:0 (palmitic)

1 - 3%

- monounsaturated fat total
- 16:1 (palmitoleic), 18:1 (oleic)

Impact of Changes in Fats/Oils between FNDDS 3.0 and FNDDS 1.0 on Selected Nutrient Intake Estimates

Intake estimates increased

less than 1%

- 4:0, 6:0, 10:0, 12:0
- 22:6

1-2%

- polyunsaturated fat total
- 8:0
- 22:1
- 18:2 (linoleic), 18:3 (linolenic)

6% - 20:1 (gadoleic)

Conclusions

- Impact on intake estimates was small
- Updating databases to reflect marketplace requires tremendous effort
- Updating FNDDS is a synergistic effort by nutritionists at NDL & FSRG