THE SUGAR ASSOCIATION
PJ B
YOUR

2005 Ag Outlook Forum - The Role of Science in Setting Nutritional Guidelines for Sweeteners

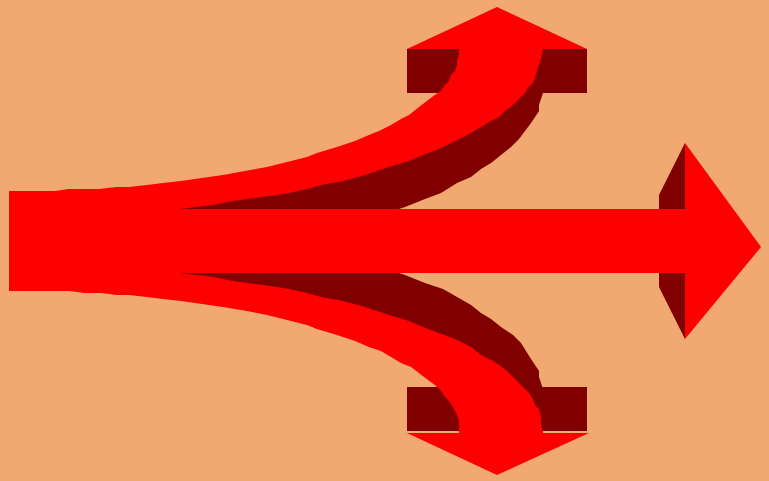
Andrew Briscoe
President & CEO
The Sugar Association
February 25, 2005

The Sugar Association

The mission of the Sugar Association is to promote the consumption of sugar as a part of a healthy diet and lifestyle through the use of sound science and research.

Public Affairs

Defending the Facts



Research & Science

Public Policy

Key Issues

- Labeling Concerns – Providing Consumers Accurate Information
- Dietary Guidelines
- Food Guide Pyramid
- World Health Organization (WHO)
- Food and Agricultural Organization (FAO)
- Responding to the Obesity Crisis

21 Sweetening Ingredients Used in Today's Foods (in Addition to Sucrose)

- Honey
- Corn Syrup
- Dextrose
- Maltodextrin
- Sorbitol
- Mannitol
- High Fructose Corn Syrup
- Crystalline Fructose
- Maltose
- Fructose
- Aspartame
- Sucralose
- Splenda
- Sweet n Low
- Glucose syrup
- Cyclodextrin
- Tagatose
- Xylitol
- Acesultame K
- Glycerol
- Saccharin

Food Labeling/Added Sugars Concerns

- Eliminate the use of “XX% Less Sugar” Nutrient Content Claims
- Revise current food label term “Sugars” to more accurate, consumer-friendly terminology.

PEPSI
EDGE
50% less sugar

Russell Stover®
PEANUT BUTTER CUPS
COVERED WITH MILK CHOCOLATE
Sugar Free
AMERICAN CULINARY INSTITUTE
2004
BEST TASTE AWARD
www.chefsbest.org
NET WT. 3.5 oz. 99 g

CR Health

Lower-sugar foods Some are diet traps

The latest food trend seems to be good news for weight ... Over the past year, manufacturers have introduced lower-sugar cereals, soft drinks, ice cream, yogurt, juices, and even pasta sauce. Many include sucralose (Splenda), a compound derived from sugar that has no demonstrated health risks and, because it's not metabolized, no calories.

Increased refined-sugar consumption has been linked to rising obesity in the U.S., and some of these lower-sugar products may help with weight loss. But a CONSUMER REPORTS label analysis found that like many "low-carb" products, some lower-sugar foods—notably cereals—have the same calories as the originals. And because they're still sweet, they may not help tame your sweet tooth, if that's your goal.

Consider the new lower-sugar General Mills cereals: Cocoa Puffs, Trix, and Cinnamon Toast Crunch. While their labels note 75 percent less sugar than the originals, their calorie and carbohydrate counts per serving are the same, given the added grain per ounce. All use the artificial sweetener sucralose.

Kellogg's new lower-sugar Frosted Flakes and Froot Loops have one-third less sugar and no artificial sweeteners. But because they, too, have more grain per ounce, they have the same ... drate and calorie ... the originals. The ... are less dense an ... serving sizes la ... ume, you'd get ... with the old ser ...

Other lower ... have reduced ... Cola's new C ... calories of ...

LESS SUGAR, MORE VOLUME The lower-sugar cereal (left) is less dense, so its serving size, with the same calories, is 1 cup vs. ¾ cup.

Edy's/Dreyer's No Sugar Added chocolate ice cream is 90 calories—vs. 150—for a ½-cup serving. Both use sucralose; C2 uses other artificial sweeteners as well.

"Low-sugar foods and beverages can play a role when people are trying to reduce," says Rachel Johnson, Ph.D., R.D., professor of nutrition at the University of Vermont. But, she added, "It's ... to help to reduce ...

age adult eats just one whole-grain serving and the average child eats less.

Nutritionists say that the availability of more mainstream cereals containing whole grains can only help improve those figures. "It's a positive move," says Barbara Rolls, Ph.D., professor of nutritional sciences at Pennsylvania State Univers...

WHAT YOU CAN DO

Here are ways ... refined sugar and ... nutrition at breakfas...

- Buy lower-sugar grain cereals and ... fresh fruit for swe... fruit will add s... but it also will ... important nutri...
- Keep in m... cereals, wher...

New, but not necessarily in...

Lower-sugar foods don't always have lower ca... fewer calories. Some replace sugar with no-ca... but add in grain, so net calories and carbs re...

Product	Serving size (cups)	Calories	Total carbohydrates (grams)
Kellogg's Frosted Flakes	¾	120	28
Kellogg's ⅓ Less Sugar Frosted Flakes	1	120	28
General Mills Trix	1	120	26
General Mills Reduced Sugar	1	120	26
Coca-Cola Classic	1	100	27
Coca-Cola C2 Lower Sugar Cola	1	45	11
Edy's/Dreyer's Grand Ice Cream, Chocolate	½	150	17
Edy's/Dreyer's No Sugar Added Ice Cream, Chocolate	½	90	17

Sugar-free cookies often have about the same number of carbohydrate grams as regular cookies, which means they're not any better for people with diabetes–or those looking to shed some pounds. They're also not better for budgeters, often costing considerably more than regular cookies.

Cookie	Calories	Carbohydrate (grams)	Price (cents)
1 Archway's Classic Oatmeal	100	17	25
1 Archway's Sugar-Free Oatmeal	110	16	36
2 Nabisco Mallomars	120	17	44
2 Nabisco Oreos	105	16	18
2 Nabisco Chips Ahoy	105	14	16
2 Murray Sugar-Free Chocolate Chip	100	13	29
2 Snackwell's Coconut Cremes	110	19	38
2 Snackwell's Sugar-Free Lemon Cremes	87	16	30

TUFTS UNIVERSITY

Health & Nutrition Letter

YOUR GUIDE TO LIVING HEALTHIER LONGER ■ JUNE 2003 Volume 21, Number 4, $5

FOOD SAFETY WATCH

Last Stop: Supermarket

DRY CLEANER'S, pharmacy, grocery store, post office, library? No. The trip should go like this: dry cleaner's, pharmacy, post office, library, and then the grocery store, especially during the warm summer months. That's because while you're taking the time to get a few extra tasks accomplished, the temperature is rising rapidly in your car–and harmful bacteria are multiplying on your food.

It's a form of what food safety ex... perts call "tempera...

Sugar-Free Shortcomings

For people with diabetes, sugar-free cookies are not a free ride

Y... OR someone in your family has been diagnosed with diabetes. So on your trips down the cookie aisle, you now pass up the sugar-laden Oreos, the Chips Ahoy, and the Mallomars and opt instead for sugar-free varieties: Murray Sugar-Free Chocolate Chip cookies, Snackwell's Sugar-Free Lemon Cremes, and Archway's Sugar-Free Oatmeal.

You don't like the taste of these ... cookies as much ...

... the most part, it's the ... carbohydrates eaten that influences blood sugar, or glucose, levels in someone with diabetes, not just the amount of simple sugar. And the sugar-free versions have as many grams of carbohydrates as the regular cookies—and pretty much the same number of calories, too. That's because much of the carbohydrate in cookies comes from flour, not just sugar. Thus, taking out the sugar and putting in a sugar substitute doesn't really change things much. Indeed, often the substances used to replace sugar are not totally carbohydrate-free themselves.

That's why, as the box on page 6 shows, two Chips Ahoy cookies have 14 carbohydrate grams, just one more than two Murray Sugar-Free Chocolate

Continued on page 6

On the Menu

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Green Tea in Weight-Loss Supplements: Can It Work? 3
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Award-Winning Tufts Nutrition Website Gets Better Still 7
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Ask Tufts Experts 7
Magnesium: Why You Need More Of It 8
Burgers By the Numbers: Calorie and Fat Comparisons 8

Strawberry Preserves

Nutrition Facts

Serving Size 1 Tbsp (20g)

Amount Per Serving

Calories 50 Calories from Fat 0

	% Daily Value*
Total Fat 0g	0%
Sodium 10mg	0%
Total Carbohydrate 13g	4%
Sugars 7g	
Protein 0g	

INGREDIENTS: Strawberries, Corn Syrup, Sugar, High Fructose Corn Syrup, Citric Acid, Fruit Pectin.

Dietary Guidelines for Americans 2005

U.S. Department of Health and Human Services
U.S. Department of Agriculture
www.healthierus.gov/dietaryguidelines

Sugars/Sweeteners Guideline

- 1980 Avoid too much sugar
- 1985 Avoid too much sugar
- 1990 Use sugars only in moderation
- 1995 Choose a diet moderate in sugars
- 2000 Choose beverages and foods to moderate your intake of sugars

The 2005 Dietary Guidelines Consumer Brochure

For the first time since 1980

NO SPECIFIC SUGARS GUIDELINE

But in the text, it says,

1) “A healthy eating plan is one that is low in saturated fats, trans fats, cholesterol, salt (sodium), and added sugars.”

2) ”Choose and prepare foods and beverages with little salt and/or added sugars (caloric sweeteners).”

Dietary Guidelines
Consumer Brochure (continued)

"Don't Sugarcoat It. Since sugars contribute calories with few, if any, nutrients, look for foods and beverages low in added sugars."

Every major, comprehensive review of the total body of scientific literature continues to exonerate sugars intake as the causative factor in any lifestyle disease, including obesity.

Review of 1000 scientific papers, the FDA Sugars Task Force in 1986 reported that "*with the exception of dental caries, the scientific evidence clears sugars of links with other diseases including diabetes, hypertension, behavior and obesity.*" [i]

The 1989 National Academy of Sciences Report on Diet and Health stated, "Sugar consumption (by those with an adequate diet) has not been established as a risk factor for any chronic disease other than dental caries in humans." [ii]

In 1997, a joint FAO/WHO expert consultation concurred that "there is no evidence of direct involvement of sucrose, other sugars and starch in the etiology of lifestyle diseases." This conclusion was included in the FAO "Carbohydrates in human nutrition" report. [iii]

[i] Glinsmann, W.H., et. al. Evaluation of health aspects of sugars contained in carbohydrate sweeteners. *J. Nutr* ll6(llS):Sl-S216, l986.

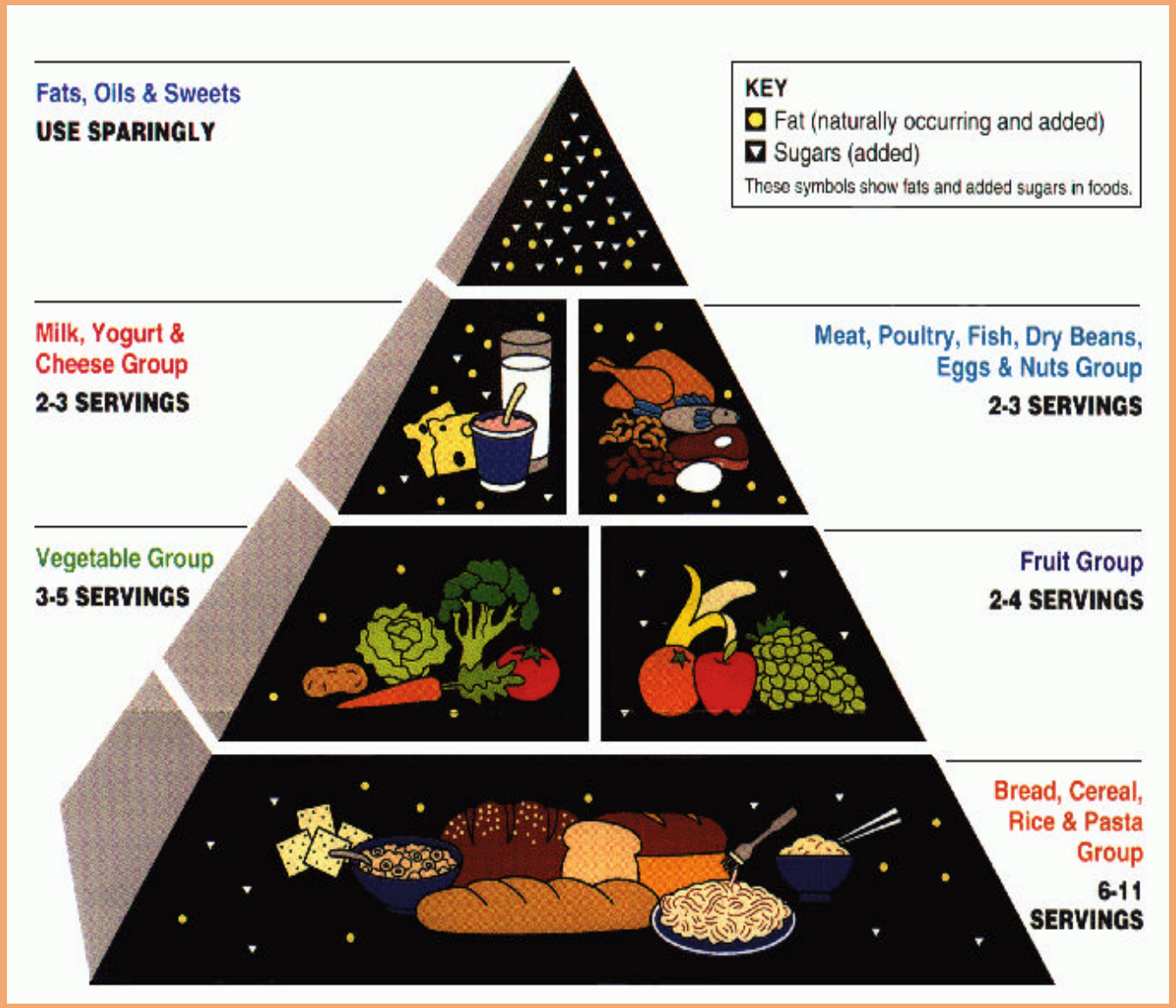
[ii] National Research Council. *Food and Nutrition Board. Diet and Health: Implications of Reducing Chronic Disease*. National Academy Press, Washington DC, 1989.

[iii] World Health Organization and Food and Agriculture Organization of the United Nations. *Carbohydrates in human nutrition*. Report of a Joint FAO/WHO consultation. FAO Food and Nutrition Paper 66, Rome, 1998.

Institute of Medicine Food and Nutrition Board's Macronutrients Report September 5, 2002

"Based on the data available on dental caries, behavior, cancer, risk of obesity and risk of hyperlipidemia, there is insufficient evidence to set a UL for total or added sugars."

However, they go on to say, "Although a UL is not set for sugars, a maximal intake level of 25 percent of less of energy from added sugars is suggested based on the decreased intake of some micronutrients of American subpopulations exceeding this level."

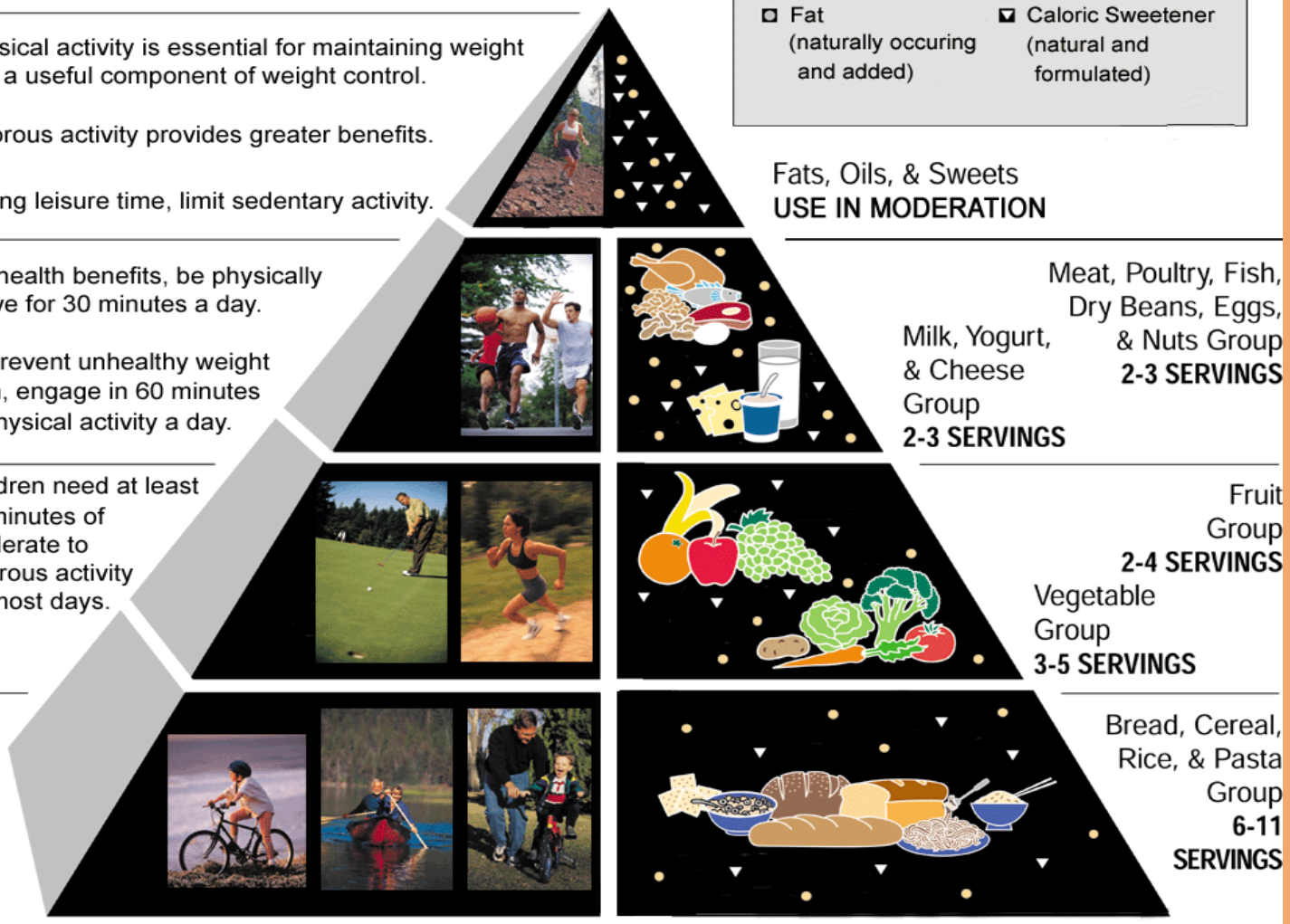

Fats, Oils & Sweets
USE SPARINGLY
KEY
Fat (naturally occurring and added)
Sugars (added)
These symbols show fats and added sugars in foods.
Milk, Yogurt & Cheese Group
2-3 SERVINGS
Meat, Poultry, Fish, Dry Beans, Eggs & Nuts Group
2-3 SERVINGS
Vegetable Group
3-5 SERVINGS
Fruit Group
2-4 SERVINGS
Bread, Cereal, Rice & Pasta Group
6-11 SERVINGS

Food Guide Pyramid

1) Eliminate reference to added sugars.

2) Establish science-based sugar policy for use in the Pyramid.

Lifestyle Pyramid



Source: U.S. Department of Agriculture/U.S. Department of Health and Human Services

A healthy lifestyle involves energy in vs. energy out. To achieve this goal, a variety of foods should be consumed in moderation and physical activity must be part of a daily schedule.

Defending Against The World Health Organization's Misguided Nutrition Policy

Objective – Prevent the use of the WHO Diet and Nutrition Report 916 in WHO policy and in other nutrition policy considerations including the re-drafted Global Strategy.

The World Health Organization (WHO) Diet and Nutrition Report 916

Calls for 10% caloric intake of sugars

In the United States

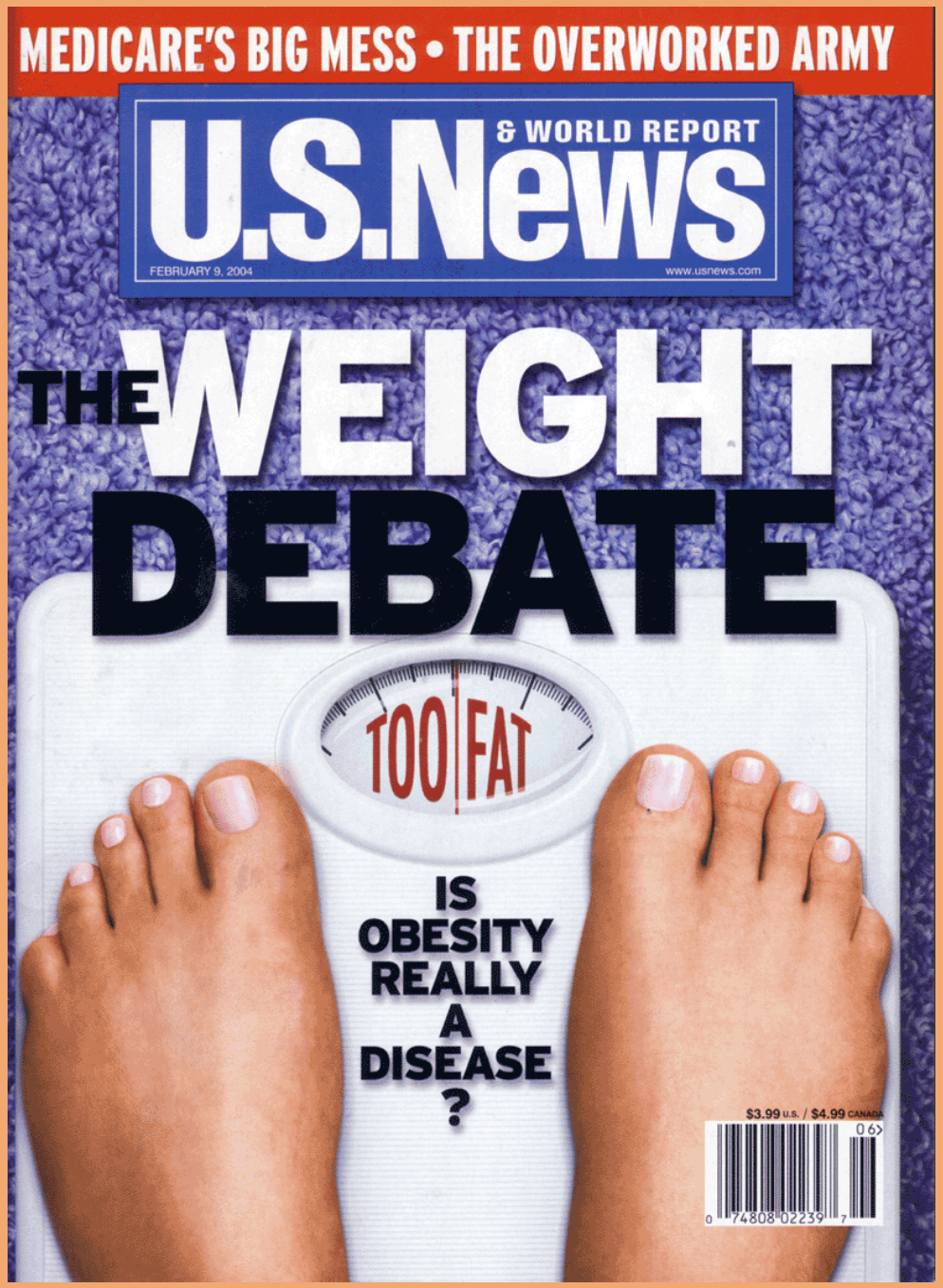
The U.S. Department of Agriculture reports that we consume 15.7% of our calories in added sugars.

Inaccuracies with WHO Report 916

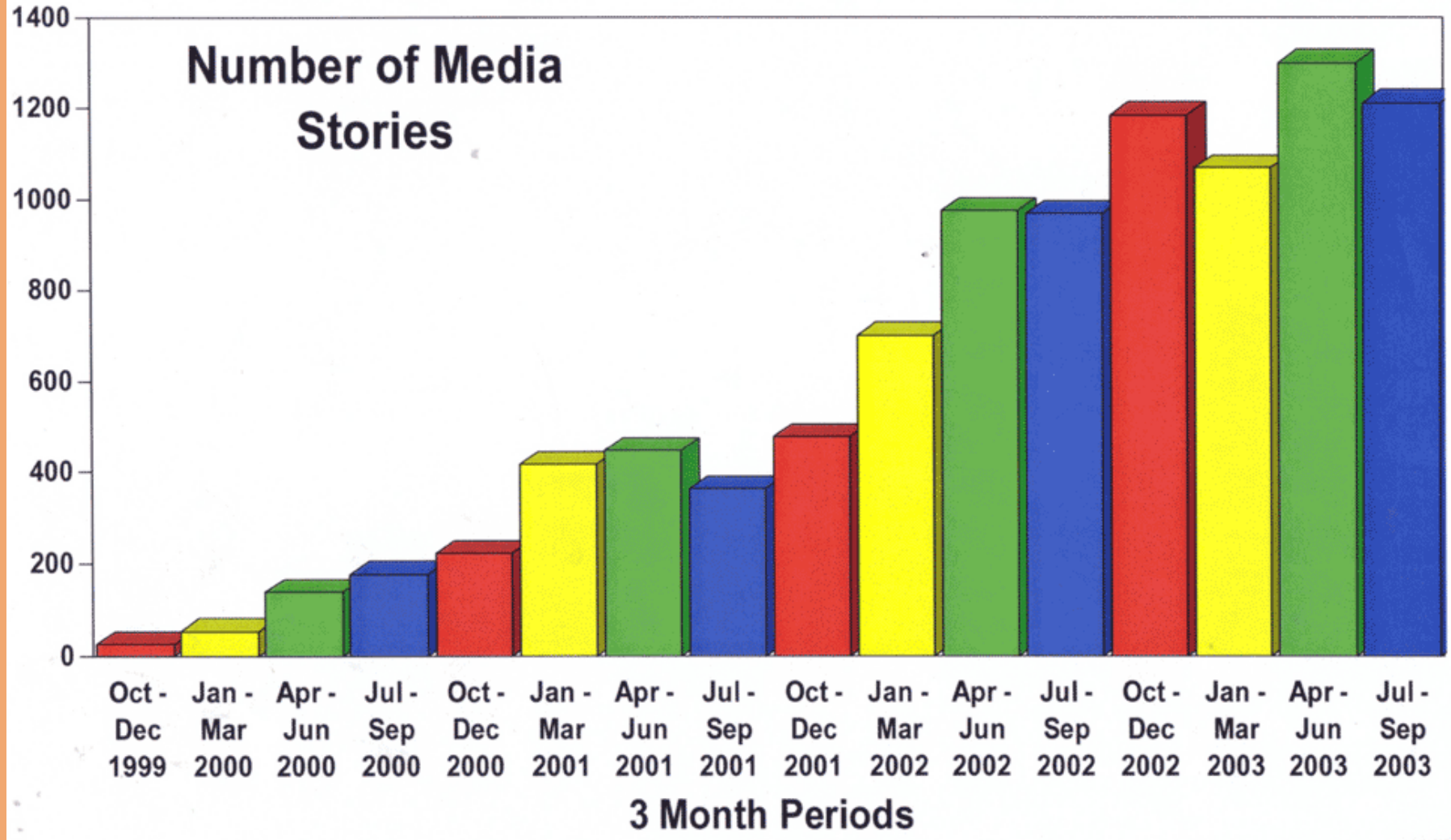
- Lacks the preponderance of science (only 11 scientific references were cited, one 30 years old)
- Lacks a broad-based, outside peer review
- Lacks an economic impact analysis (G-77 and GRULAC developing countries oppose the Report)
- Lacks due process

In the United States

If the WHO recommendation had been adopted, this would mean sugar production and deliveries in the U.S. would be cut by approximately 30 percent (2.5 million tons) or more!

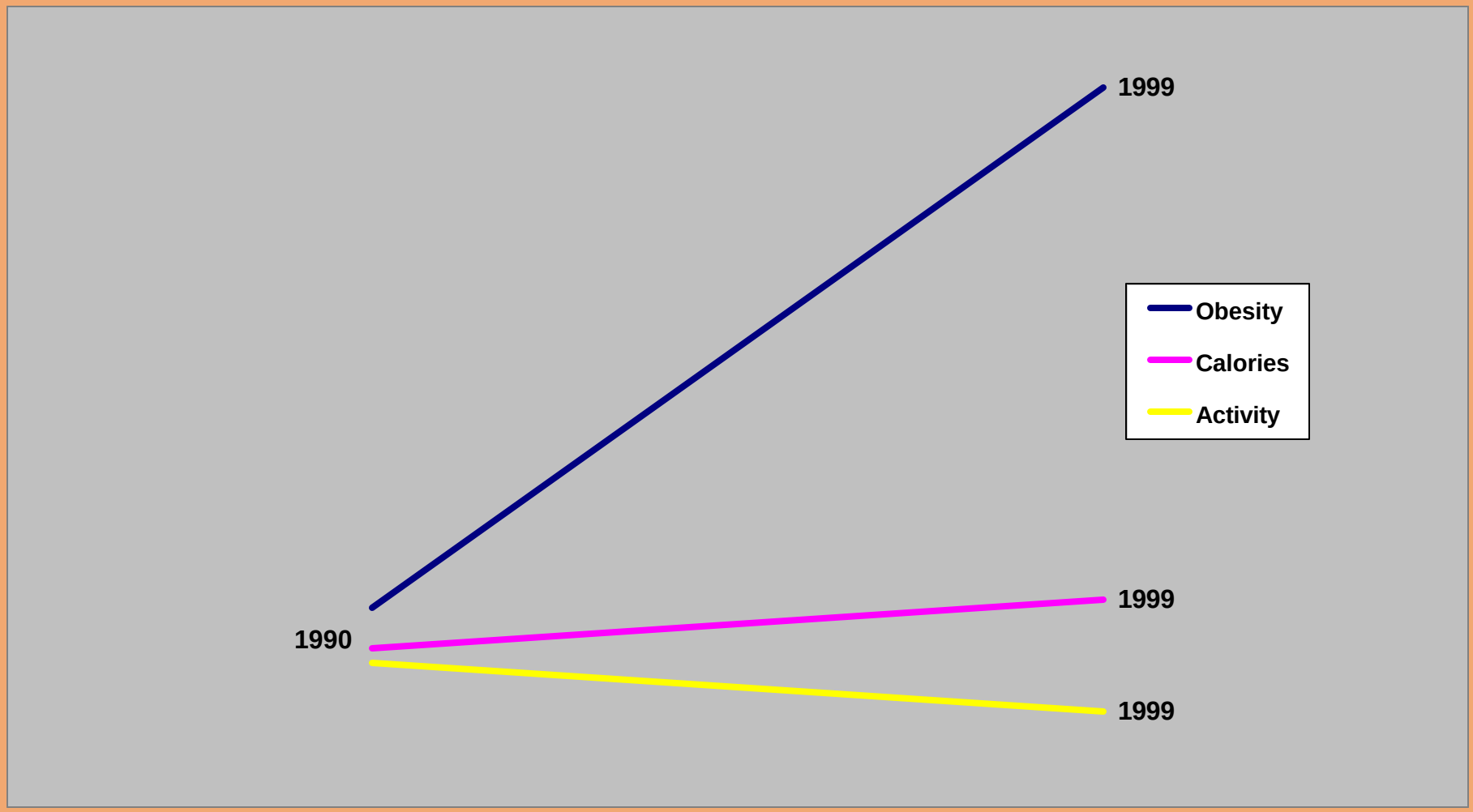

MEDICARE'S BIG MESS • THE OVERWORKED ARMY
U.S.News & WORLD REPORT
FEBRUARY 9, 2004
www.usnews.com
THE WEIGHT DEBATE
TOO FAT
IS OBESITY REALLY A DISEASE ?
$3.99 U.S. / $4.99 CANADA

Trends in Obesity-Related Media Coverage



Note: Figures represent International Food Information Council Foundation (IFIC) tracking of U.S. and International (English-speaking) wire reports and print articles on the issue and do not necessarily reflect the true number of stories.

Changes in Obesity, Food Supply Per Capita Daily Calories and Physical Activity
1990 - 1999 Comparative U.S. Trends



Sources: DHHS Centers for Disease Control & Prevention and USDA Economic Research Service

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January 30, 2003

Center for Disease Control (CDC) Reports

February 5, 2004

Caloric intake by both men and women has increased 22 percent (to 1,877 calories in women) – 7 percent (to 2,618 calories in men).

Are Diets the Solution?

- Atkins – 52% completed one year – 4% weight lost
- Ornish – 50% completed one year – 6% weight lost
- Weight Watchers – 65% completed one year – 5% weight lost
- Zone – 65% completed one year – 5% weight lost

The Facts

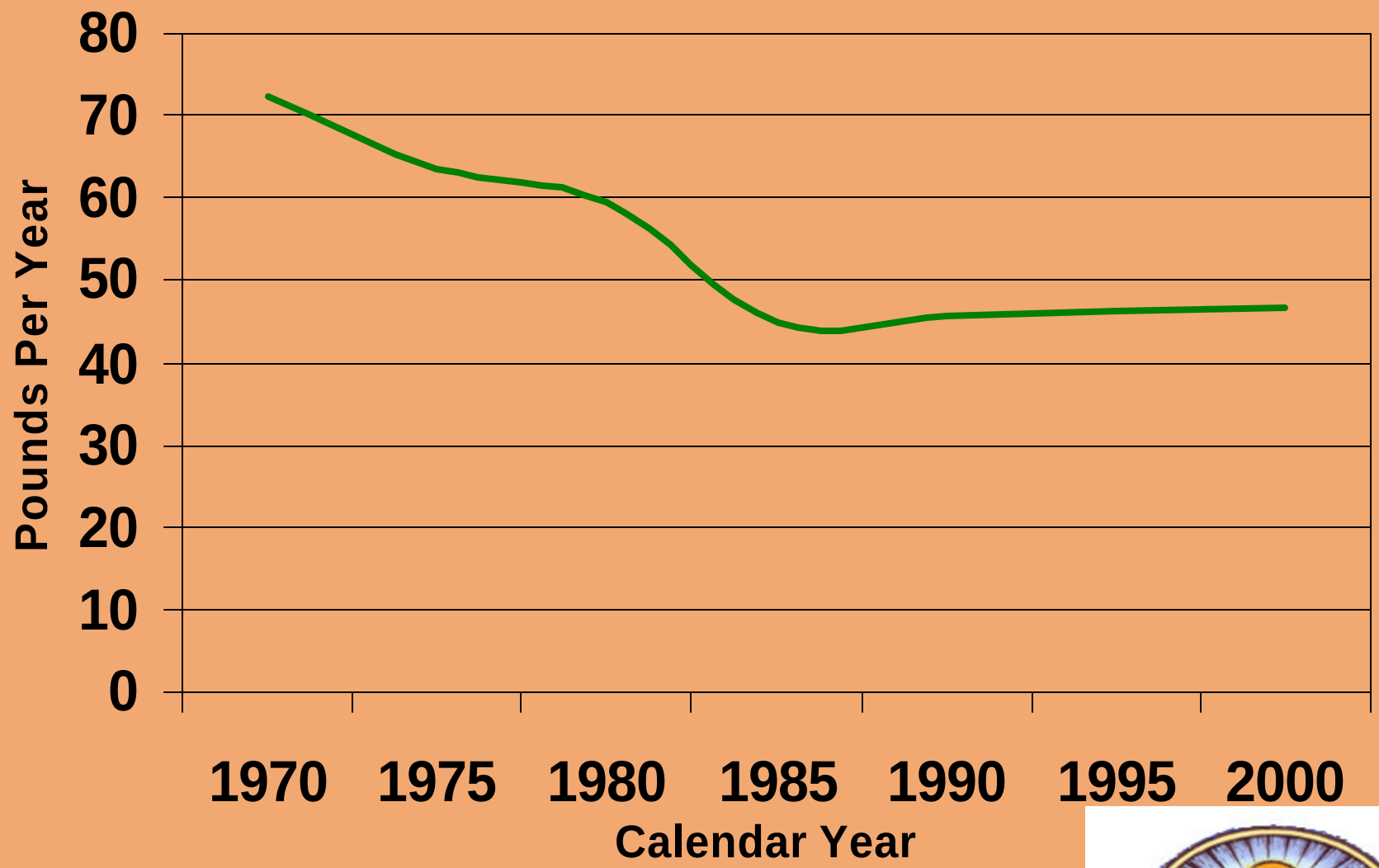
Calories in = Calories out

Imbalance means weight gain or weight loss

USDA's Economic Research Service created a new Table 51 to reflect accurate sugar consumption figures.

- Per capita deliveries of sugar (sucrose) has trended downward since 1972 when it was 102 lbs. per person per year. Now in 2002, per capita deliveries is 63 lbs. per person per year.
- Deliveries were adjusted downward by 29% for waste, spoilage, and other loss to provide an accurate sugar consumption figure of **45 lbs.** per person per year.

Figure 1. US Per Capita Sucrose Calendar Year Deliveries1 for Domestic Food and Beverage Use, 1970 – 2000



Source: USDA. Economic Research Service, Briefing Room. ***Sugar and Sweetener Yearbook Tables: Excel (.xls) Spreadsheets***, Table 51 http://www.ers.usda.gov/briefing/sugar/Data/data.htm. Last ERS Update: June 2, 2003.

Be physically active each day

Health benefits of physical activity

Physical activity recommendations

Adults – 60-90 minutes of moderate physical activity most, preferably all days of the week

Children -- 60 minutes of moderate physical activity daily

* Dietary Guidelines for All Americans 2005

Time In A Bottle

Why are soft drinks that date back to Grandma's time flourishing in a Coke-and-Pepsi world?

When the Falzer family opened C.J. Arthur's restaurant at the site of a long-popular eatery in suburban Chicago, they saw that one of the soft drinks stocked by the previous owner was a lime-tasting concoction, available mostly in the Midwest, called Green River. Fifteen years later, it's still there.

"We never ever thought of taking it out," says Cindy Falzer. "It's been here as long as there has been a restaurant in this location. And it's still really popular. We've got adults who come in and say, 'I haven't had that since I was a kid,' and we have kids who are trying it for the first time."

In this, the 85-year-old Green River is not alone. This may be a Coke-and-Pepsi universe, but a variety of regional soda makers have established comfortable and profitable niches. They may be as large as Big Red in Texas and Cheerwine in the Carolinas, which are among the 10 biggest regional brands in the country (though still minuscule by Coke and Pepsi standards), or as small as Ale-8-One

PHOTOGRAPHY BY ANDY BENNETT

E-BUSINESS FOR *All Natural*
SUGAR-BASED PRODUCTS

Welcome to E-Business for Sugar-Based Products

The definitive resource on the web for products made with all natural beet and cane sugar!

Sugar: All Natural... 15 Calories Per Teaspoon!

Featured Beverage: Dublin Dr. Pepper

Dublin Dr. Pepper, based in Dublin, TX, is the world's oldest Dr. Pepper Bottler and uses only sugar in its non-diet products. It is definitely a 'A True Texas Original'!

Visit the **Beverages** section to view all the sugar-based beverages.

Featured Food Product: Florida Crystals Sugar

Florida Crystals natural sugars are milled on the day of harvest, with one simple crystallization. The juice is pressed from sun-ripened sugarcane, washed, filtered and crystallized-all right on the farm. Because our natural sugars are less processed, they retain more of the original flavor of sun-sweetened sugarcane. No additives or preservatives, nothing artificial--just natural sweetness to enhance your favorite foods.

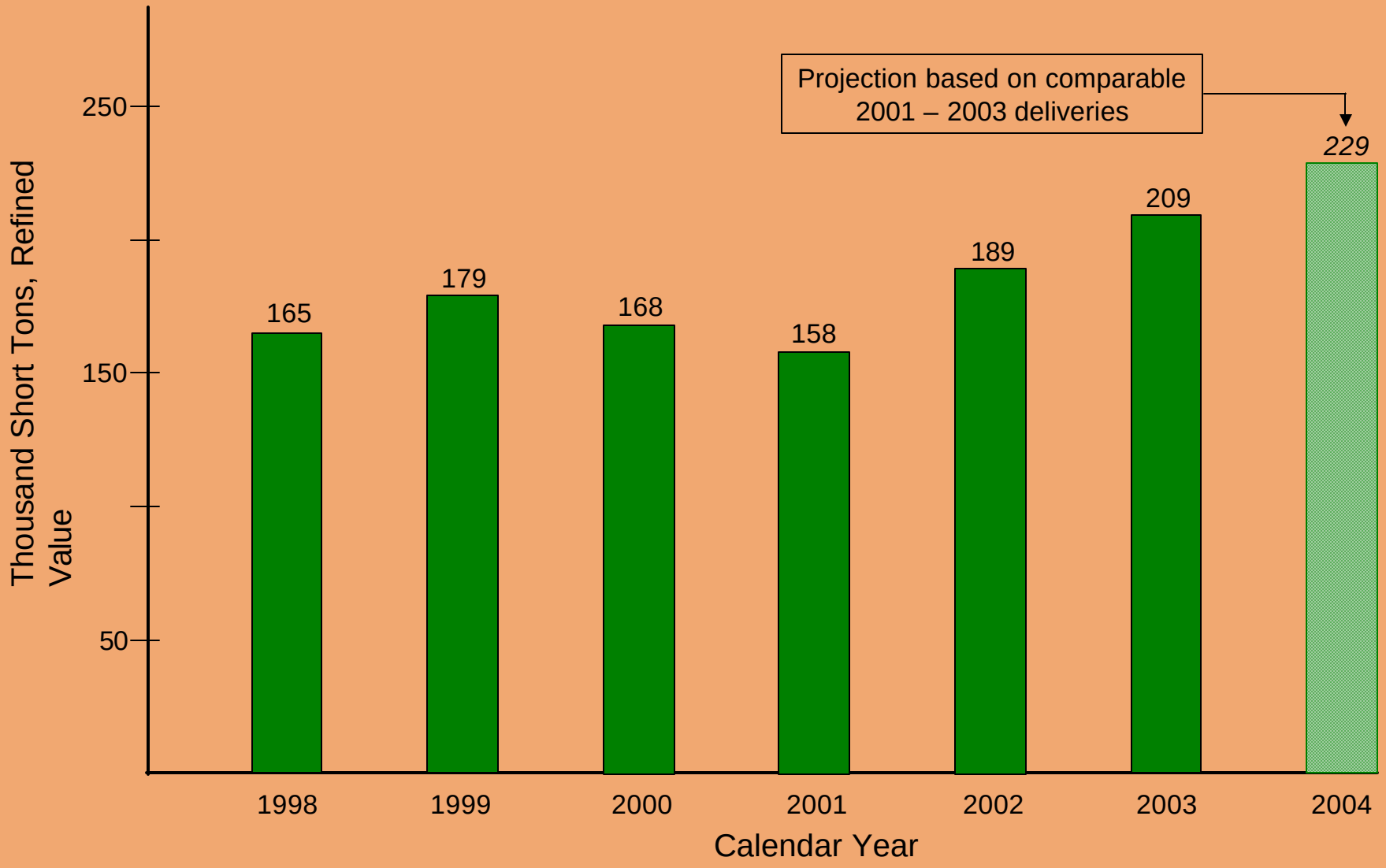
Visit the **Food Products** section to view all the sugar-based food.

Featured Cosmetic: Coconut Spa Coconut Sugar Body Rub

This incredibly effective body treatment gently buffs away aging skin cells, unclogs pores and restores your skin to a healthy glow. A luscious tropical treat, it is made with the finest quality organic hand pressed virgin coconut oil from the Phillipines and pure cane sugar crystals from Hawaii.

Visit the **Cosmetics** section to view all the sugar-based cosmetics.

USDA Reported Sugar Deliveries to Beverage Industry



Source: USDA. Economic Research Service, Briefing Room. ***Sugar and Sweetener Yearbook Tables: Excel (.xls) Spreadsheets***, Table 20. http://www.ers.usda.gov/briefing/sugar/Data/data.htm . Last ERS Update: August 25, 2004.

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August 30, 2004

Assuring Scientific Integrity and Accountability

- Access to Data Law in 1999 which expanded the Freedom of Information Act provides that raw data must be made available if the research is federally funded once the findings are published or presented in a public forum.
- Data Quality Act in 2002 set standards for all U.S. agencies to adhere to in order to utilize any science or research to support their federal policy positions.

THE REGULATORS

Cindy Skrzycki

Salt Institute's Case Shakes Up Preliminary Rulemaking

The **Salt Institute** has its blood pressure up.

The group that represents 36 domestic and foreign salt producers is appealing its loss of a lawsuit that challenged the science a **National Institutes of Health** agency used in 2003 to recommend that lower sodium consumption would improve people's health.

The case is being closely watched because it is the first to try to expand judicial review into the basis for agencies' preliminary rulemaking. Interest groups already can sue to try to overturn final regulations. But the sodium chloride group and the **U.S. Chamber of Commerce** want the courts to get into the action earlier.

According to the suit, the **National Heart, Lung, and Blood Institute (NHLBI)** at NIH violated the Data Quality Act by refusing to release scientific studies that concluded that reduced sodium intake results in lowered blood pressure for most people.

The law, passed in 2000 and enthusiastically implemented by the Bush administration, gives the public a way to urge agencies to correct the science and economics underlying the creation of a federal rule or policy.

The law permits an appeal if an agency denies the request for correction, but no judicial review. That's why business wants courts to be able to challenge agency decisions. "The petitions would all be meaningless, because we would have no way to appeal," said **William**

See REGULATORS, *E3, Col. 1*

BY KEITH BENDIS FOR THE WASHINGTON POST

External Scientific Advisory Council/New Research

Objective – Enhance science base of the Sugar Association positions to support strong public policy and PR activities.

Sugar Association Strategy Study

The Gallup Organization

September 13, 2004

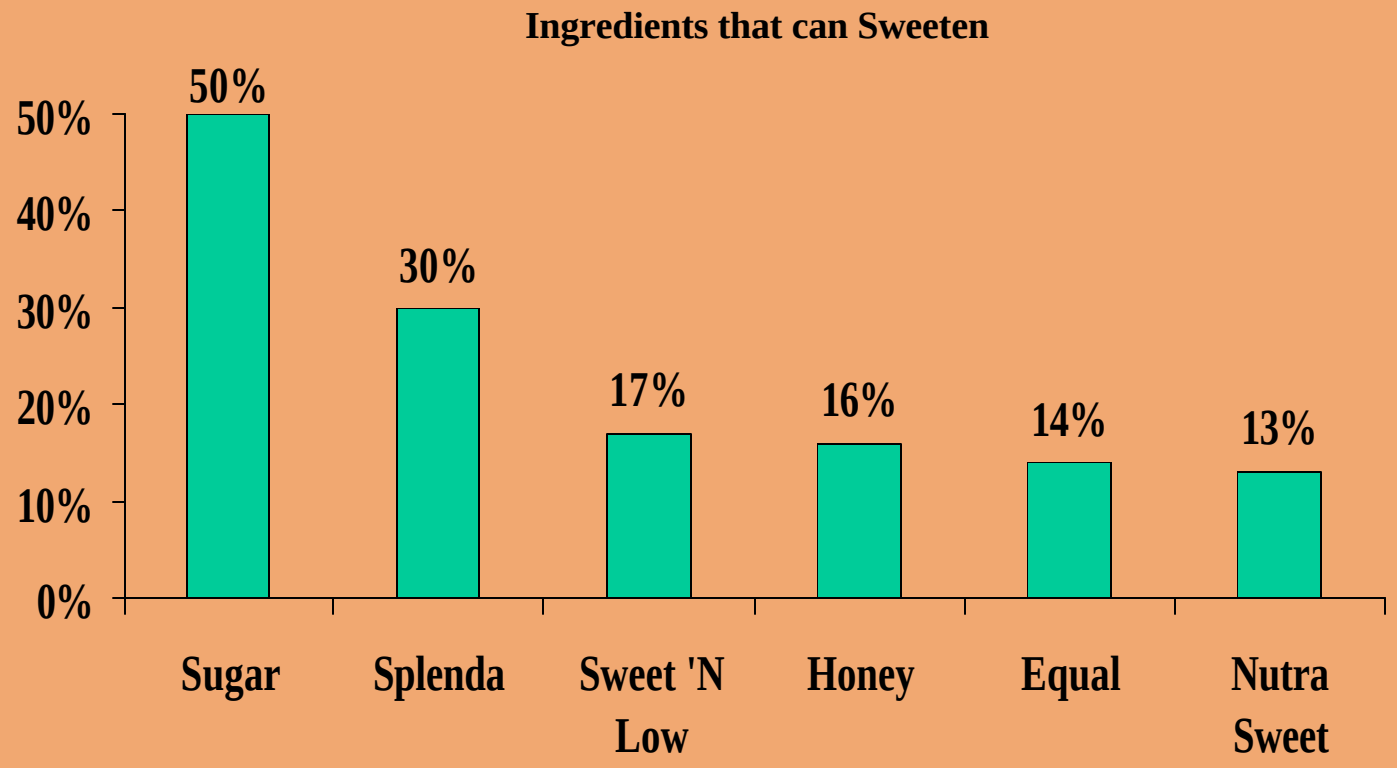
- What are the issues related to the use of sugar?
- What messages should be used to increase consumption?
- What are the best strategies to convey these messages?

Summary of Gallup Findings

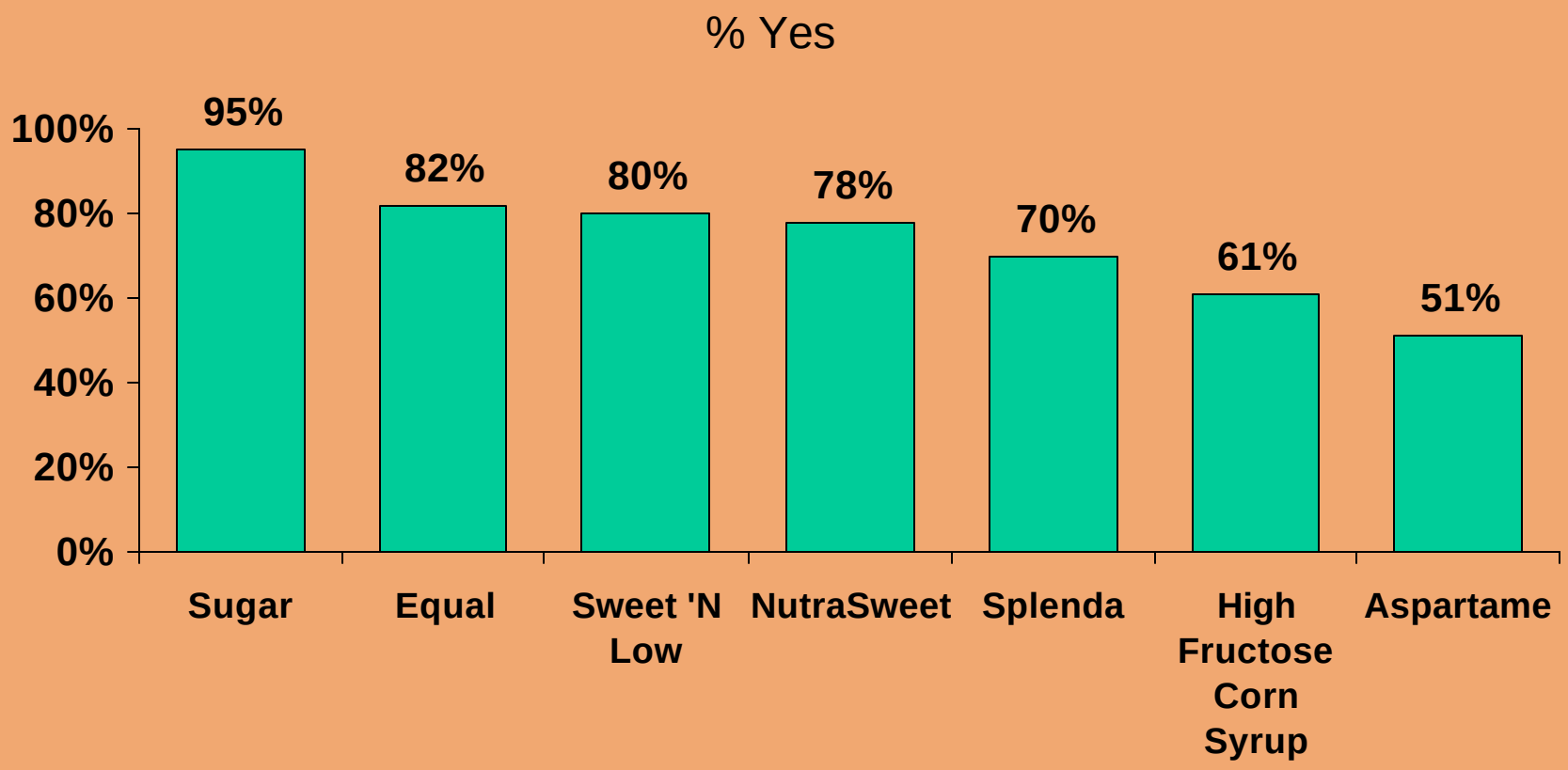
- Unprompted, sugar is acknowledged 50% with Splenda second at 30%
- When prompted, sugar awareness climbs to 95%, Equal comes in second with 82%, and Splenda is 70%
- “Refined” sugar versus “white” sugar – some consumers believe refined means it is not natural
- Consumers over estimate sugar’s caloric content – on average they put it at 76 calories per teaspoon

Sweeteners – Unprompted

- **Sugar has the highest visibility, but Splenda is surprisingly prominent**



Total Awareness of Sweeteners



Q7: Some other ingredients that you didn't mention are sometimes used to make food sweeter. Have you ever heard of the following?

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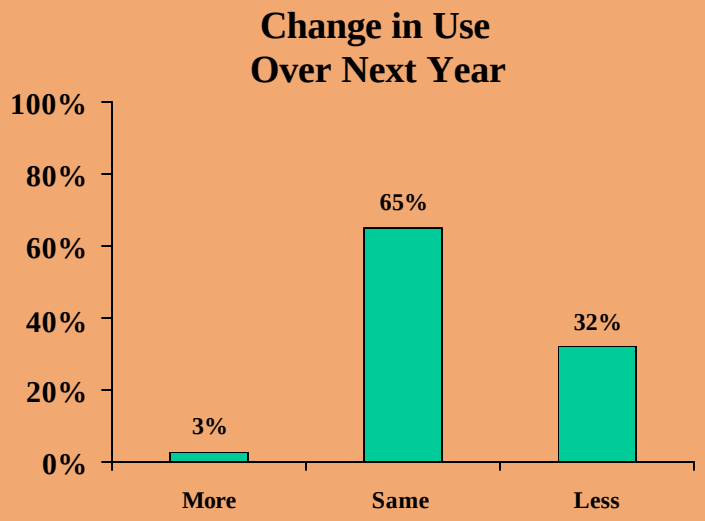
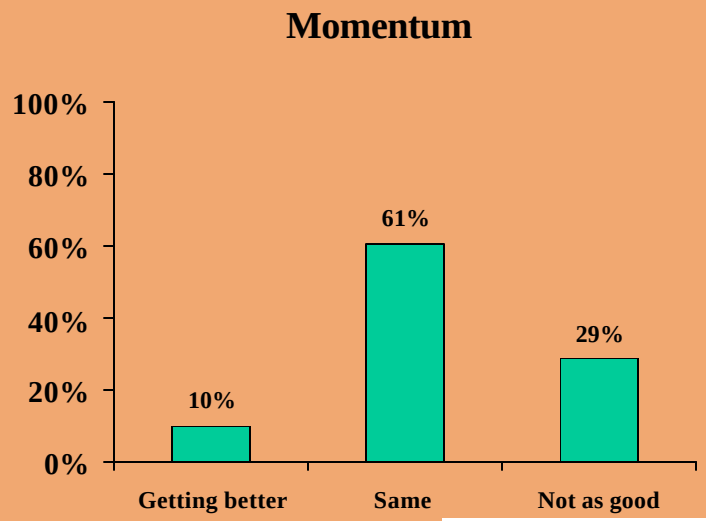
Sugar

- **Sugar is in a relatively weak competitive situation – and may erode further**
  - **Consumers overestimate sugar's caloric content**
    - **Avg. = 76/tsp., and that's up**





Super Bowl of Sweeteners

The Key Teams on the Field

THE SUGAR ASSOCIATION

Splenda
No Calorie Sweetener

HFCSFacts.com