Consumer Concerns About Peanut Consumption

High Energy Content
High Fat Content
Figure 1. Effects of Various Nuts on LDL-Cholesterol Levels*

*Mean Control – Treatment Differences and 95% Confidence Intervals
Nurses Health Study
Nut Consumption versus BMI

Hu et al., BMJ, 1998;317:1341.
Physicians Health Study (N=21,454)

Body Mass Index (kg/m²)

Average Frequency of Dietary Nut Intake

Albert et al., Arch Intern Med 2002;162:1382-1387
Nurses Health Study
Nut Consumption versus BMI

O’Byrne et al., Lipids 1997;32:687
Predicted Weight Gain (Free-Feeding with Peanuts)

Weight gain (kg)

Week 8

Ghana

U.S.

91.8%

72.2%
Peanuts and Energy Balance

500 kcal Daily Load
Factors Contributing to Less Than Predicted Weight Gain

- Strong Satiety
- Elevated Energy Expenditure
- Energy Loss
Energy Compensation
(Free-Feeding with Peanuts)

Predicted Increased Intake Without Compensation

Week 8

Ghana
U.S.

Intake (kcal)

68.8%
66.0%
Peanuts and Energy Balance

500 kcal Daily Load
-330 kcal – Dietary Compensation
170 kcal
Factors Contributing to Less Than Predicted Weight Gain

- Strong Satiety
- Elevated Energy Expenditure
- Energy Loss
Resting Energy Expenditure

Before Peanut Consumption

After Peanut Consumption

kJ/d
Peanuts and Energy Balance

500 kcal Daily Load
-330 kcal – Dietary Compensation
170 kcal
-125 kcal – Increased RMR
45 kcal
Factors Contributing to Less Than Predicted Weight Gain

- Strong Satiety
- Elevated Energy Expenditure
- Energy Loss
Energy Loss

Levine et al., NEJM, 1986;303:917.
Peanuts and Energy Balance

500 kcal Daily Load
-330 kcal – Dietary Compensation
170 kcal
-125 kcal – Increased RMR
45 kcal
-90 kcal – Fecal Loss
~0 kcal
Factors Contributing to Satiety

- Fatty Acids
- Energy
- Protein
- Rheology
- Fiber
- Cognition
Fullness Ratings

- Peanut oil
- Olive oil
- Safflower oil
- Control

Time points across intervention
Desire to Eat Ratings

- Peanut oil
- Olive oil
- Safflower oil
- Control

Time points across intervention

B WK 2 WK 4 WK 6 WK 8
Factors Contributing to Satiety

- Fatty Acids
- Energy
- Protein
- Rheology
- Fiber
- Cognition
Summary

• Peanuts help to reduce cardiovascular disease risk

• Peanut consumption does not pose a substantive threat of weight gain

• The mechanisms responsible for the effects of peanuts on appetite, food choice and body weight are being characterized