New Way to Measure Calories Using Whole Almonds

growing ADVANTAGE
The Almond Conference

Welcome

Stacey Humble

Almond Board of California

Today's Speakers & Agenda

Dr. Karen Lapsley

Chief Scientific Officer, Almond Board of California

- Historic background on calorie calculation
- Summary of the results of new research surrounding the calories in almonds

Stacey Humble

Senior Director of Global Marketing, Almond Board of California

- Report of ABC's global education and marketing efforts around the research
- Update on conversations ABC's has had to date with USDA and FDA about the research

Bill Layden

Partner, FoodMinds, LLC

- Insight into what this research may mean for almond labeling
- Perspective on FDA's priorities and current food label initiative

Calorie Update

Karen Lapsley
Almond Board of California

Study Provides New Way to Measure Calories Using Whole Almonds

December 13, 2012
1:30-2:30 pm, Rooms 306 & 307

Dr. Karen Lapsley
Chief Scientific Officer
Almond Board of California

The Foods We Eat

I. **Nutrients**

Macronutrients – protein, fat, carbohydrates

Micronutrients – vitamins, minerals, bioactives

II. **Energy**

Food as a Source of Energy

- The total or gross energy of a food is measured with a bomb calorimeter.
- This process is 100% efficient.
- When a food is eaten, it is broken down, digested, absorbed and metabolized.
- The digestion/absorption process is not 100% efficient (protein, fat, carbohydrate); unabsorbed energy is lost in the feces.
- Therefore, not all of the food's energy is available to the body.
- For protein, the metabolism is not complete, and some metabolites are excreted into the urine; energy is lost via the excreted urine metabolites.

Food Energy Available to the Body – Metabolizable Energy

Gross Energy Intake (GEI)

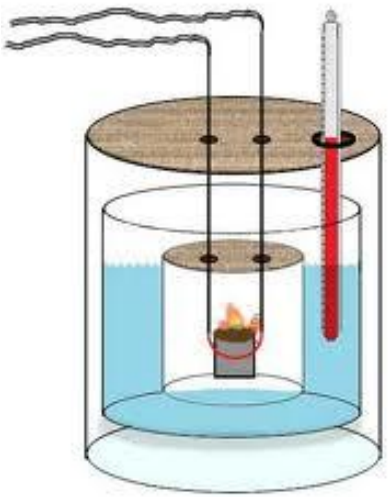
↓ → **Fecal Energy**

Digestible Energy

↓ → **Urinary Energy**

Metabolizable Energy

$$ME = GRI - GE_{feces} - GE_{urine}$$



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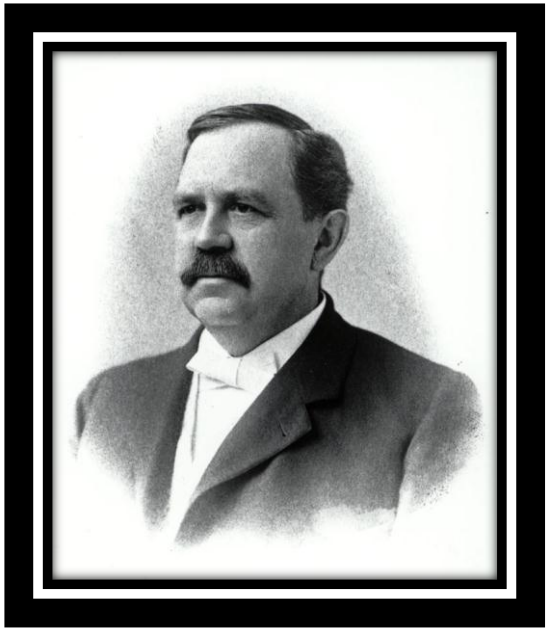
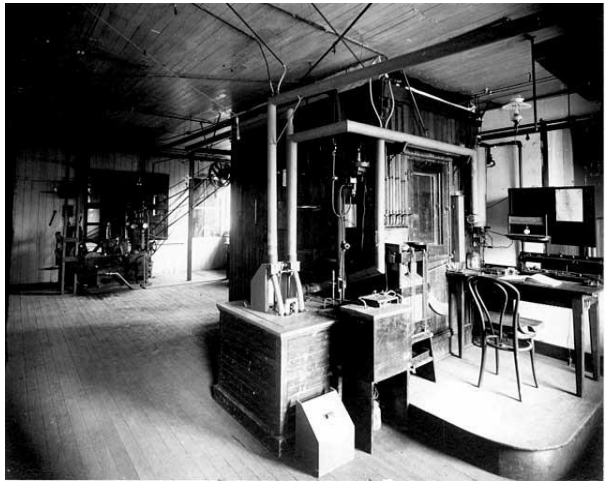
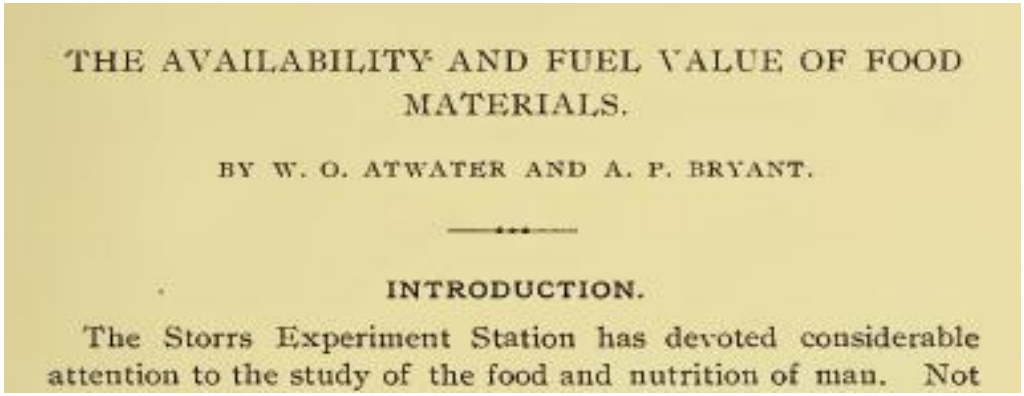
National Academy Press, 1981

Wilbur Atwater - 1896





"We live not upon what we eat, but upon what we digest."



THE AVAILABILITY AND FUEL VALUE OF FOOD MATERIALS.

BY W. O. ATWATER AND A. P. BRYANT.

INTRODUCTION.

The Storrs Experiment Station has devoted considerable attention to the study of the food and nutrition of man. Not

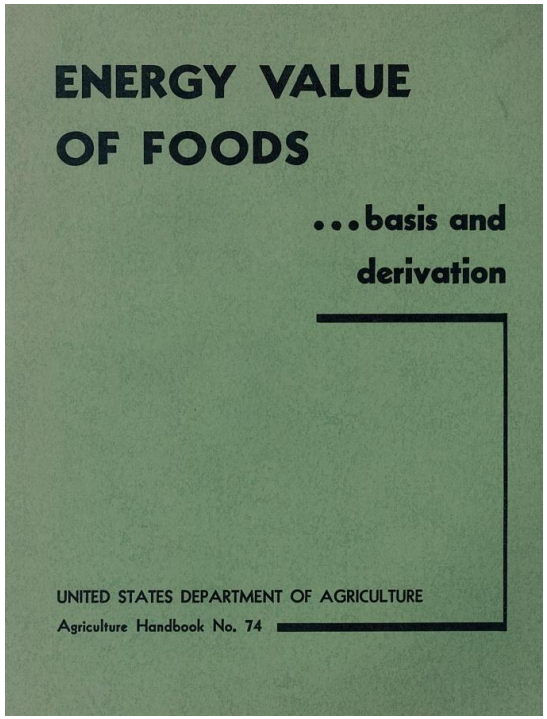
In 1896 a graduate student was sealed into an airtight chamber in the basement at Wesleyan U. He ate measured amounts of food and labor output in units of thermal energy was recorded.

This was national news!!

Then food rations for schools, armies, factories and all climates could be determined accurately!

Merrill and Watt, USDA 1955

Updated the original Atwater data with new results including the limited nut data published by Jaffa.



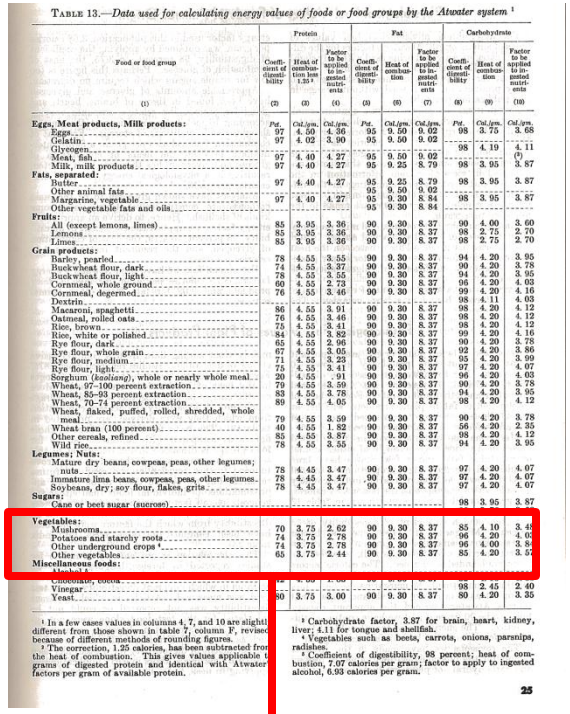


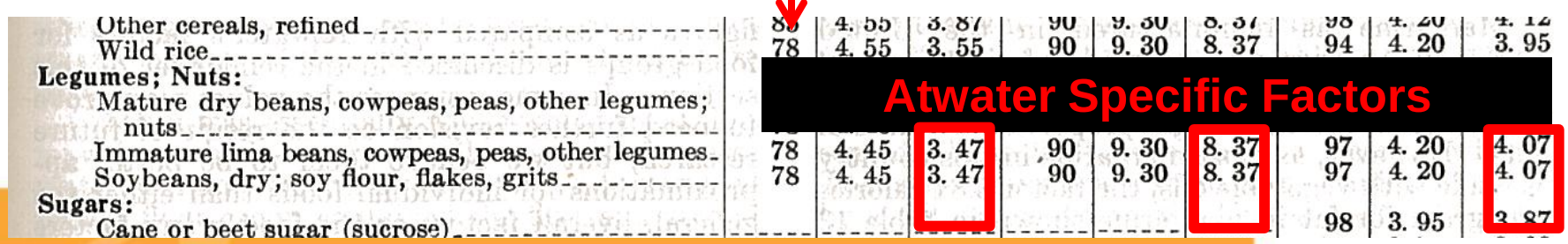
TABLE 13.—*Data used for calculating energy values of foods or food groups by the Atwater system* [1]

Food or food group (1)	Protein: Coefficient of digestibility (2)	Protein: Heat of combustion less 1.35 [2] (3)	Protein: Factor to be applied to ingested nutrients (4)	Fat: Coefficient of digestibility (5)	Fat: Heat of combustion (6)	Fat: Factor to be applied to ingested nutrients (7)	Carbohydrate: Coefficient of digestibility (8)	Carbohydrate: Heat of combustion (9)	Carbohydrate: Factor to be applied to ingested nutrients (10)
	Pct.	*Cal./gm.*	*Cal./gm.*	*Pct.*	*Cal./gm.*	*Cal./gm.*	*Pct.*	*Cal./gm.*	*Cal./gm.*
Eggs, Meat products, Milk products:									
Eggs	97	4.55	4.36	95	9.50	9.02	98	3.75	3.68
Gelatin	97	4.02	3.90	95	9.50	9.02			
Glycogen							98	4.19	4.11
Meat, fish	97	4.40	4.27	95	9.50	9.02			(9)
Milk, milk products	97	4.40	4.27	95	9.25	8.79	98	3.95	3.87
Fats, separated:									
Butter	97	4.40	4.27	95	9.25	8.79	98	3.95	3.87
Other animal fats				95	9.50	9.02			
Margarine, vegetable	97	4.40	4.27	95	9.30	8.84	98	3.95	3.87
Other vegetable fats and oils				95	9.30	8.84			
Fruits:									
All (except lemons, limes)	85	3.95	3.36	90	9.30	8.37	90	4.00	3.60
Lemons	85	3.95	3.36	90	9.30	8.37	98	2.75	2.70
Limes	85	3.95	3.36	90	9.30	8.37	98	2.75	2.70
Grain products:									
Barley, pearled	78	4.55	3.55	90	9.30	8.37	94	4.20	3.95
Buckwheat flour, dark	74	4.55	3.37	90	9.30	8.37	90	4.20	3.78
Buckwheat flour, light	78	4.55	3.55	90	9.30	8.37	94	4.20	3.95
Cornmeal, whole ground	60	4.55	2.73	90	9.30	8.37	96	4.20	4.03
Cornmeal, degermed	76	4.55	3.46	90	9.30	8.37	99	4.20	4.16
Dextrin							98	4.11	4.03
Macaroni, spaghetti	86	4.55	3.91	90	9.30	8.37	98	4.20	4.12
Oatmeal, rolled oats	76	4.55	3.46	90	9.30	8.37	98	4.20	4.12
Rice, brown	75	4.55	3.41	90	9.30	8.37	98	4.20	4.12
Rice, white or polished	84	4.55	3.82	90	9.30	8.37	99	4.20	4.16
Rye flour, dark	65	4.55	2.96	90	9.30	8.37	90	4.20	3.78
Rye flour, whole grain	67	4.55	3.05	90	9.30	8.37	92	4.20	3.86
Rye flour, medium	71	4.55	3.23	90	9.30	8.37	95	4.20	3.99
Rye flour, light	75	4.55	3.41	90	9.30	8.37	97	4.20	4.07
Sorghum (*kaoliang*), whole or nearly whole meal	20	4.55	.91	90	9.30	8.37	96	4.20	4.03
Wheat, 97–100 percent extraction	79	4.55	3.59	90	9.30	8.37	90	4.20	3.78
Wheat, 85–93 percent extraction	83	4.55	3.78	90	9.30	8.37	94	4.20	3.95
Wheat, 70–74 percent extraction	89	4.55	4.05	90	9.30	8.37	98	4.20	4.12
Wheat, flaked, puffed, rolled, shredded, whole meal	79	4.55	3.59	90	9.30	8.37	90	4.20	3.78
Wheat bran (100 percent)	40	4.55	1.82	90	9.30	8.37	56	4.20	2.35
Other cereals, refined	85	4.55	3.87	90	9.30	8.37	98	4.20	4.12
Wild rice	78	4.55	3.55	90	9.30	8.37	94	4.20	3.95
Legumes; Nuts:									
Mature dry beans, cowpeas, peas, other legumes; nuts	78	4.45	3.47	90	9.30	8.37	97	4.20	4.07
Immature lima beans, cowpeas, peas, other legumes	78	4.45	3.47	90	9.30	8.37	97	4.20	4.07
Soybeans, dry; soy flour, flakes, grits	78	4.45	3.47	90	9.30	8.37	97	4.20	4.07
Sugars:									
Cane or beet sugar (sucrose)							98	3.95	3.87
Vegetables:									
Mushrooms	70	3.75	2.62	90	9.30	8.37	85	4.10	3.49
Potatoes and starchy roots	74	3.75	2.78	90	9.30	8.37	96	4.20	4.03
Other underground crops [4]	74	3.75	2.78	90	9.30	8.37	96	4.00	3.84
Other vegetables	65	3.75	2.44	90	9.30	8.37	85	4.20	3.57
Miscellaneous foods:									
Alcohol [5]									
Chocolate, cocoa	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Vinegar							98	2.45	2.40
Yeast	80	3.75	3.00	90	9.30	8.37	80	4.20	3.35

[1] In a few cases values in columns 4, 7, and 10 are slightly different from those shown in table 7, column F, reviewed because of different methods of rounding figures.
[2] The correction, 1.35 calories, has been subtracted from the heat of combustion. This gives values applicable to grams of digested protein and identical with Atwater factors per gram of available protein.
[3] Carbohydrate factor, 3.87 for brain, heart, kidney, liver; 4.11 for tongue and shellfish.
[4] Vegetables such as beets, carrots, onions, parsnips, radishes.
[5] Coefficient of digestibility, 98 percent; heat of combustion, 7.07 calories per gram; factor to apply to ingested alcohol, 6.93 calories per gram.

25

Atwater used average values for protein, fat, and carbohydrate. Merrill and Watt emphasized there were ranges in the heats of combustion and the coefficients of digestibility.



Other cereals, refined	89	4.55	3.87	90	9.30	8.37	98	4.20	4.12
Wild rice	78	4.55	3.55	90	9.30	8.37	94	4.20	3.95
Legumes; Nuts:									
Mature dry beans, cowpeas, peas, other legumes; nuts	78	4.45	3.47	90	9.30	8.37	97	4.20	4.07
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Soybeans, dry; soy flour, flakes, grits	78	4.45	3.47	90	9.30	8.37	97	4.20	4.07
Sugars:									
Cane or beet sugar (sucrose)							98	3.95	3.87

Atwater Specific Factors

One Weakness of Traditional Atwater Values –

A very small sample size

Merrill & Watt 1973 (cite Jaffa, 1901 data)

- Almonds: 2 men, CPH (62 yr old) and WSM (56 yr old), both accustomed to a fruitarian and vegetarian diet for many years. WSM complained of numbness in the feet and fingers…for several years.
- Brazil nuts: 2 men
- Pecans: 2 men
- Walnuts: 3 men
- Peanuts: 7 men

Merrill & Watt acknowledge nuts present problems regarding digestibility and have composition similar to the legume group.

Did You Know?

In spite of advances in the nutrient analysis of foods, a better understanding of the digestion/ absorption/metabolism process and improved design of clinical trials, the original Atwater Values for the energy content of foods are still used today!

How Does USDA Determine Metabolizable Energy Today?

Almond Nutrition Facts

Serving Size 1 ounce (28g)
or about 23 almonds

Amount Per Serving
Calories 160 Calories from Fat 120

	% Daily Value*
Total Fat 14g	22%
Saturated Fat 1g	5%
Polyunsaturated Fat 3.5g	
Monounsaturated Fat 9g	
Cholesterol 0mg	0%
Sodium 0mg	0%
Potassium 200mg	6%
Total Carbohydrate 6g	2%
Dietary Fiber 3g	12%
Sugars 1g	
Protein 6g	

Vitamin A 0%	Vitamin C 0%
Calcium 8%	Iron 6%
Vitamin E 35%	Folate 4%
Magnesium 20%	Phosphorus 15%

*Percent daily values are based on a 2,000 calorie diet.

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

1. **Measure it**

$$ME = GEI - GE_{feces} - GE_{urine}$$

2. **Calculate it**

Atwater General Values

4 kcal/g protein * g protein
9 kcal/g fat * g fat
+ 4 kcal/g CHO * g CHO

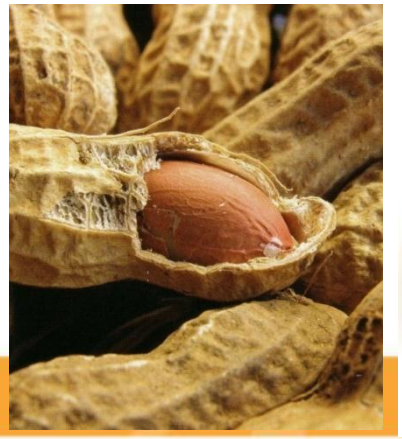
= kcal of the food

3. **Use data for specific food factors as approved by FDA**

New findings together with the original weaknesses of the Atwater method raise questions:

Are the energy values of foods accurate?

Does the energy value of almonds need to be restated?




Metabolizable Energy of Almonds: When Is a Calorie a Calorie?

Drs David Baer, Janet Novotny & Sarah Gebauer
Food Components & Health Laboratory
Beltsville Human Nutrition Research Center
USDA, Agricultural Research Service

Macronutrient absorption from almonds: the measured energy value of almonds in the human diet

United States Department Of Agriculture
Agricultural Research Service

- Objective:
  - To determine the metabolizable energy value of dry roasted almonds
  - To determine the effect of consuming almonds on macronutrient digestibility

- Hypothesis:
  - The metabolizable energy value of almonds will be lower than predicted from their nutrient composition because of reduced fat digestibility

Study design

- Randomized, crossover, controlled-feeding, weight-maintenance study in healthy adults (n = 18)
- Three 18-day diet periods, each separated by a 7-day compliance break

Diet Period 1		Break	Diet Period 2		Break	Diet Period 3	
Adaptation + Collection		→	Adaptation + Collection		→	Adaptation + Collection	
9 days	9 days	7 days	9 days	9 days	7 days	9 days	9 days

- Collection phase: all fecal and urine samples collected
- 3 different doses of dry roasted almonds
  - 0 g/d (control)
  - 1.5 oz/d (42 g/d)
  - 3.0 oz/d (84 g/d)

Controlled-feeding

- Participants were required to consume all foods provided during diet periods
- Not permitted to consume any outside foods
- Breakfast and dinner consumed at the Beltsville Human Nutrition Research Center, Mon-Fri
- Lunch and weekend meals were packed for offsite consumption

Menu example

- 7-day menu rotation
- Almonds were consumed at breakfast and dinner
- Typical American diet
- Isocaloric intake across all treatments
  - Base diet = 2600 kcal
  - Base + Almond diet = 2600 kcal

Meal	Food Item	Base	Base + Almonds
Breakfast	Almonds	0	42
	Egg Beaters	65	53
	Turkey sausage	52	42
	English muffins	78	64
	Margarine	8	6
	Peaches, canned	156	127
	2% Milk	260	212
Lunch	Roast beef	65	53
	Swiss cheese	36	29
	Italian bread	72	58
	Lettuce	12	10
	Mayonnaise	13	11
	Mustard	12	10
	Carrots	39	32
	Cranberry juice	234	190
	Vanilla wafers	33	26
Dinner	Almonds	0	42
	Spaghetti	130	106
	Beef	78	63
	Pasta sauce	104	85
	Lettuce	36	30
	Shitake sesame dressing	22	18
	Dinner roll	77	63
	Margarine	7	5
	2% Milk	312	254
	Fruit cocktail	78	63
Snack	Strawberries	100	81
	Low fat whipped topping	24	20
	Angel food cake	50	41

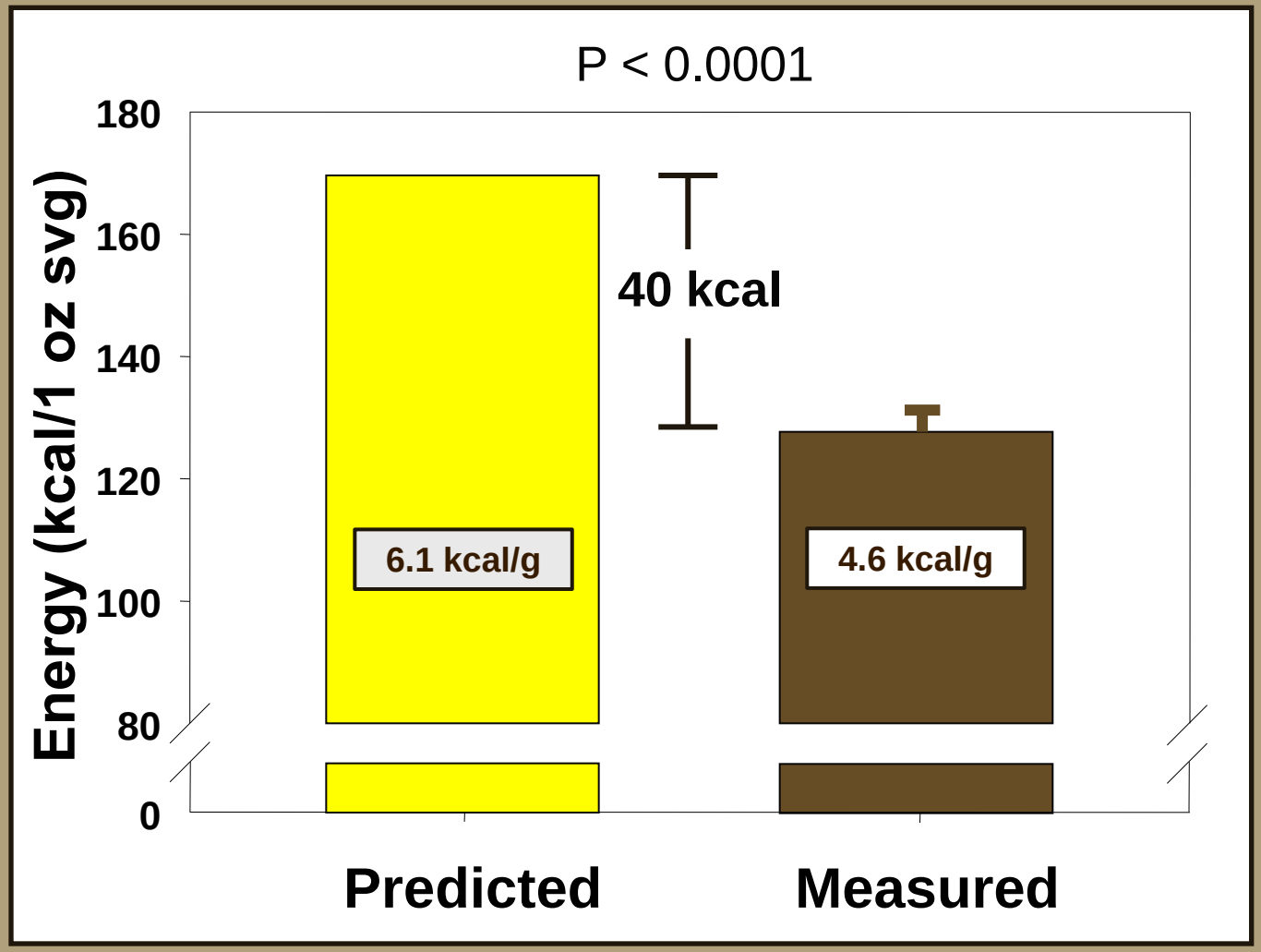
Results

Digestibility of the Whole Diet (%)				
	Control	1.5 oz/day (42 g/d)	3.0 oz/day (84 g/d)	P-value
Fat	97.8 ± 0.7[a]	93.1 ± 0.9[b]	89.9 ± 0.7[c]	<0.0001
Total carbohydrate	95.2 ± 0.3[a]	93.3 ± 0.4[b]	91.9 ± 0.3[c]	<0.0001
Total dietary fiber	80.8 ± 1.5[a]	75.4 ± 1.7[b]	71.9 ± 1.5[b]	<0.0001
Protein	91.0 ± 0.6[a]	89.0 ± 0.6[b]	87.9 ± 0.6[b]	<0.0001
Energy	90.5 ± 0.5[a]	87.5 ± 0.6[b]	85.5 ± 0.5[c]	<0.0001

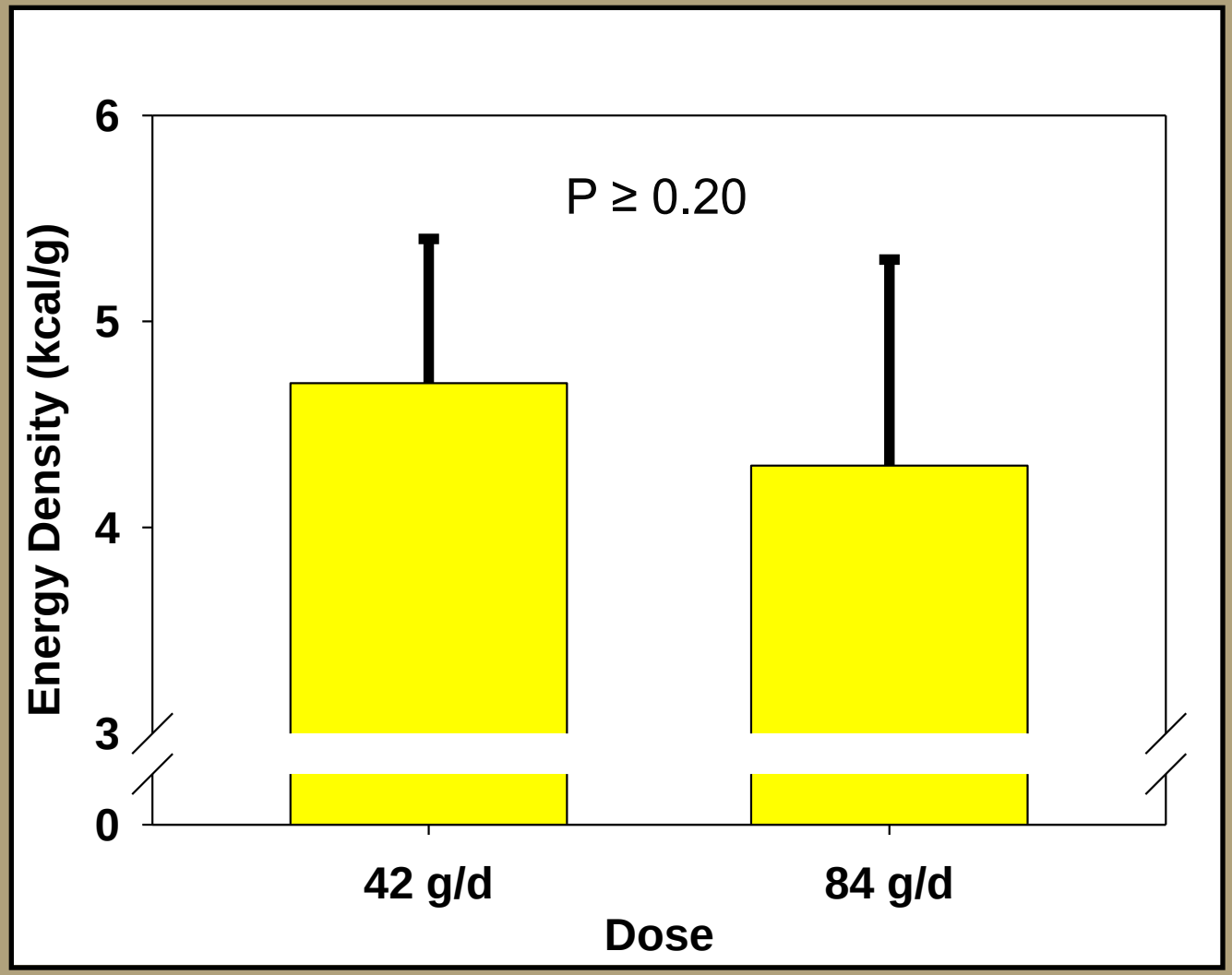
Values are expressed as mean ± SEM. Means within a row within unlike letters are significantly different ($P \leq 0.05$).

Novotny et al., 2012

Measured energy value of almonds



Dose effect?



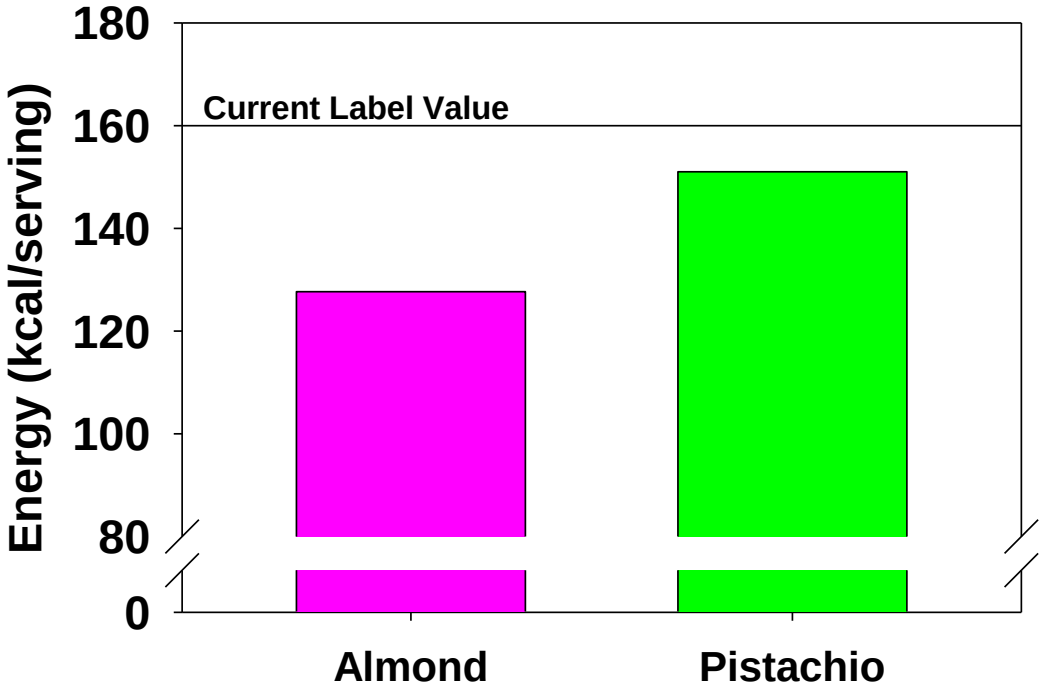
Study conclusions

- **Fat digestibility** of the total diet:
  - Decreased by 5% (1.5 oz/d) and nearly 10% (3 oz/d)
- **Energy digestibility** of the total diet:
  - Decreased by 3% (1.5 oz/d) and 6% (3.0 oz/d)
- Measured energy density of almonds was determined to be 4.6 kcal/g vs. 6.1 kcal/g as predicted by Atwater factors
- **20% fewer calories** in a 1 oz svg of almonds than listed on the nutrition label with new method for calculating calories

Energy Value of Almonds and Pistachios

The energy content of different nuts is not the same, and may be less than appears in reference tables.

20% fewer calories than the label states



5% fewer calories than the label states

USDA ARS Beltsville :Brit J Nutr 2012 107:120 (pistachios) and AJCN, August 2012 (almonds)

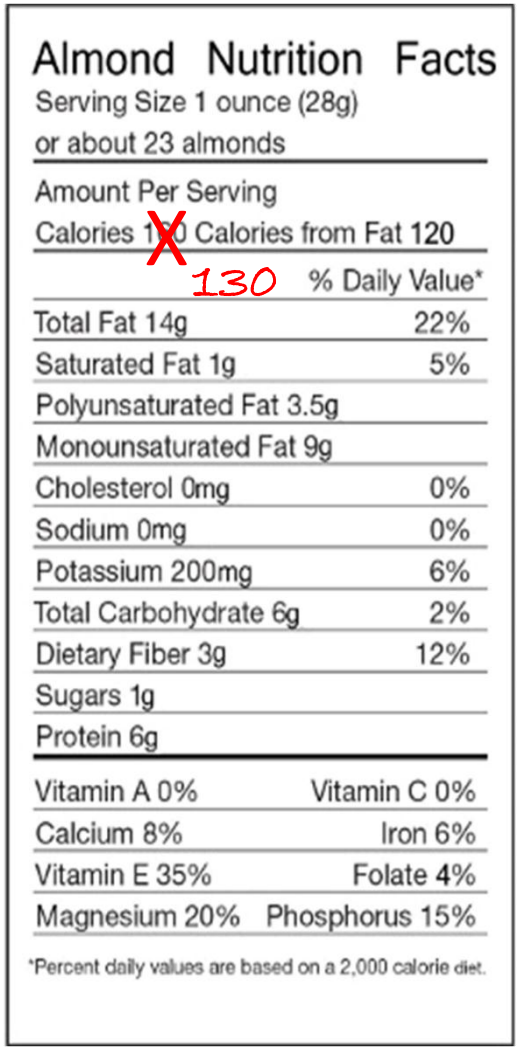
Other foods?

- Higher fat, higher fiber foods
  - Walnuts, peanuts
- Higher fat grains
  - Oatmeal
- Legumes
  - Garbanzo

Will the US food label ever change?

In summary, as a result of using the new method for calculating calories:

- Measured metabolizable energy value of almonds is 4.6 ± 0.8 kcal/g, equivalent to 130 kcal/serving
- 1 oz serving of almonds contains 20% fewer available calories than that listed on the nutrition label
- Rigorous evidence demonstrates inaccuracies of Atwater approach for calculating energy content, particularly for nuts
- Importance of accurate energy value of foods in nutrient databases and on food labels for food manufacturers, health professionals, and consumers



Almond Nutrition Facts

Serving Size 1 ounce (28g)
or about 23 almonds

Amount Per Serving
Calories ~~160~~ 130 Calories from Fat 120

	% Daily Value*
Total Fat 14g	22%
Saturated Fat 1g	5%
Polyunsaturated Fat 3.5g	
Monounsaturated Fat 9g	
Cholesterol 0mg	0%
Sodium 0mg	0%
Potassium 200mg	6%
Total Carbohydrate 6g	2%
Dietary Fiber 3g	12%
Sugars 1g	
Protein 6g	

Vitamin A 0%	Vitamin C 0%
Calcium 8%	Iron 6%
Vitamin E 35%	Folate 4%
Magnesium 20%	Phosphorus 15%

*Percent daily values are based on a 2,000 calorie diet.

Calorie Update

Stacey Humble

Almond Board of California

Stacey Humble
Senior Director, Global Marketing
Almond Board of California

Getting Rid of “the But…”

“Almonds are an excellent snack for a healthy diet, BUT they’re calorie dense so watch the portion size!”

- This caveat had become so consistent in media hits that we called it “the but”
  - Consumers were continually rating almonds as heart healthy and the most nutritious nut, calories among the leading reasons they weren’t eating more
  - However, we had seen numerous studies over the past decade suggesting that not all of the lipid from almonds is absorbed. In fact many of the subjects of our hearth health studies lost weight and had to be coached to maintain their weight.

The Pitch

Almonds actually provide 20% fewer calories than what's reported on the nutrition label.

- Key messages:
  - The study's take-away message is that "a calorie is not a calorie" and "all calories are not created equal."
  - The Atwater factors, when applied to certain foods, may result in overestimation of their measured energy content. This is thought to be partly due to the fiber content and/or the rigidity of almond cell walls.
  - This discovery is the result of an entirely new, more specific way of counting calories. Your delicious, nutritious snack is the same natural product it's always been.,

Total Global Media Impact

Press releases were distributed in the US, Canada, European Union, India and S. Korea

- **Total Global Impressions to date: 1,181,400,763 (~1.2 billion)**
  - EU3 – 474,477,131
  - US – 139,361,867
  - India – 561,339,258
  - S. Korea – 6,222,507
- **Global Educational Outreach**
  - ABC has organized multiple scientific sessions and has participated in many conferences around the world to help explain and put the calorie research in context
    - US
    - S. Korea
    - Europe

NA Consumer Press Highlights

npr

The Washington Post

U.S. News & World Report

fitness

Women's Health

San Francisco Chronicle
NORTHERN CALIFORNIA'S LARGEST NEWSPAPER

UPI.com
OVER 100 YEARS OF JOURNALISTIC EXCELLENCE

The Miami Herald

Hungry Girl
Tips & Tricks...For Hungry Chicks!

myFOXla.com
KTTV • LOS ANGELES

RUN EAT Repeat

BAKERS JOURNAL

PHIL LEMPERT SUPERMARKET GURU

THE PLAIN DEALER

ACTION NEWS
abc 7
wxyz.com

leSoleil

102.7 KIIS FM

HUFFPOST HEALTHY LIVING

california almonds
Almond Board of California

NA Consumer Press Headlines/Excerpts

Almond Joyful News: Fewer Calories, Quicker Cholesterol Benefits, and Wonderful New Snacks!

There have always been plenty of reasons to be nuts about almonds (the fiber, the protein, the energy-boosting advantage, etc.), and now a few new ones are popping up. For instance, recent research suggests that almonds may actually have fewer calories than we thought -- a new method of measurement found that the number might be closer to 130 calories per ounce, rather than 170. AMAZING! Next, our nutty buddy has been linked to speedier cholesterol improvements. A study found that almond consumption as part of a low-calorie diet helped overweight and obese individuals improve their cholesterol levels in less time than those on a low-cal diet without nuts. So eat those almonds (in moderation, of course)! And because we can never have enough options, here's some good news: The peeps behind Wonderful Pistachios have branched out and are now bringing us Wonderful Almonds.

NA Consumer Press Headlines/Excerpts

The Miami Herald

Almonds are even healthier than thought

Today is good news Tuesday. A delicious, versatile and healthy food that some have avoided because of fat/calorie concerns has lost some weight. The calorie count in almonds is 20 percent less than what is printed on the label.

UPI.com

OVER 100 YEARS OF JOURNALISTIC EXCELLENCE

WASHINGTON, July 12 (UPI) -- *Whole almonds provide about 20 percent fewer calories than originally thought, scientists from the U. S. Department of Agriculture said.*

102.7 KIIS FM

New research from the USDA shows that almonds actually have less calories than what is listed on food package labels.

ZOOMER CANADA

Get More Crunch in Your Lunch: Almonds Have Less Calories Than We Thought!

california almonds

Almond Board of California

NA Consumer Press Headlines/Excerpts

npr

If Almonds bring you joy, enjoy more for fewer calories

Scientists are starting to discover that the standard way of measuring calories, established more than 100 years ago, may not be terribly accurate when it comes to higher fat, high-fiber foods like nuts. But when it comes to almonds, the count may be off by a whole lot.

San Francisco Chronicle

NORTHERN CALIFORNIA'S LARGEST NEWSPAPER

20 percent

The amount by which the state's Almond Board decreased the calorie count of whole almonds. The move came after new USDA research showed that the fat in almonds is not completely absorbed during the human body's digestion. Researchers attribute this to almonds' unique cell structure and high fiber content.

HUFFPOST HEALTHY LIVING

Almonds And 10 Other Foods That Can Help You Maintain A Healthy Weight

Nuts may get a bad rap as being high in fat, but a new study suggests that people trying to maintain a healthy weight can still eat them without sacrificing poundage -- and get a cholesterol benefit, to boot, a small new study suggests.

THE PLAIN DEALER

Give almonds another look

Speaking of counting calories, here's an interesting bit of news about a healthy snack. A study that will be published in August in the American Journal of Clinical Nutrition provides a new understanding of the calorie count of almonds. Turns out, almonds might have 20 percent fewer calories than originally thought.

california almonds®

Almond Board of California

NA Food Professional/Health Professional Press Highlights

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my health news daily

Nutrition Action HEALTH LETTER™

Tufts Health&Nutrition Letter THE FRIEDMAN SCHOOL OF NUTRITION SCIENCE AND POLICY

Nutrition Diva™ Quick and Dirty Tips FOR EATING WELL AND FEELING FABULOUS

Healthy Eating | Weight Loss | Prevention & Anti-aging | Cooking & Recipes | Ask the Diva | All Tips

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FOOD Manufacturing

Almonds Less Calorie-Laden Than Previously Thought

Fooducate Blog
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Almond Calories Are Now 20% Lower. How Awesome is That !?!

Nutrition Action HEALTH LETTER

Whole almonds may contain fewer calories than you think

FOOD PRODUCT DESIGN

Whole Almonds Have 20% Fewer Calories Than Previously Thought

SCIENTIFIC AMERICAN™

The Hidden Truths about Calories

Just this month, a new study by Janet Novotny and colleagues at the USDA found that when the "average" person eats almonds she receives just 128 calories per serving rather than the 170 calories "on the label."

california almonds
Almond Board of California

NA Sample Tweets

Men'sHealth

Clint Carter @clintlcarter
New study says almonds have 20% fewer calories than thought. Makes you wonder what other nutritional #s we have wrong. goo.gl/InJYz
Expand

NutritionWorks @NutritionWorkWA 13 Jul
Okay, you have GOTTA LOVE THIS! Less calories than previously thought?! When do we ever get such good news? And... fb.me/1owFM80Ae
Expand

Fresh Juice @FreshJuiceCA 12 Jul
Food news: A new study by USDA scientists says that #almonds have 20 percent fewer calories than we previously thought. bit.ly/NqND6d
Expand

Eat Healthy Info @EatHealthyInfo 12 Jul
And in good news...Almonds have fewer calories than thought ar.gy/1OFB
Expand

LHJ Health Editors @lhjHealthLadies 20 Jul
Good news: We love **almonds** for their taste **and** heart benefits; now a study shows they have fewer **calories** than thought! prn.to/NDcMil
Expand

deliciousliving magazine

susan enfield @susan_enfield 11 Jul
Good news: Fat in almonds is harder for body to absorb, ergo 20% fewer calories than thought: new study! ow.ly/caHR2 @Engredeas...
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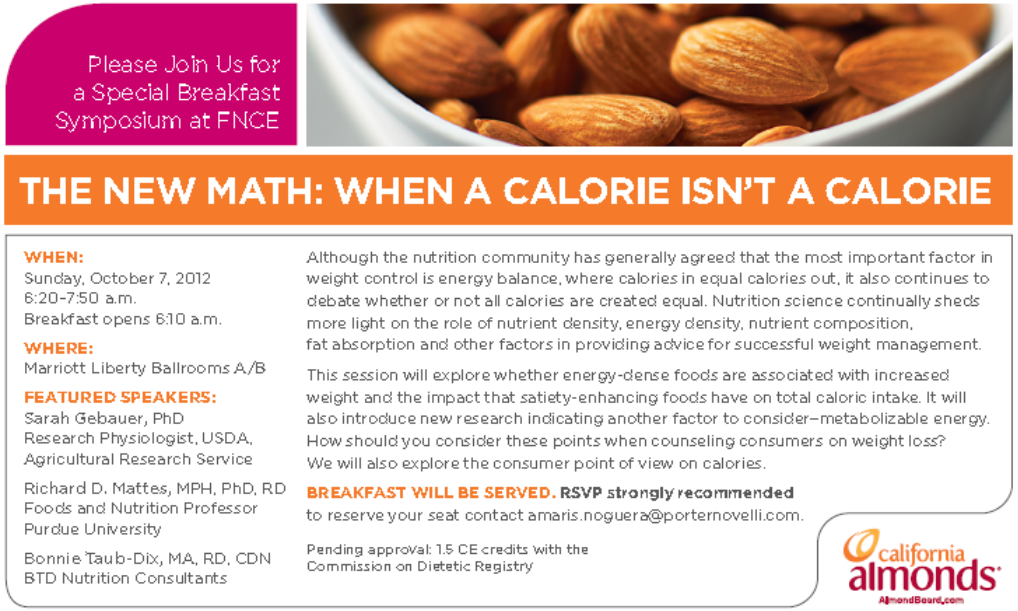
NA Health Professional Outreach

American Society of Nutrition and Experimental Biology
ABC Satellite Session
April 20th – San Diego

American Dietetic Association Food + Nutrition Conference + EXPO
October 6-9, Philadelphia
ABC Breakfast Session – **The New Math: When a Calorie Isn't a Calorie**



Please Join Us for a Special Breakfast Symposium at FNCE

THE NEW MATH: WHEN A CALORIE ISN'T A CALORIE

WHEN:
Sunday, October 7, 2012
6:20-7:50 a.m.
Breakfast opens 6:10 a.m.

WHERE:
Marriott Liberty Ballrooms A/B

FEATURED SPEAKERS:
Sarah Gebauer, PhD
Research Physiologist, USDA, Agricultural Research Service

Richard D. Mattes, MPH, PhD, RD
Foods and Nutrition Professor
Purdue University

Bonnie Taub-Dix, MA, RD, CDN
BTD Nutrition Consultants

Although the nutrition community has generally agreed that the most important factor in weight control is energy balance, where calories in equal calories out, it also continues to debate whether or not all calories are created equal. Nutrition science continually sheds more light on the role of nutrient density, energy density, nutrient composition, fat absorption and other factors in providing advice for successful weight management.

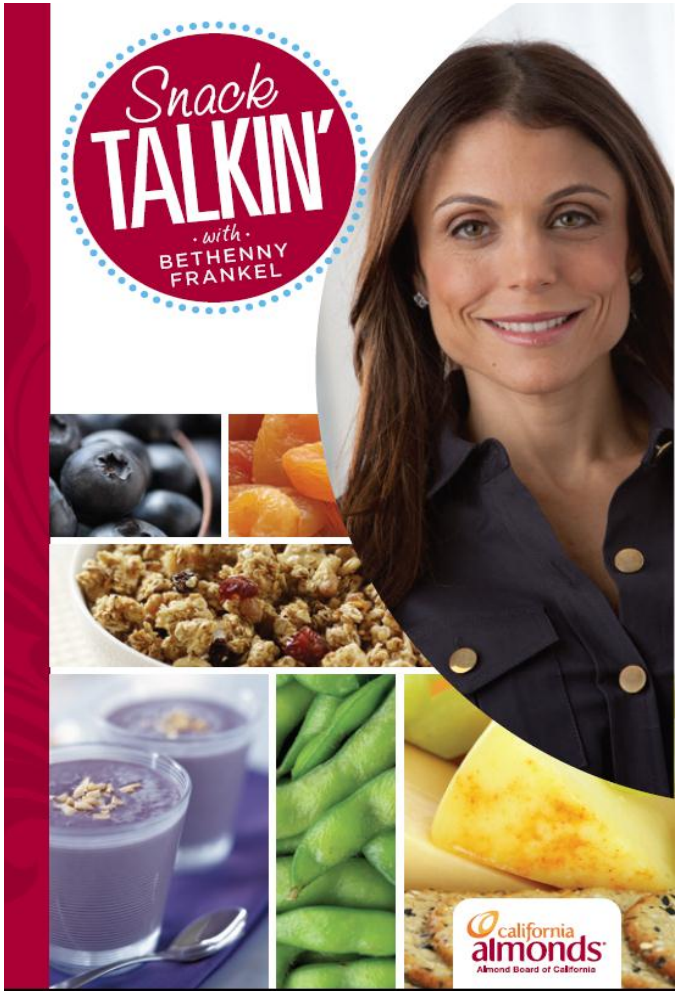
This session will explore whether energy-dense foods are associated with increased weight and the impact that satiety-enhancing foods have on total caloric intake. It will also introduce new research indicating another factor to consider–metabolizable energy. How should you consider these points when counseling consumers on weight loss? We will also explore the consumer point of view on calories.

BREAKFAST WILL BE SERVED. RSVP strongly recommended to reserve your seat contact amaris.noguera@porternovelli.com.

Pending approval: 1.5 CE credits with the Commission on Dietetic Registry

california almonds
AlmondBoard.com

And Now in the Midst of Phase 2:
“Skinnygirl” Bethenny Frankel as Our NA Spokesperson



UK Coverage Highlights

THE Sun

My Weekly

Another reason to eat nutrient-rich almonds – they've been found to have even fewer cals than originally thought!

NEWS FLASH!

"Packing in filling fibre and protein…a 30g portion has 129 calories rather than 160"

AFTER REPORT CLAIMS EGGS ARE BAD AS CIGS…

SCIENTIFIC advice on what foods are good and bad seems to change as regularly as the daily special at the local cafe.

Just a few weeks ago, British experts were declaring eggs the perfect food. Then this week Canadian researchers claimed they are as bad for your heart as cigarettes because the yolks fill arteries with sludge.

Here LYNSEY HAYWOOD shows just how often food advice chops and changes – with good news in green and bad in red. Meanwhile Sun nutritionist Amanda Ursell says: "We're always hearing something is good for us one minute and bad the next. I wouldn't be too worried about eggs."

Food advice is so hard to swallow

1990: Health chiefs warn about eggs' high cholesterol and average consumption falls to two or three a week.

2011: New York boffins say dark chocolate contains cancer-fighting antioxidants and protects cardio system.

2011: Salt levels in sausages may trigger high blood pressure, strokes and heart disease, campaigners warn.

2001: London scientists say red wine can protect the heart as it appears to help keep arteries unclogged.

1950s: White bread is fortified with vitamins and minerals. Has twice the calcium of most wholemeal loaves.

2006: Red meat linked to breast cancer in older women, and – in another study in 2007 – to bowel cancer too.

1999: Nuts can increase the risk of a heart attack due to high fat content, an Iowa Women's Health Study finds.

2008: Samples taken from supermarkets across Europe find grapes have dangerous levels of pesticides.

1980: Widespread alarm after an American study suggests coffee raises the risk of pancreatic cancer.

2002: Low-carb New Atkins Diet hits world, claiming that cutting out foods like potatoes is key to weight loss.

2009: Advice to limit eggs lifted as experts find the cholesterol has little effect on most people's own levels.

2012: Those who eat it a few times a week are slimmer than those who eat it occasionally, US study finds in March.

2012: Eating one sausage or three bacon rashers a day can up risk of pancreatic cancer, boffins say in January.

2011: Red wine can help stimulate the growth of healthy bacteria in the gut, according to researchers in the US.

2007: University of Virginia scientists say white bread will not make you fat and carbs are "not the enemy".

2010: Consumption of red meat is linked to a higher risk of heart disease by a US Nurses' Health study.

2011: Almonds contain 20 per cent fewer calories than previously believed, according to US research.

2011: Eating grapes may ease liver disease, according to a study carried out by the University of Queensland.

2007: Review of 66 clinical trials confirms coffee NOT carcinogenic. Blames fags smoked over cuppas instead.

2009: Potatoes are exceedingly rich in vitamin B6 which helps to combat stress, a European study claims.

2012: Eating just two yolks a week is as bad for the heart as smoking as they clog arteries, Canadian scientists say.

2012: A European review raises concerns about bars' calories and fat, saying they contribute to obesity epidemic.

2012: In April, an expert says bangers' saturated fat is healthy if you choose ones with at least 85 per cent meat.

2012: Just one glass of wine a day raises the risk of breast cancer, say researchers in Germany and Italy.

2012: Harvard researchers say just one portion a day can significantly raise your risk of developing type 2 diabetes.

2011: Modern farming has cut down fat levels and it gives vital nutrients like iron, says British Nutrition Foundation.

2012: Eating a pack of walnuts a day can significantly improve sperm quality and may boost fertility, say US boffins.

2012: Grapes are rich in vitamins A, C, B6, folate and minerals which help you look younger, British experts say.

2012: New book Coffee Is Good For You claims it is more likely to stop you getting cancer and to lower heart risk.

2011: Two portions of spuds a day – preferably microwaved – can lower blood pressure, a US study finds.

THE TIMES

The healthy way to a beach-ready body

Amanda Ursell

Q I'm going on holiday soon and would like to shed a few pounds before I go, are there any tips or tricks you can suggest?

A The first thing you have to do is accept that to lose weight, you need to consume fewer calories from food and become more active. Everyone has a "best" way of cutting calories. Charles Saatchi ate eggs for breakfast, lunch and dinner. Beyoncé survived on the Lemon Detox Diet (an impossible regime of maple-syrup sweetened lemon water), while Elizabeth Hurley has in the past favoured endless bowls of watercress soup.

If none of these methods grab you, then have a go at my tips:

1 Do an audit. Write down everything, absolutely everything, you ate and drank yesterday. Take a red pen and swipe through all the "stuff" you didn't really need: smoothies, cappuccinos, lattes and so on. When it's in black and white, you can't deny that there are things that need jettisoning.

2 Think volume. Research shows that we feel satisfied when we eat a certain weight of food. It's a different amount for everyone but once we hit that amount, we feel OK. To drop calories without feeling deprived, swap high-calorie/low-volume foods for low-calorie/high-volume ones. For example, a croissant with butter and jam weighs 130g and has 400 calories. A bowl of porridge weighs 400g but has just 290 calories.

3 Eat foods that switch off hunger. These include foods that are rich in protein, such as eggs, low-fat milk, ricotta cheese, lean red meat, fish, chicken, turkey, Quorn, tofu and pulses. Have a portion at every meal. To these add a modest serving of slow-release carbohydrates such as oats, granary or sourdough bread, pitta, tortilla wraps, noodles, pasta or sweet potatoes. Also add some vegetables and fruit.

4 Get enough sleep. A lack of sleep makes you really hungry in the morning and then you'll be searching for quick sugar-hit foods to get you going.

5 Plan what you are going to eat for breakfast, lunch and dinner every day. Knowing what your next meal consists of settles your mind and helps you develop the more continental approach to food — savouring meals rather than squandering calories on meaningless on-the-run snacks in between.

6 Eat slowly. Scientists in China have found that chewing each mouthful 40 times compared with only 15 times helps people to consume 12 per cent fewer calories at meal times. Forty chews is a bit excessive, but you get the gist — take more time and slow things down when you eat.

7 Cut salt. Reducing salt intake to just 3g a day can help our bodies to release up to 1.5 litres of excess stored water, which shows up on the scales as a 1-2lb weight loss and makes you feel less bloated. It's great for easing straining waistbands, puffy ankles and morale. Avoiding processed foods and cutting back on salt in cooking — or at the table — will help you to achieve this target.

8 If you want to snack, choose hunger-beating ones. A few squares of dark chocolate between meals rather miraculously has been shown to help people eat up to 18 per cent fewer calories at their next meal. The particular fats in chocolate appear to have this satiating effect. Otherwise, try a handful of almonds. Scientists in America have just discovered that almonds have 20 per cent fewer calories than originally thought. Packing in filling fibre and protein, it now seems that a 30g portion (about 23 nuts) has 129 calories rather than 160.

If you have a nutrition question, e-mail amanda.ursell@thetimes.co.uk

"Try a handful of almonds"

HELLO!

HELLO! lifestyle

WELL BEING

COUNT DOWN

Diets come and go, but cutting back on your calorie intake has always been a surefire way to shed excess pounds. However, new research suggests that the energy values given to certain foods simply do not add up

Good news if you are nuts about almonds. According to the findings of a new study by the United States Department of Agriculture (USDA), they may have fewer calories than thought. And they are not the only food type that could be less fattening than assumed. In fact, there is a growing belief among nutritionists and healthy-eating experts that when it comes to counting calories, we may have to redo our sums – and rethink our food choices.

A calorie is the energy we get from food. Too much of it and we end up putting on weight. But the latest thinking suggests that the texture of the food, its fibre content, and how it is cooked can all affect the amount of energy the body is able to get from it. Even the process of chewing food uses up energy and, therefore, burns calories.

This was clearly shown in the research on almonds. Rather than using the standard way of measuring calories, the study, published in the *American Journal of Clinical Nutrition*, used an advanced method to determine how many calories were absorbed during digestion of the nuts. And the difference was substantial. They found that a 28g serving of almonds (about 23 nuts) has 129 calories, almost 20 per cent less than the 160 calories listed on nutritional labels.

What's more, by eating almonds in place of certain other foods, they could contribute to weight loss. "When an 84g serving of almonds was incorporated into the diet daily, the energy digestibility of the diet as a whole decreased by five per cent," says research physiologist David Baer, who headed the study.

"Therefore, for individuals with energy intakes of between 2,000 and 3,000 calories a day, incorporation of 84g of almonds into the diet daily in exchange for highly digestible foods would result in a reduction of available energy of 100 to 150 calories a day. With a weight-reduction diet, this deficit could result in more than a pound of weight loss per month."

The same research team has also looked at pistachios and has already discovered that their calorie count is five per cent lower than has been estimated in the past. One person who is particularly excited by the findings is respected nutritional biochemist Dr Geoff Livesey, an expert in the way our bodies use calories.

"The Baer calorie study is an example of how a healthy, nutrient-dense food like almonds has 20 per cent fewer calories than previously thought," he says. "I hope we see further research in the coming years to investigate more foods, in the context of a mixed diet, and their genuine calorie values."

At present, the calorie counts of different foodstuffs are worked out using a system developed more than 100 years ago by American chemist Wilbur Olin Atwater, who burnt samples of food and measured the amount of energy released from the heat this created.

However, this system fails to take into account the way the human body works and the role played by digestion, fibre and the mix of nutrients. Basically, the harder something is to digest, the more our bodies have to work at it, and the more calories we use chewing and breaking it down.

And the implications of David Baer's findings go much further than almonds, particularly in Western society, where obesity levels are on the rise.

"Having accurate calorie information helps consumers make healthier food choices," says Dr Livesey.

It is clear that if we are to make those choices, more research is needed. In the meantime the simple rule for anyone keen to follow a healthier diet is opt for fibre-rich whole foods that not only take longer to digest, keeping you fuller for longer, but might also contain fewer calories than you thought.

"Having accurate calorie information helps consumers make healthier food choices"

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Almond Board of California

UK Coverage Highlights

SlimmingSolutions.co.uk
12 YEARS IN BUSINESS

Daily Mail

Mail, Tuesday, September 9, 2002 — Page 49

Good Health

By PETA BEE

Don't count calories, it'll just make you FATTER!

ONE of the longest standing truisms of dieting is that a calorie is a calorie and the more of them we consume (and the fewer we expend), the fatter we will get. But what if everything we thought we knew about calories was wrong?

A recent month's studies have thrown open the debate about calories, challenging conventional wisdom about which foods are really packing in fat. Not only are many of the calorie contents listed on food labels or in calorie counting books inaccurate, the calories from certain foods affect the body in different ways.

The discrepancies really would add up — a recent study at the University of California found that people who ate 12 per cent more calories per day than usual gained 12lb of weight in a year. Here, the experts help unravel the calorie riddle ...

■ IT'S FOOD TEXTURE, NOT CALORIES, THAT MATTERS

■ DON'T TRUST THE FOOD LABELS

■ THAT'S WHY RAW FOOD IS LESS FATTENING

■ WHY LOW FAT IS BAD FOR DIETERS

NEVER TOO LATE TO GET FIT WHAT TO DO IN YOUR 60s

WOMEN: You are never too old to learn to swim and there are particular benefits of aqua activity for this age group. Not only is swimming kind to ageing joints and those affected by arthritis, because it works as a giant cushion to protect knees and hips, but it also improves body strength.

A study of post-menopausal women in the European Journal of Applied Physiology showed that after swimming twice a week for 24 weeks, they were able to complete on average 28 more abdominal crunches than when they started. They also lost on average a 25 per cent reduction in body fat and an 8 per cent drop in blood pressure.

MEN: There is no need to lost a gut to improve your health — t'ai chi, the ancient martial art that combines deep breathing and relaxation with slow and gentle movements, can help people aged up and over to reduce stress, improve balance and general mobility, and increase muscle strength, particularly in the legs.

Last year, researchers at the University of Leeds urged older people to take up t'ai chi after reviewing 35 papers on the activity and finding 20 of them concluded that it "might be effective".

Of four studies that looked at fall prevention, a key concern for the elderly, three showed that t'ai chi had positive effects. A number of other studies showed that the martial art was good at "improving psychological health".

PETA BEE

Health & Fitness

FOOD news

Almonds – now even healthier

They're high on the list of most-nutritious foods, and here's another reason to add a handful to your daily diet. Research from the United States Department of Agriculture found that almonds provide 20 per cent fewer calories than previously thought. It's because their fat is only partially digested when we eat them, so we don't absorb 100 per cent of the calories.

"Having accurate calorie information helps consumers make healthier choices," says Dr Livesey

SNACK
A MAGAZINE FOR AND ABOUT SNACKING

Almonds 'may have 20% fewer calories'

ALMONDS may contain 20% fewer calories than previously thought, according to new research in the American *Journal of Clinical Nutrition*. The results could have implications for food labelling.

Researchers from the US Department of Agriculture's Agricultural Research Service question the validity of the most common way of determining the calorie content of food, which assumes that protein, fat and carbohydrate each deliver a consistent energy per gram, regardless of the food matrix that surrounds them. The researchers suggest that this assumption may not hold true for nuts in general and almonds in particular.

The theory is that the rigid structure of almond cell membranes could lock in some fat, rendering it unavailable for digestion.

Using an alternative method involving the measurement of residual energy and macronutrients excreted by the test subjects, the team found that almonds' energy content was 129 kcal per 28-gram serving, rather than 168-170 kcal, as determined by the conventional method.

The researchers also hypothesise that the results could vary, depending on whether the almonds are eaten whole, ground or otherwise processed.

Are calories really all they're cracked up to be?

Like 0 Send Tweet 1 +1 0 Pin it

Diets, they come and go, but reducing your calorie intake has always been a surefire way to **lose weight**. However, new research shows that the energy values given to certain foods simply don't add up!

There's some good news if you're a fan of almonds. According to the findings of a new study by the United States Department of Agriculture (USDA), they may have fewer calories than first thought. And they are not the only foods type that could be less fattening than assumed. In fact there is a growing belief among nutritionists and healthy-eating experts that when it comes to calorie counting, we may have to re-do our sums and rethink our food choices.

A calorie is the energy we get from food. Too much of it and we end up putting on weight. But the latest thinking suggests that the texture of food, it's fibre content, and how it is cooked can all affect the amount of energy the body is able to get from it. Even the process of chewing food uses up energy and, therefore, burns calories.

This was clearly shown in the research on almonds. Rather than using the standard way of measuring calories, the study, published in the American Journal of Clinical Nutrition, used an advanced method to determine how many calories were absorbed during digestion of the nuts. And the difference was substantial. They found that a 28g serving of almond (about 23 nuts) has 129 calories, almost 20% less than the 160 calories listed on nutritional labels.

What's more, by eating almonds in place of certain other foods, they could contribute to **weight loss**. "When an 84g serving of almonds was incorporated into the diet daily, the energy digestibility of the diet as a whole decreased by five per cent," says research physiologist David Baer, who headed the study.

"Therefore, for individuals with energy intakes of between 2,000 and 3,000 calories a day, incorporation of 84g of almonds into the diet daily in exchange for highly digestable foods would result in a reduction of available energy of 100 to 150 calories a day. With a weight-reduction diet, this deficit could result in more than a pound of weight loss per month."

The same research team had also looked at pistachios and has already discovered that their calorie count is 5% lower than has been estimated in the past. One person who is particularly excited by the findings is nutritional biochemist Dr Geoff Livesey, an expert in the way our bodies use calories.

"The Baer calorie study is an example of how healthy, nutrient-dense foods like almonds has 20 per cent fewer calories than previously thought," he says.

"I hope we see further research in the coming years to investigate more foods in the context of a mixed diet, and their genuine calorific values."

At present, the calorie counts of different foodstuffs are worked out using a system developed more than 100 years ago by American chemist Wilbur Olin Atwater, who burnt samples of food and measured the amount of energy released from the heat this created.

However, this system fails to take into account the way the human body works and the role played by digestion, fibre and the mix of nutrients. Basically, the harder something is to digest, the more our bodies have to work at it, and the more calories we use chewing and breaking it down.

And the implications of David Baer's findings go much further than almonds, particularly in Western society, where obesity levels are on the rise.

"Having accurate calorie information helps consumers make healthier choices," says Dr Livesey.

It is clear that if we are to make those choices, more research is needed. In the meantime the simple rule for anyone keen to follow a healthier diet is opt for fibre-rich whole foods that not only take longer to digest, keeping you fuller for longer, but might also contain fewer calories than you thought.

"And when you eat [30g] of almonds, you are likely to get just 128 calories rather than the 170 on the label"

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Almond Board of California

UK Coverage Highlights

FOOD navigator.com

Momentum builds to overhaul global calorie system

By Rod Addy, 31-Jul-2012

1 comment

Related topics: Nutrition labelling, Science & Nutrition, Fruit, vegetable, nut ingredients

A storm in the US over how calories are measured could cross to Europe and an overhaul of the system is long overdue, according to one nutrition expert.

The Almond Board of California is petitioning food authorities in the US to reduce the amount of calories allocated to almonds on food labels. This follows a study published in the American Journal of Clinical Nutrition earlier this month, which claims that almonds should be allocated 20% fewer calories than previously thought.

Kennedy's Confection

Almonds have 20% fewer calories than originally thought

A study released in the August issue of the American Journal of Clinical Nutrition (AJCN) provides a new understanding of almonds' calorie count, showing they have about 20% fewer calories than originally thought. The study was conducted by United States Department of Agriculture (USDA) scientists.

David Baer PhD, and his team used an advanced method to determine more precisely the number of calories from almonds that are actually absorbed during digestion. Resulting data showed a 28g serving of almonds (about 23 almonds) has 129 calories versus the 160 calories listed on labels.

The study's discussion noted: "When an 84g serving of almonds was incorporated into the diet daily, the energy digestibility of the diet as a whole decreased by 5%. Therefore, for individuals with energy intakes between 2000 and 3000 kcal/d, incorporation of 84g almonds into the diet daily in exchange for highly digestible foods would result in a reduction of available energy of 100 - 150 kcal/d. With a weight reduction diet, this deficit could result in more than a pound of weight loss per month."

The results support previous research indicating that the macronutrients in almonds, including fat, are only partially absorbed during digestion. The incomplete absorption of macronutrients in almonds is thought to be due to the fibre content and/or the rigidity of almond cell walls, which encapsulate macronutrients and render them unavailable for absorption during digestion. Therefore, traditional methods of calculating the energy value of almonds result in gross overestimations because they do not account for the fact that macronutrient digestibility in almonds are not 100%.

"I find the research about new, corrected calculations for almonds to be encouraging," commented Dr Geoff Livesey, registered public health nutritionist. "The Baer calorie study is an example of how a healthy, nutrient dense food, like almonds, has 20% fewer calories than previously thought. I hope we see further research in the coming years to investigate more foods, in the context of a mixed diet, and their genuine caloric values."

Most often, foods' calorie counts are calculated based on a system developed by Atwater et al more than 100 years ago. Known as the Atwater general factors, the system assigns calorie values for every gram of protein, fat and carbohydrate found in a given food (four cal/g for protein, nine cal/g for fat and four cal/g for carbohydrate).

"A reduction (in calories) of about 20% is groundbreaking…"

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New research has heralded these results

Less calories in almonds than first thought

24th July 2012

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Researchers use a more precise method of measuring the calories in almonds and find they have about 20% fewer calories than originally thought

A study released in the August issue of the American Journal of Clinical Nutrition (AJCN) provides a new understanding of almonds' calorie count, showing they have about 20% fewer calories than originally thought.

The study, conducted by United States Department of Agriculture (USDA) scientists, provides yet another reason to choose almonds as a nutritious snack.

At first glance, the study results beg the question, how can a food's calorie count suddenly change when the composition of the food itself hasn't?

The answer is that David Baer, PhD, and his team used an advanced method, built on traditional methods, to determine more precisely the number of calories from almonds that are actually absorbed during digestion. Resulting data showed a 28g serving of almonds (about 23 almonds) has 129 calories versus the 160 calories listed on labels.

The study's discussion noted: "When an 84g serving of almonds was incorporated into the diet daily, the energy digestibility of the diet as a whole decreased by 5%. Therefore, for individuals with energy intakes between 2,000 and 3,000 kcal/d, incorporation of 84g almonds into the diet daily in exchange for highly digestible foods would result in a reduction of available energy of 100–150 kcal/d. With a weight-reduction diet, this deficit could result in more than a pound of weight loss per month."

The results support previous research indicating that the macronutrients in almonds, including fat, are only partially absorbed during digestion. The incomplete absorption of macronutrients in almonds is thought to be due to the fibre content and/or the rigidity of almond cell walls, which encapsulate macronutrients and render them unavailable for absorption during digestion. Therefore, traditional methods of calculating the energy value of almonds result in gross overestimations because they do not account for the fact that macronutrient digestibility in almonds are not 100%.

More Health
- Less calories in almonds than first thought
- Drop the pounds and boost your libido
- Superfood feature: Yogurt
- Fat destinations: Almost three quarters of 'dieters' bring home extra baggage
- Eggs are healthier now
- Five tips for healthy snacking

More food
- Less calories in almonds than first thought
- Expert Tips: Frankie & Benny's Top Ten on how to Keep the kids Entertained

Almonds have 20% fewer calories than thought

By Mike Stones, 12-Jul-2012

Post a comment

The calorific value of almonds is 20% less than previously thought, leading to gross overestimations of their energy value, according to new US research published in the American Journal of Clinical Nutrition (AJCN).

Scientists from the United States Department of Agriculture (USDA) found that a 28g serving of almonds (about 23 almonds) contained 129 calories compared with 160 calories listed on labels.

"When an 84g serving of almonds was incorporated into the diet daily, the energy digestibility of the diet as a whole decreased by 5%," noted the scientists.

"Therefore, for individuals with energy intakes between 2,000 and 3,000 kcal/d, incorporation of 84g almonds into the diet daily in exchange for highly digestible foods would result in a reduction of available energy of 100–150 kcal/d."

Weight-reduction diet

They said: "With a weight-reduction diet, this deficit could result in more than a pound of weight loss per month."

The results follow previous research showing that the macronutrients in almonds, including fat, are only partially absorbed during digestion. This is attributed to the fibre content and/or the rigidity of almond cell walls, which encapsulate macronutrients and make them unavailable for absorption during digestion.

Consequently, traditional methods of calculating the energy value of almonds result in gross over-estimations, since they do not account for the fact that macronutrient digestibility in almonds is not 100%.

Dr. Geoff Livesey, registered public health nutritionist, said: "I find the research about new, corrected calculations for almonds to be encouraging.

"The Baer calorie study is an example of how a healthy, nutrient-dense food, like almonds, has 20% fewer calories than previously thought. I hope we see further research in the coming years to investigate more foods, in the context of a mixed diet, and their genuine caloric values."

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The US research team, lead by David Baer, recently conducted a similar study using pistachios. They found a 5% decrease in pistachios' calorie count compared with the 20% decrease in almonds.

Pistachios

The team expanded on the traditional Atwater calorie test, devised 100 years ago, using a specially designed diet and a more precise method of measurement. This allowed them to understand the calories provided by almonds when eaten as part of a mixed diet.

Livesey said: "I hope the research encourages people to choose nutrient-dense foods like almonds. Having accurate calorie information helps consumers make healthier food choices."

A recent survey revealed that being overweight was the top health condition affecting respondents across Western Europe. Accurate information about the energy value of foods is important to consumers, health professionals and food manufacturers, said Livesey.

Dr Karen Lapsley, chief scientific officer for the Almond Board of California, said: "This new information indicates we get fewer calories than we thought from a handful of almonds. It may help explain, at least in part, why research participants in a recent almond study did not gain weight when they added almonds to their daily routine."

"The Baer calorie study is an example of how a healthy, nutrient dense food, like almonds, has 20% fewer calories.."

femalefirst.co.uk

Researchers discover almonds have 20% fewer calories

Date: 12/07/2012

12 July 2012 – A study released in the August issue of the American Journal of Clinical Nutrition (AJCN) provides a new understanding of almonds' calorie count, showing they have about 20% fewer calories than originally thought. The study, conducted by United States Department of Agriculture (USDA) scientists, provides yet another reason to choose almonds as a nutritious snack.

At first glance, the study results beg the question, how can a food's calorie count suddenly change when the composition of the food itself hasn't?

The answer is that David Baer, PhD, and his team used an advanced method, built on traditional methods, to determine more precisely the number of calories from almonds that are actually absorbed during digestion. Resulting data showed a 28g serving of almonds (about 23 almonds) has 129 calories versus the 160 calories listed on labels.

The study's discussion noted: "When an 84g serving of almonds was incorporated into the diet daily, the energy digestibility of the diet as a whole decreased by 5%.
Therefore, for individuals with energy intakes between 2,000 and 3,000kcal/d, incorporation of 84g almonds into the diet daily in exchange highly digestible foods would result in a reduction of available energy of 100–150kcal/d. With a weight-reduction diet, this deficit could result in more than a pound of weight loss per month."

The results support previous research indicating that the macronutrients almonds, including fat, are only partially absorbed during digestion. The incomplete absorption of macronutrients in almonds is thought to be due the fibre content and/or the rigidity of almond cell walls, which encapsulate macronutrients and render them unavailable for absorption during digestion. Therefore, traditional methods of calculating the energy value of almonds result in gross overestimations because they do not account for the fact that macronutrient digestibility in almonds are not 100%.

"I find the research about new, corrected calculations for almonds to be encouraging," commented Dr. Geoff Livesey, registered public health nutritionist. "The Baer calorie study is an example of how a healthy, nutrient-dense food, like almonds, has 20% fewer calories than previously thought. I hope we see further research in the coming years to investigate more foods, in the context of a mixed diet, and their genuine caloric values."

In fact, the same research team also recently conducted a similar study using pistachios, finding a 5% decrease in pistachios' calorie count compared to the 20% decrease in almonds.

Most often, foods' calorie counts are calculated based on a system developed by Atwater et al more than 100 years ago. Known as the Atwater general factors, the system assigns calorie values for every gram of protein, fat and carbohydrate found in a given food (4cal/g for protein, 9 cal/g for fat, and 4 cal/g for carbohydrate).
The recently published USDA study tested a healthy food, almonds, as part of a 'mixed diet,' which means amongst other foods eaten as part of a normal diet. As the new study notes, "There have been few, if any, studies that looked at the calorie value of whole food within a mixed diet that could confirm the accuracy of Atwater's coefficients." So, for this study, the researchers expanded on Atwater's approach, using a specially designed diet and a more precise method of measurement that allowed them to understand the calories provided by almonds when eaten as part of a mixed diet.

Almonds are nutrient-rich. Gram per gram, they contain more protein (6g), dietary fibre (3.5g), calcium (75g), vitamin E (7.4mg), riboflavin (0.3mg), and niacin (1mg) than any other tree nut. A 28 gram handful of almonds contain 13 grams of unsaturated fat, 1 gram of saturated fat and no cholesterol. Replacing saturated fats with unsaturated fats in the diet contributes to the maintenance of normal blood cholesterol levels.

REUTERS

"I find the research about new, corrected calculations for almonds to be encouraging," commented Dr. Geoff Livesey, registered public health nutritionist. "The Baer calorie study is an example of how a healthy, nutrient-dense food, like almonds, has 20% fewer calories than previously thought. I hope we see further research in the coming years to investigate more foods, in the context of a mixed diet, and their genuine caloric values."

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"I hope the research encourages people to choose nutrient-dense foods like almonds. Having accurate calorie information helps consumers make healthier food choices," says Livesey. A recent survey found that being overweight was the top health condition affecting respondents across Western Europe and although food labelling in the UK will not likely change in the near future, having accurate information about the energy value of foods is important to consumers, health professionals and food manufacturers. In fact, almonds were named by consumers in the same survey as the best nut for numerous health attributes, including nutrition and weight management.

According to Dr. Karen Lapsley, Chief Scientific Officer for the Almond Board of California: "This new information indicates we get fewer calories than we thought from a handful of almonds. It may help explain, at least in part, why research participants in a recent almond study did not gain weight when they added almonds to their daily routine." This new study published in the same issue of AJCN found that eating almonds as a daily snack as part of a reduced-calorie diet resulted in weight loss and improvements in heart disease risk factors.

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"Researchers discover almonds have 20% fewer calories"

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Home > Wissen > Gesundheit > Fetthaltige Mandeln helfen beim Abnehmen

16:11 | Nährwertbilanz

Fetthaltige Mandeln helfen beim Abnehmen

Mandeln sind bekanntermaßen sehr gesund, enthalten allerdings auch viel Fett. Dick machen sie wohl trotzdem nicht — denn Mandelfett wird vom Körper nur schlecht verwertet. *Von Fanny Jiménez*

© Dinodia Photo Library

Mandeln sind nicht nur gesund, sondern auch kalorienärmer als man zunächst dachte

Wenn man im Supermarkt einen Blick auf die Produktverpackung wirft, um den Kaloriengehalt von Mandeln zu erfahren, dann schlagen 28 Gramm, also etwa eine Handvoll, mit gut 170 Kalorien zu Buche.

Nun aber erzählen US-Forscher im Fachblatt "American Journal of Clinical Nutrition", sie hätten das noch mal überprüft. Und die Mandel wäre nun doch wesentlich kalorienärmer als gedacht. Es seien nämlich nur 129 Kalorien, die sie zur Nährwertbilanz beisteuert.

WEITERFÜHRENDE LINKS

- Chemie: Persipan – das Marzipan für Arme
- Ernährung: So futtern Sie sich im trüben Herbst gute Laune an
- Gesundheit: In welchen Lebensmitteln Nervennahrung steckt
- Ernährungsforschung: Essen, wenn der Hunger nagt, ist die beste Diät

THEMEN

- Abnehmen
- Diät
- Kalorien
- Ernährung

Seit 100 Jahren dieselbe Methode

Höchste Zeit, sich mal zu fragen, wie die Kalorienangaben überhaupt auf die Verpackung kommen und ob da wohl jemand seine Laborwaage nicht richtig bedienen konnte.

Die Methode, die noch heute dazu verwendet wird, ist über 100 Jahre alt und stammt von dem US-Chemiker Wilbur Atwater. Er berechnete erstmals die Energie, die entsteht, wenn Nährstoffe vollständig verbrannt werden, und wies Proteinen, Ballaststoffen, Kohlenhydraten und Fetten einen festen Kalorienwert per Gramm zu.

Nicht alles wird verdaut

Das Problem ist nur: Nicht immer werden alle Nährstoffe vollständig verbrannt, sprich verdaut. Ob der Körper in dieser Hinsicht mit Mandeln fertig wird, testeten die Forscher jetzt mit einer neuen, etwas unappetitlichen Methode: Sie gaben Probanden in drei Gruppen 18 Tage lang ihre Mahlzeiten vor. Dabei variierten sie zwischen den Gruppen nur, wie viel Mandeln gegessen wurden.

Ernährung
Diese Mythen rund ums Essen sind überholt

Dann verglichen sie den Nährstoffanteil: einmal vor dem Essen auf dem Teller und einmal nach dem Verdauungsprozess, also auf dem Klo. So konnten sie bestimmen, was wirklich verdaut worden war. Die Gruppenunterschiede gingen dabei auf die Mandeln zurück.

Das Ergebnis: Sie werden nicht sonderlich gut verdaut, weil der Körper nicht an ihr Fett herankommt. Darum haben Mandeln weniger Kalorien als gedacht. Außerdem halten sie den Körper davon ab, das Fett der gesamten Mahlzeit zu verwerten. Drei Handvoll Mandeln sparen bis zu 150 Kalorien pro Tag. So hat die falsche Kalorienangabe also doch noch ihr Gutes.

"New information indicates we get fewer calories than we thought from a handful of almonds"

Wellness Foods Europe

Surprising study provides a new understanding of almonds' calorie count

17-07-12

Researchers use a more precise method of measuring the calories in almonds and find they have about 20 % fewer calories than originally thought

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ERNÄHRUNGSIRRTUM

Mandeln kalorienärmer als gedacht

17.07.2012 | AUTOR:ANDREAS TIMPHAUS
© WOMENSHEALTH.DE

Noch ein gesunder Snack für Zwischendurch! Mandeln haben einen niedrigeren Kaloriengehalt als bisher angenommen

Ein super Snack für den kleinen Hunger: Mandeln sind nicht nur gesund, sie haben auch deutlich weniger Kalorien als bisher gedacht
© Shutterstock

Mandeln sind wahre Nährstoffpakete* und enthalten offenbar 20 Prozent weniger Kalorien als bisher angenommen. Zu diesem Ergebnis kommt nun eine amerikanische Studie des *United States Department of Agriculture (USDA)*. Demnach besitzt eine Handvoll Mandeln (28 Gramm) nur 129 anstatt der früher berechneten 160 Kalorien.

Wie sich der Kaloriengehalt eines Nahrungsmittels plötzlich ändern kann? Die Forscher hatten eine modernere Berechnungs-Methode

Ø 3.0 | 7 Bewertungen

TEILEN

Teilen 2 | Twittern 1

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Statistiko.de

Vermischtes

Überraschende Studie liefert neue Erkenntnisse über den Kaloriengehalt von Mandeln (BILD)

VERÖFFENTLICHT AM 13. JULI 2012 VON ALMOND BOARD OF CALIFORNIA - 0 KOMMENTARE

QUELLE: OBS/ALMOND BOARD OF CALIFORNIA

) (ots) -

T-Online

"Almonds are nutrient-rich with fewer calories then originally thought"

Mandeln helfen beim Abnehmen

19.07.2012, 13:20 Uhr | vdb

Mandeln könnten beim Abnehmen helfen. (Quelle: Thinkstock by Getty-Images)

Mandeln gelten als gesundes Lebensmittel und Dickmacher zugleich. Nun ergab eine Studie von Wissenschaftlern des United States Department of Agriculture in Washington: Die leckeren Nüsse setzen weniger an als gedacht. Und noch mehr: Sie könnten sogar beim Abnehmen helfen.

Bei ihren Untersuchungen gingen die Forscher mit sehr moderner Technik vor. Sie konnte besser als bisher belegen, wie viele Kalorien tatsächlich bei der Verdauung vom Körper aufgenommen werden. Das Ergebnis zeigte dadurch im Vergleich zu früheren Untersuchungen einen abweichenden Wert für die Kalorienaufnahme von Mandeln: 28 Gramm (rund 23 Stück) lieferten dem Körper nur 129 Kalorien - und nicht wie zuvor angenommen 160 Kalorien.

MEHR ZUM THEMA

- Diese Lebensmittel enthalten gefährliche Giftstoffe
- Video: Abnehmen - aber richtig
- Schlankmacher: Mandeln machen satt und sind gesund
- Zehn unbekannte Dickmacher ohne Kalorien
- Die Psychologie des Essens: zehn Essfallen

Wer Mandeln isst, nimmt weniger Kalorien auf

Doch die Forscher fanden noch mehr heraus: Mandeln können sogar beim Abnehmen helfen. "Wurden 84 Gramm Mandeln in die tägliche Nahrungsaufnahme integriert, ging die Energieverdaulichkeit im Gesamten um

Germany Coverage Highlights

"Almonds have 20% fewer calories then originally thought: 129 instead of 160 calories"

Neue Studie

Warum Mandeln schlank machen

andeln sind nicht nur gesund - sie machen auch noch schlank
(Foto: Public Address)

Link
Die TK
"American Journal of Clinical Nutrition"

BOOKMARK

Mandeln haben weniger Kalorien als gedacht. Das haben US-Wissenschaftler herausgefunden. In ihrer Studie schreiben die Forscher, der Grund liege zum einen darin, dass das in Mandeln enthaltene Fett vom menschlichen Körper schlecht verwertet wird. Statt 170 Kalorien pro 28 Gramm liefert eine Portion Mandeln nur Energie in Form von 129 Kalorien – der Rest der Nährstoffe wird mit dem Stuhl ausgeschieden.

Kaloriensparer

Zum anderen unterstützen Mandeln das Abnehmen, weil sie den Körper davon abhalten, alles Fett einer Mahlzeit zu verwerten. Wer drei Handvoll der nussähnlichen Frucht am Tag ist, kann so bis zu 150 Kalorien einsparen. Die Wissenschaftler berichten ausführlich über ihre Studie in der Fachzeitschrift "American Journal of Clinical Nutrition".

Fitmacher

Mandeln sind ein leckerer Snack, der viele ungesättigte Fettsäuren, Mineralstoffe wie Magnesium, Calcium und Kupfer sowie reichlich Vitamine B1, B2 und E enthält. Durch ihre wertvollen Inhaltsstoffe können Mandeln helfen, Diabetes, Herz-Kreislauf-Erkrankungen, einem hohen Cholesterinspiegel und Osteoporose vorzubeugen. Sie schmecken pur als Knabberei, als Mus auf dem Brot oder gerieben im Müsli.

Bild am Sonntag


46 Ratgeber BILD am SONNTAG, 26. August 2012

Paprika
Die Schoten knacken nicht nur herrlich prall, sie sind auch bis zum Bersten mit Vitalstoffen gefüllt. Allen voran: der Falten-Verzögerer Vitamin C. Während in Orangen „nur" 45 mg je 100 g stecken, finden sich in Paprika 140 mg je 100 g. Carotinoide, die die Früchte so gelb strahlen lassen, neutralisieren krebserregende Substanzen, stärken das Immunsystem und wirken Entzündungen entgegen. **Wie viel?** Eine halbe Schote.
Gesunde Abwechslung: Fenchel. Das anisartige Gemüse schmeckt nicht nur exotisch, es enthält Terpene mit antioxidativer Wirkung und soll Cholesterin senken.

Rosa Grapefruit
Wer täglich vor dem Essen (oder im Salat) eine halbe Grapefruit isst, nimmt ab. Wissenschaftlich erwiesen zwischen 3 und 4,5 Kilo im Jahr. Denn: Die Frucht reguliert den Blutzuckerspiegel und bremst das Heißhunger-Hormon Insulin. Und das ist der Übeltäter, der das Fett auf der Hüfte lagert. Vorsicht: Grapefruit verträgt sich mit manchen Medikamenten nicht! Also im Zweifel den Arzt fragen. **Wie viel?** Eine halbe Frucht.
Gesunde Abwechslung: Beeren. Sie stecken voller Antrocyane, das sind Farbstoffe, die antioxidativ wirken, vor Krebs schützen und jung halten.

Basilikum
Wissenschaftler des US Department of Human Nutrition haben herausgefunden: Die ätherischen Öle im Kraut schützen vor aggressiven, krebsauslösenden Sauerstoff-Molekülen, stärken die Zellen gegen Umwelteinflüsse und helfen beim Schlankwerden: Enthaltene Enzyme aktivieren die Fettverbrennung. **Wie viel?** 2 Stängel. **Gesunde Abwechslung:** Petersilie. Reinigt das Blut und hilft bei Mundgeruch.

Möhren
Enthalten die Vorstufe zu Vitamin A. Schon eine Rübe deckt den Tagesbedarf. Retinol sorgt für gesunde Haut und junge Zellen. Möhren können zwar, entgegen der weit verbreiteten Meinung, nicht weitsichtiger machen (die meisten Augenleiden sind Kurz-, Weitsichtigkeit und Hornhautverkrümmungen), die Retinol-Vorstufen werden aber zum Aufbau von Sehpurpur benötigt. Hilft bei Nachtsehschwäche. **Wie viel?** Eine Rübe. **Gesunde Abwechslung:** Rettich. Schleimlösende Stoffe helfen bei Erkältung.

Mandeln
Macht ihr Fett nicht fett? Im Gegenteil. In einer US-Studie nahmen Nuss-Esser mehr ab als Nuss-Abstinenzler. Grund: Mandeln machen satt, erhöhen die Thermogenese (Futterverwertung) und ihre guten Fette scheinen sich nicht so auf die Hüften zu legen wie schlechte Fette. Eine Studie (gerade im „American Journal of Clinical Nutrition" veröffentlicht) enthält zudem: Mandeln haben 20 Prozent weniger Kalorien als angenommen, nämlich nur 129 statt 175 kcal (je Portion). **Wie viel?** 2 Esslöffel. **Gesunde Abwechslung:** Walnüsse. Ihr Zink ist gut für die Leber, soll sie sogar vor alkoholbedingten Schäden schützen.

ESSEN
DER GESÜNDESTE SALAT DER WELT
Zusammengestellt nach neuesten Erkenntnissen der Ernährungswissenschaft. Und: Er schmeckt trotzdem!
Von CAROLINE FRANKE
In dieser Schüssel ist alles drin für Sie: Schönheit, Fitness, Glück. Es ist der gesündeste Salat der Welt; und schmecken tut er auch noch.

Chicorée
Seine Bitterstoffe machen ihn zum natürlichen Appetitzügler. In einer Studie erhielten 520 Übergewich-

Kürbiskerne
Enthalten Magnesium für starke Nerven und essenzielle Fettsäuren, die im Gehirn die Signalübertragung gewährleisten. Glykoside stärken die Blase und schützen

Gurke
Ist der Personaltrainer im Salat. Gurken entwässern und wirken harntreibend. Giftstoffe, die bei Diäten beim Abbau von Fett freigesetzt werden, können leichter abtransportiert werden.

Radieschen
Die Spa- nier haben die Größe der kleinen Kugeln längst erkannt: Sie essen Radieschen zur Paella. Warum?

"The study found that eating almonds as a daily snack as part of a reduced-calorie diet resulted in weight loss"

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Artikelmagazin
Das Online-Magazin

FOOD DESIGN

Healthy Ageing:

Molkenprotein unterstützt gesunde Muskulatur

Eine Reihe aktueller wissenschaftlicher Studien unterstützt die These, dass Molkenprotein bei älteren Menschen die Proteinsynthese positiv beeinflusst.

Die Fähigkeit des menschlichen Körpers, Protein zu synthetisieren, geht mit zunehmendem Alter zurück. Typischerweise führt das zur sogenannten Sarkopenie, dem altersbedingten Verlust von Muskelmasse. Aktuelle Untersuchungen von Yifan Yang von der McMaster University in Hamilton, Kanada, und Bart Penninx von der Universität Maastricht zeigen, dass Molkenprotein als Nahrungsergänzung Sarkopenie entgegenwirken kann. Beide Studien legen nahe, dass ältere Menschen nach einem Krafttraining höhere Proteindosen als junge Menschen benötigen, deren Anspruchsniveau bei moderaten Dosen liegt. Die Kombination von Krafttraining und höherer Einnahme von Protein kann eine wirksame Strategie für Senioren bilden. Mit der Erhöhung der Proteinsynthese auf das Niveau junger Erwachsener sollte sich nämlich der altersbedingte progressive Verlust von Muskelmasse ausgleichen lassen.

Dieser Verlust wirkt sich negativ auf die Kraftleistung und Mobilität aus. Zudem kann der altersbedingte Muskelschwund zu chronischen Krankheiten von Insulinresistenz führen. Denn die Muskeln speichern die Verbrennung von Kohlenhydraten und bei der Zwischenspeicherung von Glukose als Energiereserve eine wichtige Rolle. Auch als Reserve von Aminosäuren übernehmen Muskeln eine wichtige Aufgabe. Die Aminosäuren werden in vielen Stoffwechselprozessen verwendet, beispielsweise zur Wundheilung und Regulierung des Immunsystems.

Höhere Dosierung

Die Studie von Yang belegt, dass die Muskeln älterer Menschen eine höhere Anstrengungsschwelle aufweisen. Diese lässt sich jedoch durch Einnahme von schnell verdaulichen Molkenproteinen in einer Menge von mindestens 20 Gramm überwinden. Bei Krafttraining wurde die Muskelproteinsynthese um 90 Prozent gesteigert, wenn Molkenproteindosen von 40 Gramm eingenommen wurden. Penninx und seine Kollegen fanden heraus, dass die Einnahme von 35 Gramm Molkenprotein – im Vergleich zu nur beziehungsweise 20 Gramm – bei älteren Menschen mit Bewegungsmangel zu einer höheren Aminosäureabsorption und Muskelproteinsynthese führt.

Susana Lester, Nutrition Manager for Life-style Ingredients bei Volac, zeigt sich von den Ergebnissen begeistert. „Diese Studien wiederlegen bisherige Vorstellungen, dass Menschen mit zunehmendem Alter weniger Protein benötigen. Es wurde argumentiert, dass Senioren eine höhere Dosis nicht ertragen können, da Proteinabbau/-verlust deutlich ansteigen. Die Yang-Studie weist aufdecken such, dass eine gezielte Proteinaufnahme wichtiger ist, als lediglich den täglichen Gesamtbedarf an Protein abzudecken. Alle Erwachsenen könnten von einer über den Tagesablauf verteilten Proteinaufnahme profitieren. Dabei sollte möglichst eine Aufnahme von acht bis 25 Gramm Protein bei jeder Mahlzeit angestrebt werden. Rund 30 Prozent des abweichenden Muskelverlusts ist durch Unaufmerksamkeit bedingt. Wir wissen nun, dass ältere Menschen von 40 Gramm hochwertigem Protein im Rahmen eines geregelten Krafttrainings besonders profitieren werden. Unser Ziel ist hier die einmalige Gelegenheit: Er kann den Senioren proteinreiche Produkte anbieten. Damit erhält diese Zielgruppe zwischzeitlich Lösungen, die einen lebenslangen aktiven Lebensstil unterstützen."

Komparativer Nutzen

Die Studie von Bard zeigt, dass Molkenprotein im Vergleich zu anderen hochwertigen Proteinquellen eine höhere Rate der Muskelproteinsynthese unterstützt. Dies gilt für gesunde ältere Männer sowohl im Ruhezustand als auch nach einem Kraftmarsch. Die Wirksamkeit von Molkenprotein ist geklärt durch den hohen Gehalt an Leucin zurückzuführen. Leucin ist eine essentielle Aminosäure, die vermutlich für den Energiehaushalt im Muskelgewebe eine zentrale Rolle spielt. Die Anreicherung von Proteinen mit Leucin könnte demnach eine Lösung für den Proteinwirkungsgrad darstellen. Churchward-Venne weist zusätzlich auf einen weiteren Faktor hin: Im Gegensatz zu angereicherten Proteinlösungen ist nur intaktes Molkenprotein imstande, eine erhöhte Muskelproteinsynthese bei jungen Erwachsenen bis zu fünf Stunden nach dem Training beizubehalten. Für Susane Lester ermöglichen diese neuen und umfangreichen wissenschaftlichen Daten die zeitgerechte Entwicklung von Produkten für passende Ernährungsstrategien. „Wer sich auch nach dem 70. Lebensjahr guter Gesundheit erfreuen will, sollte zur richtigen Zeit die richtigen Nahrungsmittel zu sich nehmen. Was eine gesunde Muskulatur betrifft, gibt uns der Forschung einstweilig die Notwendigkeit hervor, zu bestimmten Proteinquellen überzugehen. Diese nutzen schnell verdaulich und von Natur aus reich an Leucin sein. Hier bietet sich Molkenprotein an ebenso an."

www.volac.com

Neue Erkenntnisse über den Nutzen von Molkenprotein bei gesunden älteren Menschen:

- Eine Dosis von 20 Gramm ist für die Steigerung der Muskelproteinsynthese im Ruhezustand optimal.
- Bei Krafttraining ergab die Aufnahme von 40 Gramm Molkenprotein die besten Ergebnisse, da damit die Muskelproteinsynthese effektiver verlief.
- Im Vergleich zu identischen Dosen anderer hochwertiger Proteine fördert Molkenprotein eine gesteigerte Muskelproteinsynthese. Diese Wirkung ist wahrscheinlich der hohen Konzentration von Leucin zuzuschreiben, einem potenten Stimulator der Muskelproteinsynthese.

Yifan Yang et al.: „Resistance exercise enhances myofibrillar protein synthesis with graded intakes of whey protein in older men", *British Journal of Nutrition*, online veröffentlicht am 7. Februar 2012. http://dx.doi.org/10.1017/S0007114511007422

Bart Penenings et al.: „Amino acid absorption and subsequent muscle protein accretion following graded intakes of whey protein in elderly men", *American Journal of Physiology*, online veröffentlicht am 14. Februar 2012

N.A. Bard et al.: „Greater stimulation of myofibrillar protein synthesis with ingestion of whey protein isolate v. micellar casein at rest and after resistance exercise in elderly men", *British Journal of Nutrition*, online veröffentlicht am 31. Januar 2012

T.A. Churchward-Venne et al.: „Supplementation of a suboptimal protein dose with leucine or essential amino acids: effects on myofibrillar protein synthesis at rest and following resistance exercise in men", *The Journal of Physiology*, online veröffentlicht am 25. März 2012

Kalorienangaben können neu errechnet werden

Eine in der August-Ausgabe des *American Journal of Clinical Nutrition* veröffentlichte Studie zeigt, dass Mandeln etwa ein Fünftel weniger Kalorien enthalten als bislang gedacht. Die Wissenschaftler des United States Department of Agriculture (USDA) wollen mit dieser Untersuchung erste Erkenntnisse über die Ungenauigkeit der Atwater-Faktoren bei bestimmten Anwendungen liefern. Zudem glauben sie, eine Methode gefunden zu haben, um den Energiewert einzelner Bestandteile innerhalb einer Mischkost exakt zu bestimmen. Die Kalorienzahl in Lebensmitteln wird üblicherweise nach einem System berechnet, das von dem amerikanischen Chemiker Wilbur Olin Atwater vor über 100 Jahren entwickelt wurde. Das System ordnet jedem Gramm Proteine, Fett und Kohlenhydrate, die in einem bestimmten Lebensmittel vorkommen, einen Kalorienwert zu: vier Kilokalorien pro Gramm für Proteine und Kohlenhydrate, neun Kilokalorien pro Gramm für Fett.

J.A. Novotny, S.K. Gebauer, D.J. Baer: „Discrepancy between the Atwater factor predicted and empirically measured energy values of almonds in human diets", *American Journal of Clinical Nutrition*, online veröffentlicht am 3. Juli 2012

vital

Kalorienarme Mandel

Da knackt es sich noch mal so gut: Mandeln sind nach neuesten Erkenntnissen kalorienärmer als bisher angenommen.

Frisch vom Baum - Mandeln, noch in grüner Hülle

Mandeln sind gesünder als vermutet. Grund: Eine Handvoll der wertvollen Kerne hat statt 160 nur 129 Kilokalorien – also 20 Prozent weniger als bislang angenommen. Zu diesem Ergebnis kommt das United States Department of Agriculture. Neueste Untersuchungen zeigen, dass Eiweiß, Fett und Kohlenhydrate von Mandeln im Darm nicht vollständig aufgenommen, sondern zum Teil ungenutzt wieder ausgeschieden werden. Damit fällt auch der Energiegehalt geringer aus. Zur Kalorienberechnung werden Lebensmittel in einem Spezialgerät verbrannt. Seit mehr als 100 Jahren gehen Ernährungsexperten davon aus, dass der Körper alle Inhaltsstoffe hundertprozentig aufnimmt. Das scheint nicht immer so zu sein. Nun wird geforscht, ob vielleicht noch andere Lebensmittel neu berechnet werden müssen.

Mandeln, die köstlichen Schlankmacher

Mandeln gehören zur Herbst- und Winterzeit wie alle Nüsse. Und neben vielen gesundheitsfördernden Substanzen, können Mandeln sogar schlank machen.

Gefällt mir 1 | Twittern 2 | +1 1 | Vorlesen

Von: Angelika Lensen am 16. Oktober 2012 in Ernährung // 0 Kommentare

Eine neue Studie des amerikanischen United Department of Agriculture (USDA) zeigt, dass Mandeln etwa 20 Prozent weniger Kalorien enthalten, als bislang angenommen. Mandeln sind daher als Snack für zwischendurch empfehlenswert.

In der Studie, die im August im American Journal of Clinical Nutrition (AJCN) erscheinen wird, haben die Wissenschaftler eine modernere Messtechnik angewendet. Damit kann die tatsächlich während des Verdauungsprozesses aufgenommene Kalorienmenge exakter bestimmt werden. Durch das neue Messverfahren stellte sich heraus, dass 28 Gramm Mandeln (etwa 23 Stück) nur 129 Kalorien enthalten und nicht, wie auf der Verpackung angegeben, 160 Kalorien.

Die Studie konnte dokumentieren, dass bei einer täglichen Aufnahme von 84 Gramm Mandeln, die Energieverdaulichkeit insgesamt um fünf Prozent zurückging. Ersetzen Menschen, die normalerweise 2000 bis 3000 Kalorien täglich zu sich nehmen, leicht verdauliche Lebensmittel teilweise durch 84 Gramm Mandeln, wird die Energieaufnahme um 100 bis 150 Kalorien gesenkt. Während einer Diät kann das einen Gewichtsverlust von mehr als 500 Gramm im Monat bewirken.

vital

WENIGER KALORIEN

Freigesprochen: die Mandel

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QUICKTIPP

ERNÄHRUNGS UMSCHAU
FORSCHUNG & PRAXIS

Energiegehalt von Mandeln geringer als mittels Atwater-Faktoren berechnet?

(Am J Clin Nutr) Der Energiegehalt von Lebensmitteln wird üblicherweise mittels der Atwater-Faktoren berechnet: Demnach enthält 1 g Protein/Kohlenhydrate 4 kcal und 1 g Fett 9 kcal. Eine kürzlich im American Journal of Clinical Nutrition veröffentlichte Studie zeigt nun am Beispiel von Mandeln, dass sich über die Atwater-Faktoren nicht für alle Lebensmittelgruppen akkurat der Energiegehalt ermitteln lässt.

Über einen Zeitraum von 18 Tagen wurden 18 Probanden im Crossover-Design drei verschiedenen kontrollierten Diäten ausgesetzt: 1) keine Mandeln, 2) 42 g Mandeln/Tag, 3) 84 g Mandeln/Tag. Der Nährstoff- und Energiegehalt der Mahlzeiten als auch von Urin- und Stuhlproben wurde analysiert. Die Analysen ergaben, dass der Energiegehalt der Mandeln 4,6 ± 038 kcal/g betrug (129 kcal pro 28 g-Portion). Dies ist signifikant niedriger als der anhand der Atwater-Faktoren berechnete Energiegehalt von 6,0 ± 6,1 kcal/g (168–170 kcal/28 g-Portion). Die Atwater-Faktoren ergeben bei Mandeln einen 32 % höheren Energiegehalt als die Humanstudie.

Die Forscher sehen diese Ergebnisse als Beweis für die Ungenauigkeit der Atwater-Faktoren für die Bestimmung des Energiegehalts einzelner Lebensmittelgruppen (im Kontext einer Mischkost). *Literatur: Novotny JA, Gebauer SK, Baer DJ (2012) Discrepancy between the Atwater factor predicted and empirically measured energy values of almonds in human diets. Am J Clin Nutr 96: 296–301* (19.09.12)

gute Laune
usik!

Medizin-Infos

Mandeln: Weniger Kalorien als gedacht

Mandeln sind kleine Kraftpakete: Sie bestehen zu rund 20 Prozent aus Eiweiß und liefern neben vielen Vitaminen auch hochwertige Fettsäuren. Bislang hielten sich Figurbewusste beim Genuss der gesunden Knabberei lieber zurück, denn in einer 28 Gramm-Portion stecken 170 Kalorien. Doch US-Forscher fanden heraus: Unser Körper ist gar nicht in der Lage, die Mandeln vollständig zu verdauen. Statt der 170 werden daher nur 130 Kalorien verwertet.

california almonds®
Almond Board of California

France Coverage Highlights

ELLE

Les amandes seraient-elles plus light qu'avant ?

Par Tanissia Issad - Le 19/07/2012

© Noel Barnhurst

Auparavant, 28 grammes d'amandes contenaient 160 calories. Aujourd'hui, cette même quantité d'amande n'équivaut plus qu'à 129 calories. Et pourtant, il s'agit bien d'amandes identiques, en tout points comparables. Ce n'est donc pas un changement dans la culture ou la composition de ce fruit sec qui entre en compte. Effectivement, il faut plutôt chercher du côté de la méthode de calcul des calories, que les scientifiques du ministère américain de l'Agriculture (USDA) remettent en cause. Dans le cadre d'une étude qui sera publiée en août prochain dans l' « American Journal of Clinical Nutrition » (AJCN) sur la teneur calorique des amandes, ils se sont rendu compte que ce qu'on appelle communément le système des « facteurs généraux d'Atwater » ne donne pas toujours la réelle mesure du nombre de calories présent dans chaque aliment.

Un système vieux d'un siècle

Ce système vieux d'un siècle attribue à chaque gramme de glucide, protéine ou lipide contenu dans un aliment un nombre de calories précis. En revanche, il ne se préoccupe à aucun moment de la manière dont glucides, lipides et protéines sont assimilés par le corps. Une poignée d'amandes, c'est donc peu de calories. Quand en plus on sait que ce fruit sec ne contient pas de cholestérol et très peu de graisses saturées, il y a de quoi se réjouir. Dans le cadre d'un régime pauvre en calories, consommer des amandes (en quantité raisonnable, bien sûr) s'avère être un encas parfait ! Cependant, l'étude stipule que ces résultats ne s'appliquent qu'aux amandes entières, mais pas forcément au beurre ou à la poudre d'amandes. Alors, à vos fruits secs…

"Nutrient dense foods, like almonds, has 20% fewer calories according to new research … "

MiamMiam

Amandes contre almonds

"Researchers use a more precise method of measuring the calories in almonds"

Genri Fais (Nutrhyp) @faisg

Les amandes seraient-elles plus light qu'avant ?

elle.fr/Minceur/News/N…

Réduire · Répondre · Retweeter · Favori

8:37 - 20 Juill 12 via Tweet Button · Détails

Le Point.fr

Amandes, pistaches et autres graines pour "l'apéro"

Même si ces produits ont des effets bénéfiques, il faut éviter d'en grignoter toute la journée en raison de leur apport calorique.

Une équipe turque a publié l'an dernier un travail montrant que les pistaches améliorent l'érection. © KOWALSKI / SIPA

J'aime 19 Envoyer

Commentaire (1)

À ne pas manquer

- LE POINT DU JOUR : coût du travail, cyberdéfense, Mauresmo
  par Vincent Coquaz, Marc Leplongeon et Steeve Vaugondy
- EXCLUSIF. Merah : la DCRI auditionnée par la police des polices
  par Ariel Wizman et Aziz Zemouri

Par ANNE JEANBLANC

Certes, le temps ne se prête guère aux apéritifs anisés - pris au soleil et avec glaçons -, en tout cas dans les deux tiers de notre pays. Pourtant, il est fort probable que le 14 Juillet soit, pour bon nombre de Français, l'occasion de trinquer. Alors, avant de commencer le dîner, est-il bien raisonnable de consommer des pistaches, amandes ou autres noix et noisettes ? Oui, si l'on en croit certaines études et les dossiers régulièrement envoyés à la presse par les producteurs de ces graines.

Tout d'abord, différentes enquêtes ont démontré l'intérêt des amandes et autres noix pour réduire le risque cardiovasculaire. Dans une grande cohorte d'infirmières américaines, les décès d'origine cardiaque sont moins fréquents chez les consommatrices d'au moins deux rations de noix par semaine que chez celles qui n'en mangent pas souvent. Si la faculté de ces aliments de diminuer le taux de cholestérol dans le sang est désormais prouvée, leur impact sur la pression artérielle est moins clair. En réalité, elles auraient un effet limité, mais réel.

Laposte.net

Bien + qu'une messagerie

ELLE

Mail · Imprimer

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YAHOO! ACTUALITÉS FRANCE

CONTENUS ASSOCIÉS

Afficher la photo

Les amandes seraient-elles plus light qu'avant ?

NEWS SANTÉ

Un masque à la fiente d'oiseau

Elle - il y a 25 minutes

Ramadan : 6 conseils pour jeûner sans danger pour la santé

Topsante.com - il y a 26 minutes

Amis : 6 conseils pour entretenir vos amitiés

Topsante.com - il y a 1 heure 0 minute

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"28g serving of almonds (about 23 almonds) has 129 calories versus the 160 calories listed on labels"

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Almond Board of California

France Coverage Highlights

Journal des Femmes

L'apport calorique des amandes remis en question

Publié le 09 août 2012, 11h40 par Francesca Chiericato

« Hapsatou Sy lance deux nouveaux produits pour les cheveux Le spa Aquamoon lance une ligne de produits cosmétiques »

Dernières actus

- Ioma lance l'application Iphone "Ioma à moi"
- Ecocentric.fr vous invite à découvrir son nouveau look
- Christophe-Nicolas Biot réinstalle son bar à chignon chez Courrèges
- Balinea.com dédie une semaine aux soins orientaux
- Elements Showcase, New York : une foire événement dans le monde du parfum
- Lady Gaga : la chanteuse discrète en brune
- Zensoon.com, un nouveau site de réservation beauté et bien-être
- Ghd France renouvèle son engagement en faveur de la Ligue contre le cancer

Une étude américaine démontrerait que ces fruits seraient moins caloriques qu'on ne le croit.

Jusqu'ici, les nutritionnistes nous avaient mis en garde contre les amandes. Si ces fruits oléagineux ont des vertus santé, ils ont aussi une valeur calorique assez importante. Mais une nouvelle étude vient de remettre tout cela en question. D'après les chercheurs du Ministère Américain de l'Agriculture (USDA), les amandes contiendraient 20 % des calories en mois par rapport à ce qu'on l'estimait avant.

Ces résultats, publiés dans l'*American Journal of Clinical Nutrition*, ont été obtenus en effectuant des tests jugés plus précis que les précédents. Le verdict : une portion d'amandes (28 g, soit environ 23 fruits) contiendrait 129 kcal et non 160, comme on le pensait jusqu'à présent.

© Brad Pict / Fotolia
Une portion d'amandes contiendrait 129 kcal.

Ces fruits se révèleraient alors de bons alliés minceur. Ils constitueraient des en-cas peu caloriques et, surtout, sains. En effet, les amandes contiennent des acides gras polyinsaturés qui permettent de diminuer le cholestérol. Elles sont aussi riches en nutriments (magnésium, calcium, potassium...) et en fibres, si bien qu'elles favorisent le transit intestinal.

En tout cas, pour garder la ligne, évitez d'en abuser. Et préférez les amandes nature et surtout sans sel ajouté.

"Almonds would be snacks low in calories and most importantly, healthy"

"Almonds are less caloric than thought"

LaNutrition.fr
Bon à manger • Bon à savoir

Les amandes seraient moins caloriques qu'on le pensait

- Les amandes seraient moins caloriques qu'on le pensait.
- Une bonne raison pour en consommer plus ?

Jacques Robert - Vendredi 27 Juillet 2012

2 Réagissez | Envoyez | Imprimez | Partagez |

Taille du texte

Mots-clés
amandes, antioxydant, calories

Les dernières news
- Des antioxydants pourraient protéger du ...
- Des antioxydants pour protéger des dange...
- Un antioxydant améliore l'autisme
- Maigrir : une question de calories ?
- La créatine joue un rôle antioxydant

Le calcul de l'apport énergétique (calories) des aliments est habituellement basé sur le système *Atwater*, du nom de son inventeur Wilbur Olin Atwater un chimiste Américain. Cette méthode considère les protéines, glucides et lipides de manière isolée et le calcul des calories d'un aliment se fait en additionnant les calories respectives de chaque catégorie (4 kcal par gramme de glucide et de protéine, 9 kcal par gramme de lipide et 7 kcal par gramme d'alcool).

Néanmoins, des chercheurs du ministère de l'Agriculture des Etats-Unis ont analysé les urines. Pour les chercheurs cette anomalie s'explique par une plus faible digestibilité de certains composants des amandes. Ils pensent que cette anomalie concerne tous les types d'oléagineux. S'agit-il d'une bonne raison pour manger plus d'amandes ? Oui, si on en croit les études, les amandes sont riches en minéraux et très antioxydantes et pourraient combattre le diabète et les maladies cardiovasculaires. Lisez notre article : "Les atouts santé des noix, des noisettes et des amandes fraîches".

Référence

Novotny JA, Gebauer SK, Baer DJ. Discrepancy between the Atwater factor predicted and empirically measured energy values of almonds in human diets. Am J Clin Nutr. 2012 Aug;96(2):296-301.

Liu JF, Liu YH, Chen CM, Chang WH, Chen CY. The effect of almonds on inflammation and oxidative stress in Chinese patients with type 2 diabetes mellitus: a randomized crossover controlled feeding trial. Eur J Nutr. 2012 Jun 22.

Le nouvel Observateur

FRUITS A COQUE HAUTEMENT RECOMMANDÉS

Selon une étude publiée par « Nutrition Research », il conviendrait de recommander le grignotage des... amandes. Avantage attendu : la baisse de la tension et l'entretien du bon cholestérol. S'assurer tout de même que ce fruit à coque très protéiné ne soit pas gorgé de pesticides.

Femme actuelle.fr

Thinkstock

1 / 5

L'amande, bon pour le cholestérol

Le + santé : ce fruit oléagineux, que l'on trouve toute l'année, est bon pour le cœur grâce à ses acides gras qui font baisser le taux de cholestérol*. L'amande est aussi riche en fibres, idéal pour le transit et la ligne, et contient beaucoup d'antioxydants (vitamine E en particulier).

La choisir et la consommer : l'amande doit être bien ferme et sèche. Faites-en un allié santé et minceur toute l'année. A l'apéro, après une séance de sport ou en en-cas, une poignée d'amandes redonnent énergie et vitalité. Voir aussi nos recettes à l'amande.

Le saviez-vous ? L'amande est riche en calories (575 kcal pour 100g). Et 100 g d'amandes (généralement un sachet) couvre presque la moitié des besoins journaliers en protéines d'une femme de 60 kg.

** Voir la récente étude publiée dans le Journal of American Medical Association à propos du régime Portfolio.*

"Make it a healthy and slimming ally all year"

california almonds®
Almond Board of California

EU Food Professional Outreach:
ABC Symposium at **SIAL** – Global Food Industry Exhibition
Paris, October 19th-23rd

- During SIAL trade show in Paris, the Almond Board of California hosted an event discussing the Baer research and wider discussions on whether all calories are created equal
- The informal symposium was presented by guest speakers, Dr Geoffrey Livesey, Lu Ann Williams, Head of Research at Innova Market Insights and Leatherhead's Head of Nutrition Prof Martin Wickham
- Following the event, coverage has appeared in publications Food News, Food Navigator and Food Ingredients First

Invitation

SIAL 2012 The Global Food Marketplace

california almonds Almond Board of California

The Almond Board of California is delighted to invite you to a discussion about calories: are all calories created equal? Is there a flaw in how we measure calories? Are our current nutrition labels accurate? The team will share with you the results of a study that was recently published in the prestigious American Journal of Clinical Nutrition (AJCN). In this study, which was conducted by a group from the United States Department of Agriculture (USDA), researchers used a rigorous method for determining the energy value of almonds and found that almonds may have about 20% fewer calories than originally thought.

Presenters: Prof Martin Wickham, Head of Nutrition, Leatherhead
Dr Geoffrey Livesey, Independent nutritionist and calorie expert
Lu Ann Williams, Head of Research at Innova Market Insights

When: SIAL Tuesday 23rd October at 10am in Conference Room 501

Breakfast and refreshments will be available from 10am to 11am
Please **RSVP** to hannah.baker@porternovelli.co.uk

We look forward to seeing you,

The Almond Board of California

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India Consumer Press Highlights

healthyeats

REUTERS

DNA
DAILY NEWS & ANALYSIS

Dainik Bhaskar

City Express

YAHOO!

rediff.com
rediff BLOGS

the pioneer

HELLO!
DAILY NEWS

The Indian EXPRESS

SILObreaker

equities.com
Global Financial Network

PRLOG
Press Release Distribution

AlmondButter4U
the healthier butter

राष्ट्रीय सहारा

FOOD PRODUCT DESIGN

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Almond Board of California

India Consumer Press Highlights

Almonds a healthy snack substitute for dieters

Substituting almonds for less healthy foods could help dieters stick to a calorie-controlled diet, and lower their cholesterol at the same time, says a new study published in the *American Journal of Clinical Nutrition*. After six months, they found that the nut-free dieters had lost slightly more weight than the almond eaters: 16 pounds compared to 12 pounds. After a year, there was no difference in weight lost. REUTERS

The Indian EXPRESS

An almond a day, keeps heart problems at bay

City Express

The almond diet

Historians generally agree that almonds were among the earliest cultivated foods.

The varieties of almonds were first found in China and carried by the traders down the ancient silk road to Greece, Turkey, and the Middle East.

Almond nuts are rich in dietary fiber, vitamins, and minerals and packed with numerous healths promoting phyto-chemicals. This kind of well balanced food offers protection against diseases and cancers.

Jar of facts

Est seventy almonds per day. That's the number that people in a US City of Hope National Medical Center experiment ate daily for six months, in conjunction with a reduced-calorie diet, to drop 18 percent of their body weight.

California produces 80 per cent of the world's supply of almonds.

California Almond

almonds a day. The latest research shows that almonds may play a leading role in preventing colon and lung cancer. It's amazing but true just a few almonds go a long way towards healthy levels of blood pressure and cholesterol.

They are also rich source of minerals like manganese, potassium, calcium, iron.

The sweet almond oil is obtained from the nuts is an excellent emollient; helps to keep skin well protected from dryness. It has also been used in cooking, and as "carrier or base oil" in traditional medi- enapy, in phar- nd cosmetic

the pioneer

Almonds a healthy snack substitute for dieters

Substituting almonds for less healthy foods could help dieters stick to a calorie-controlled diet, and lower their cholesterol at the same time, says a new study. "Nuts, and in this case almonds, shouldn't be on the 'do not eat' list, they can be effectively incorporated in a weight loss plan, with the caveat that they have to be portion controlled," said Dr Gary Foster, who led the study at Temple University in Philadelphia. Past research also suggests that nuts like almonds might play a reducing risk for heart dis

DNA

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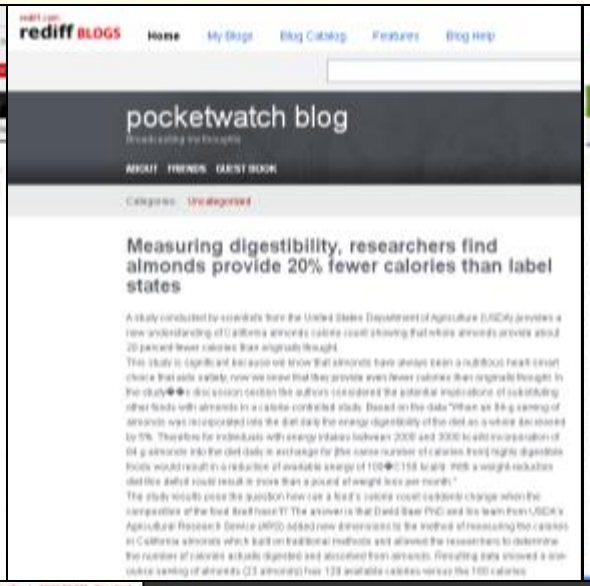
India Consumer Press Highlights



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Almond Board of California

South Korean Coverage Highlights/Excerpts

"Calories of Almonds have been exaggerated," *Health Chosun*
(Health section of a predominant daily newspaper *Chosun Ilbo*)
A recent scientific study shows that a handful of almonds provides 20% fewer calories than originally calculated.

"Study provides new way to measure calories using whole almonds," *KDA Web site*
(The most influential channel among dietitians)

"Almonds have high calories? No!," AM7 (One of top three free tabloids)
A handful of almonds offers 129kcal, which is 20% fewer than the calories listed on the U.S. Nutrition Facts Panel

"Measuring digestibility, researchers find that almonds provide 20% fewer calories than originally calculated," Yakup
(Top-tier health trade medium)

Korean Dietetic Association Annual Conference

July 21st-22nd, 2012

Marketing: What Next?

ABC's global marketing strategy for this research moving forward is to…

- Continue garnering scientific support for the methodology and results
  - Participation in scientific conferences and symposia
  - Involvement in health professional events and exhibits

- Continue putting the results in perspective for all audiences as we await more research to substantiate and expand on the findings

So, the Big Question:

Can Nutrition Labels Change?

Changing the Calorie Count Where it Counts

In North America and Europe, where calories are required to be disclosed on pack the ultimate objective is to change the calorie count:

- **On the Label**
  - The ultimate consumer decision tool at point of purchase
- **In the Nutrient Database**
  - Important for consumers using calorie-counter apps
  - The go-to source for health professionals
- **On ABC Materials and Resources**
  - Allows for consistent reinforcement of this exciting and motivating news

What Next?

- ABC's role moving forward:
  - Continue to conduct nutrition research that increases the understanding of almonds' nutrition and health benefits
    - E.g. research similar to this study on other, non-whole forms
  - Promote ongoing study results to consumers, health professionals and food professionals.
- Partner with industry members pursuing label changes for their products

Almond Calories: Seize the Day!

Bill Layden

FoodMinds, LLC

3 Points

- It’s all about calories
- Changes in scientific knowledge and consensus take time
- Opportunity is knocking today for the almond industry on calories*

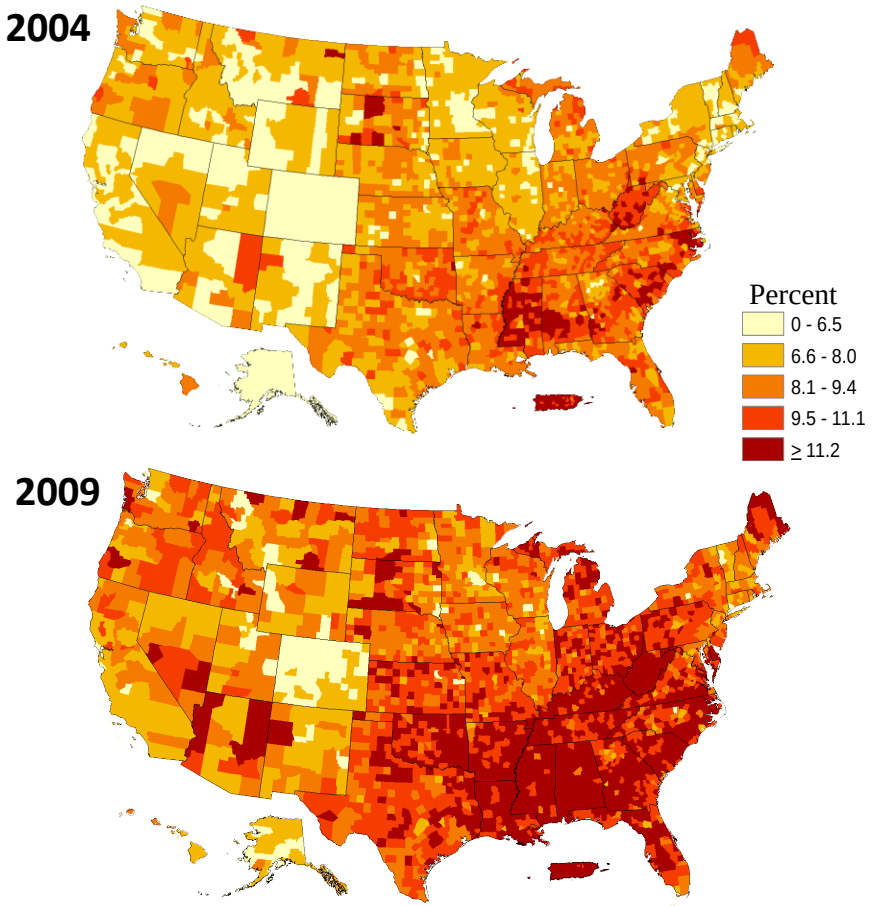
*A policy perspective, not legal advice or counsel. Consult your attorney.

foodminds

Prevalence and public health burden

- **25.6 million** = number of people in the United States affected by diabetes, 2010
  - 11.3% of all people ≥ 20yrs
  - 26.9% of all people ≥ 65yrs
- **79 million** = number of people in the United States estimated to have pre-diabetes
- **$174 billion** = estimated total diabetes medical costs in the United States, 2007

Diagnosed diabetes among adults aged ≥ 20 yrs



Source – Centers for Disease Control and Prevention

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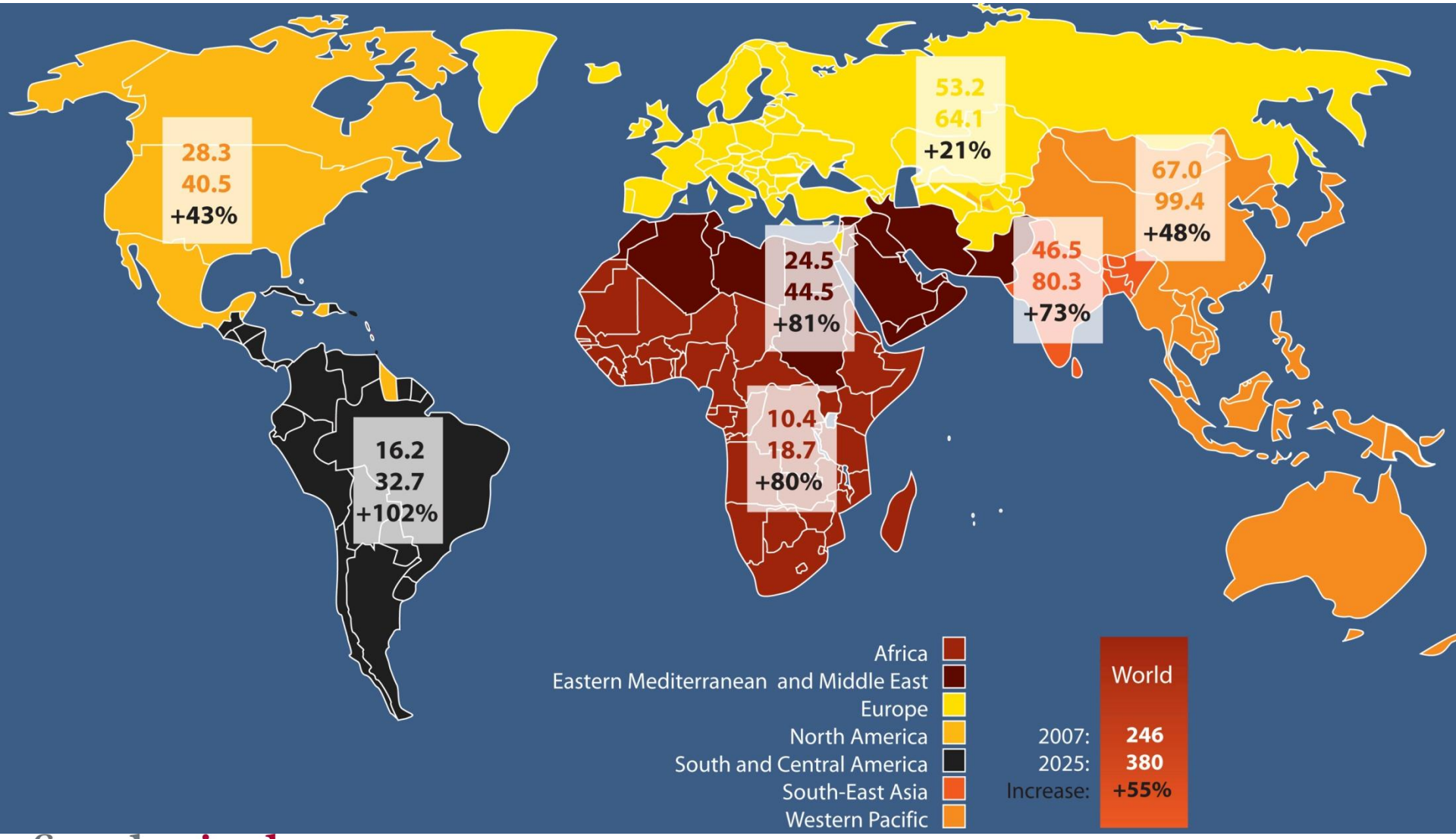
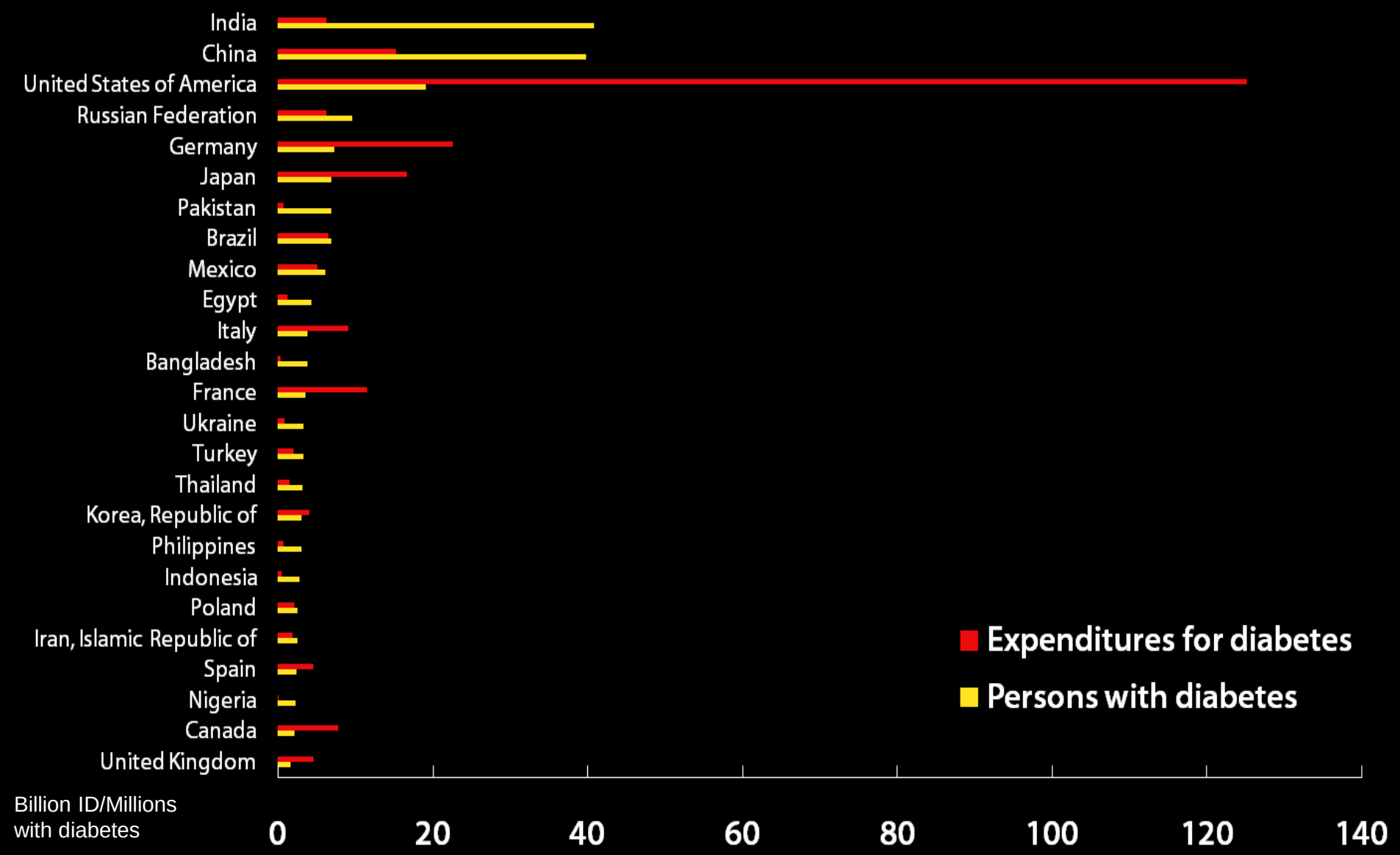
GLOBAL PROJECTIONS FOR THE NUMBER OF PEOPLE WITH DIABETES (20-79 AGE GROUP), 2007 and 2025 (MILLIONS)



ANNUAL EXPENDITURES FOR DIABETES (ID) VS PREVALENCE
25 COUNTRIES WITH THE LARGEST PREVALENCE IN 2007



CALORIES

CALORIES

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A Focus on Calories

Government

U.S. Food and Drug Administration
Protecting and Promoting Public Health
www.fda.gov

Nutrition Facts
Serving Size 1 cup (247g)
Servings Per Container about 2

Amount Per Serving	
Calories 110	Calories from Fat 15
	% Daily Value*
Total Fat 2g	3%
Saturated Fat 0.5g	3%
Trans Fat 0g	
Cholesterol 10mg	3%
Sodium 480mg	20%
Total Carbohydrate 18g	6%
Dietary Fiber 4g	16%
Sugars 3g	
Protein 7g	
Vitamin A	20%
Vitamin C	0%
Calcium	4%
Iron	8%

* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs

		Calories:	2,000	2,500
Total Fat	Less than		65g	80g
Sat Fat	Less than		20g	25g
Cholesterol	Less than		300mg	300mg
Sodium	Less than		2,400mg	2,400mg
Total Carbohydrate			300g	375g
Dietary Fiber			25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

Serving size information

Prominence of Calorie information

Daily Values

Other Factors

Coming soon!

Barbara O. Schneeman, Ph.D.
Office of Nutrition, Labeling, and Dietary Supplements
FDA-CFSAN

Industry

Facts Up Front

PER 1 CUP SERVING

140 CALORIES	1g SAT FAT 5% DV	410mg SODIUM 17% DV	5g SUGARS	1000mg POTASSIUM 20% DV	VITAMIN A 20% DV

Clear On Calories

For containers 20 fl oz or less

SANDWICHES	CALORIES	PRICE
HAMBURGER	280	.89
CHEESEBURGER	330	.99
FILET-O-FISH®	470	1.99
CRISPY CHICKEN	550	2.79
QUARTER POUNDER®	430	2.29
BIG N' TASTY®	540	2.29
BIG MAC®	590	2.39
CHICKEN McGRILL®	450	2.89
DOUBLE QUARTER POUNDER®	760	2.99

HEALTHY WEIGHT COMMITMENT FOUNDATION

1.5 trillion calories by 2015

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"Scientists confirmed today that everything we know about the structure of the universe is wrongedy-wrong-wrong."

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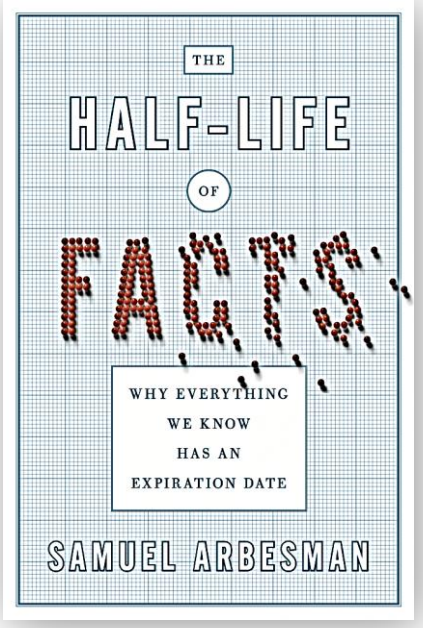
THE
HALF-LIFE
OF
FACTS
WHY EVERYTHING
WE KNOW
HAS AN
EXPIRATION DATE
SAMUEL ARBESMAN


Sugar Free
New!
SnackWells
Chocolate Chip
Cookies
NET WT 5½ OZ (156g)
New!
SnackWells
CarbWell
Cookies
Fudge Covered Grahams

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FOR IMMEDIATE RELEASE

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STUDY PROVIDES NEW WAY TO MEASURE CALORIES USING WHOLE ALMONDS

Measuring digestibility, researchers find almonds provide 20% fewer calories than label states

Modesto, CA (July 11, 2012) – A study conducted by scientists from the United States Department of Agriculture (USDA) and released in the August issue of the *American Journal of Clinical Nutrition (AJCN)* provides a new understanding of almonds' calorie count, showing that whole almonds provide about 20 percent fewer calories than originally thought.[i]

At first glance, the study results beg the question, how can a food's calorie count suddenly change when the composition of the food itself hasn't?

The answer is that David Baer, PhD, and his team from USDA's Agricultural Research Service (ARS) used a new method of measuring the calories in almonds, which built on traditional methods and allowed the researchers to determine the number of calories actually digested and absorbed from almonds. Resulting data showed a one-ounce serving of almonds (about 23 almonds) has 129 calories versus the 160 calories currently listed on the Nutrition Facts Panel. The results may have implications for certain other foods as well.

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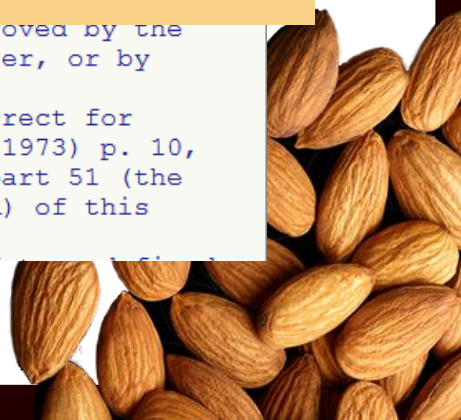
"or by other means, as appropriate"

(D) Using data for specific food factors for particular foods or ingredients approved by the Food and Drug Administration (FDA) and provided in parts 172 or 184 of this chapter, or by other means, as appropriate; or

(E) Using bomb calorimetry data subtracting 1.25 calories per gram protein to correct for incomplete digestibility, as described in USDA Handbook No. 74 (slightly revised 1973) p. 10, which is incorporated by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51 (the availability of this incorporation by reference is given in paragraph (c)(1)(i)(A) of this section).



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Is the Baer method “other means?”

You betcha

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Does FDA require premarket approval to change nutrition facts?

Nope

Manufacturer's obligation to ensure label information is truthful, accurate and not misleading

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How much variance does FDA allow now for calorie declaration on labels?

20%

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Considerations

- Initially limited to the form of almond studied?
- How communicate to consumers consistent with FDA and FTC rules?
- Do you hear opportunity knocking?

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Almond calories:

SEIZE THE DAY!

Questions