

IQPC Conference, Toronto, March 31st. 2004
“Kid’s Nutrition 2004”

New Ingredients: What Should We Be
Incorporating in the Youth Diet?

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Ceres Consulting
March 30th. 2004

Presentation Outline

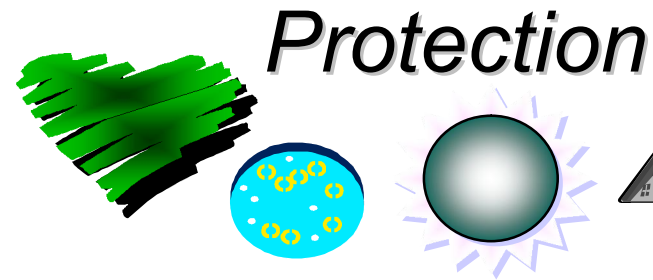
- Nutrition basics
- Recommended dietary intakes
- What dietary gaps?
- Eating right for optimal nutrition
- Where are some fortification opportunities?
- Show me the data!

Five Key Vitamin Functions in the Human Body

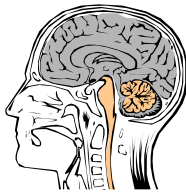
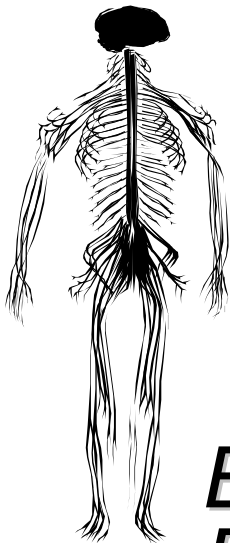


Metabolism

→ ENERGY



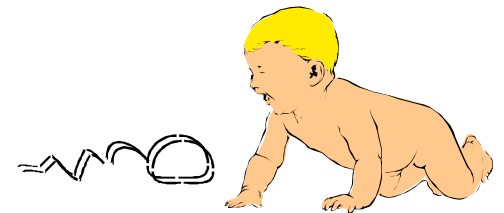
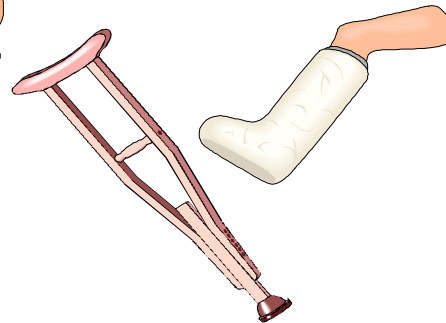
Protection



Basal Requirements



Growth/Repair



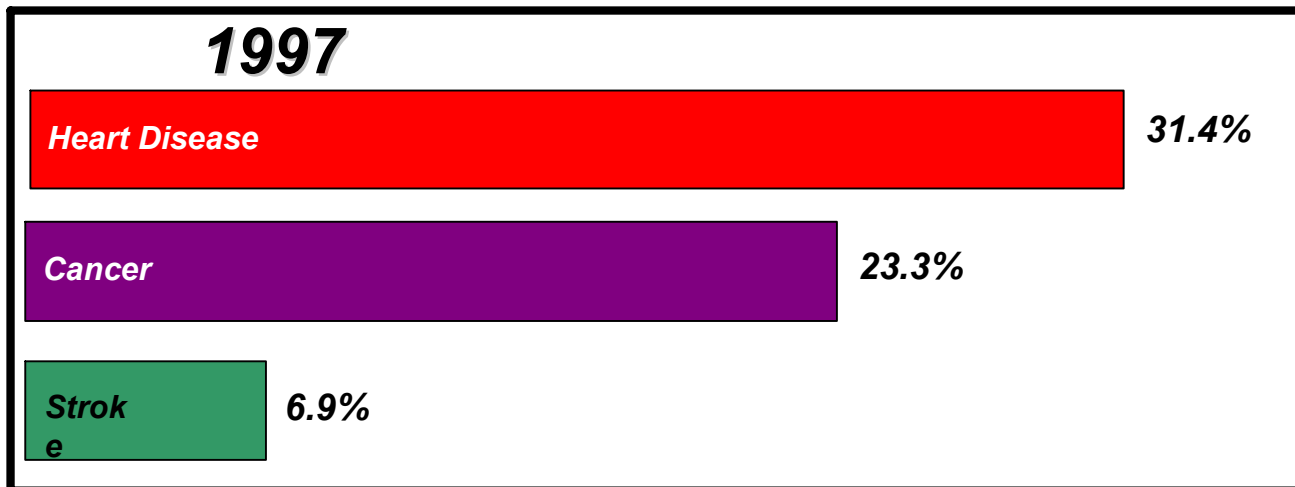
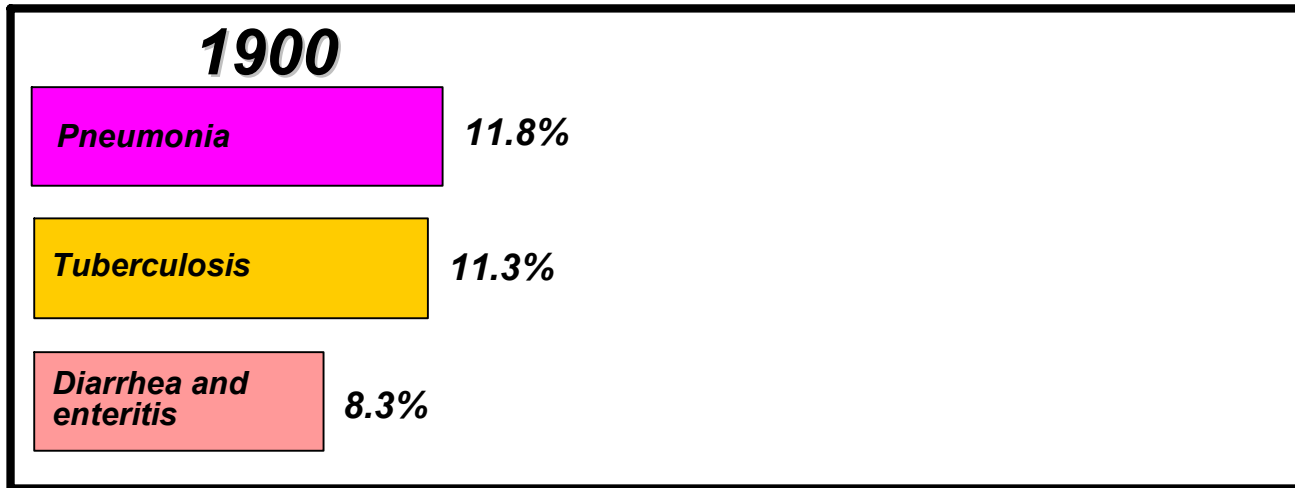
Reproduction

Key Functions for Vitamins in the Human Body

- Metabolism
 - Energy formation/maintenance
 - Regulation of body functions
- Basal Requirements
 - Eyesight
 - Nervous system
 - Brain/cognitive function
- Reproduction
 - Sperm health
 - Pregnancy/lactation
 - Birth defects
- Protection
 - Immune response
 - Environment
 - CVD, Lungs
 - GI tract
 - Recovery from injury
 - Diabetes
 - Chronic disease of elderly
- Growth/Repair
 - Growth Bones
 - Blood Skin
 - Collagen Hair

Shift in Disease Burden (1900-1997)

Leading Causes of Death



Types of Nutrient Enrichment

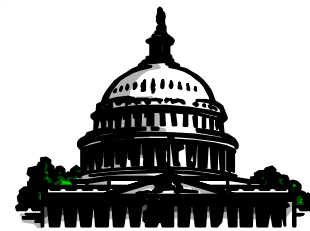
⌚ RESTORATION:

restore losses due to processing and handling



⌚ STANDARDIZATION:

enrich to meet current food standards of identity



⌚ FORTIFICATION:

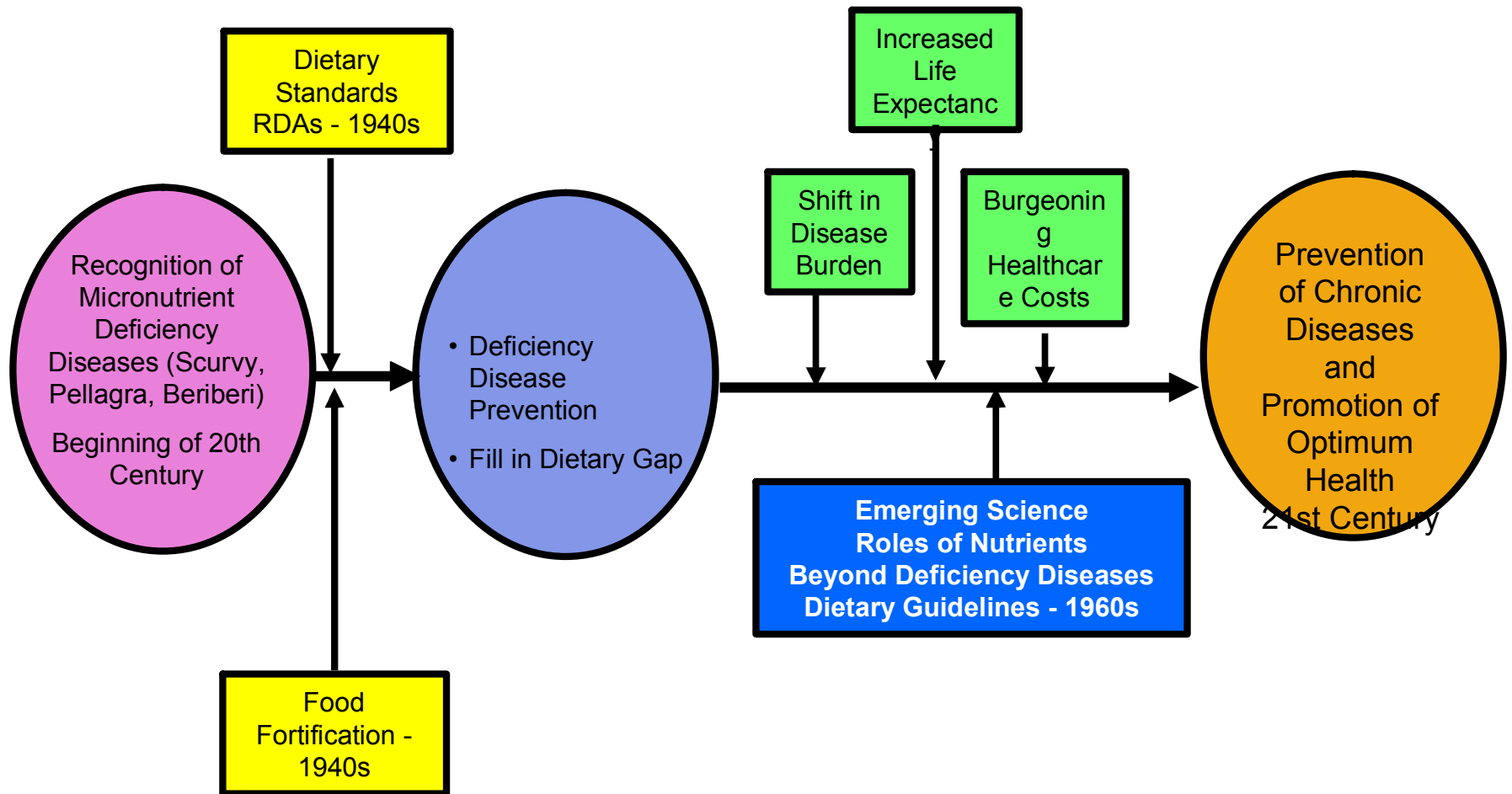
enrich to meet a specific nutritional profile

⌚ REPLACEMENT:

modified and/or new product replacing a standard product
i.e.. lite, reduced, low, non, free, etc...



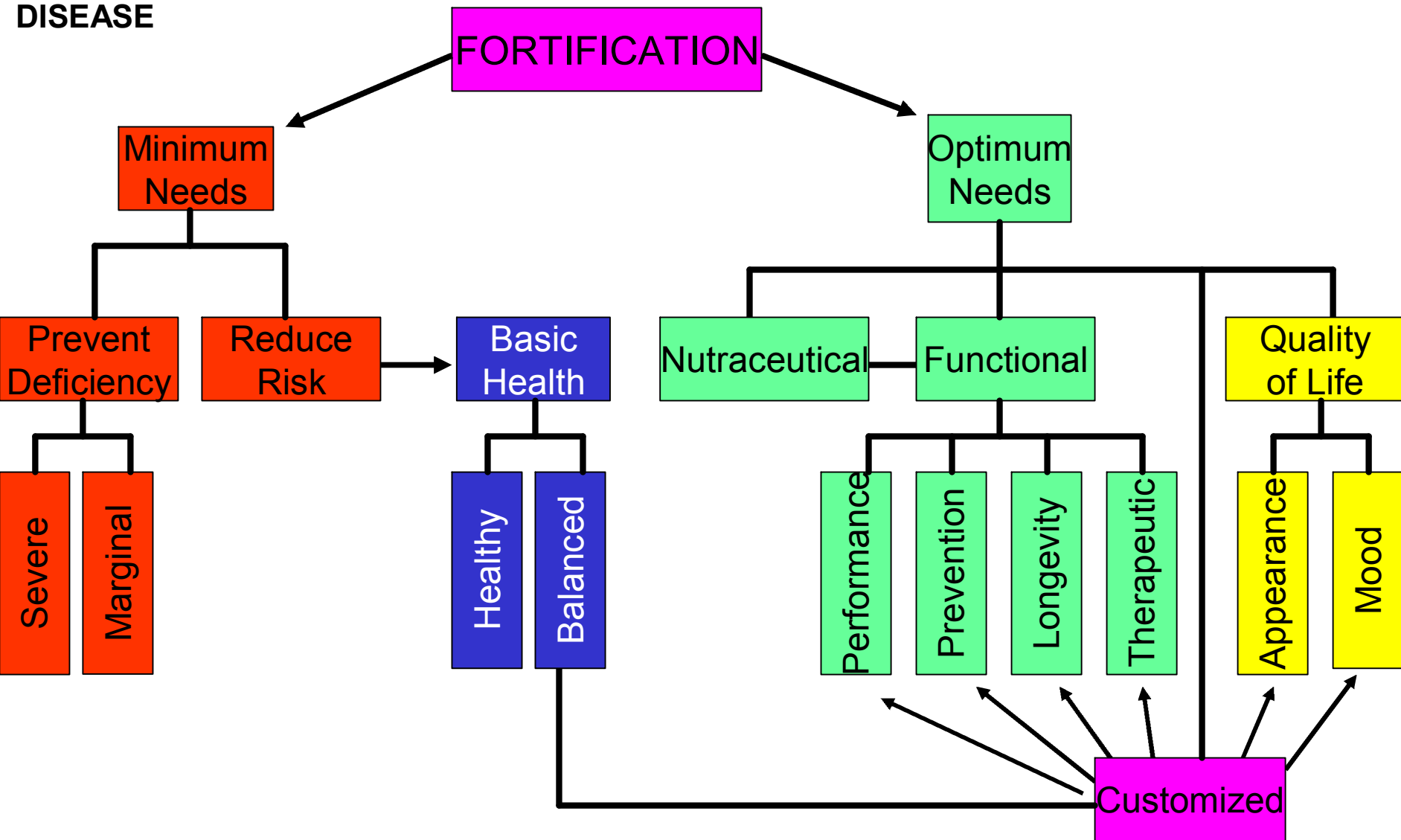
Evolutionary Landscape of Nutrition and Health



EVOLUTION / REVOLUTION OF FORTIFIED CHOICES IN THE NEW MILLENIUM

ABSENCE OF DISEASE

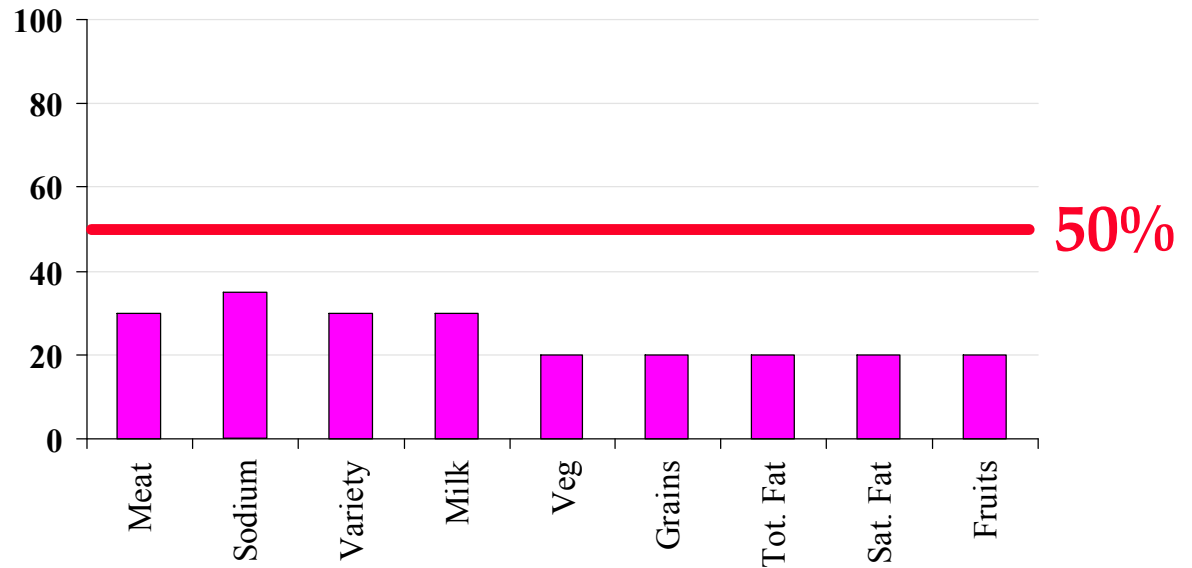
WELLNESS



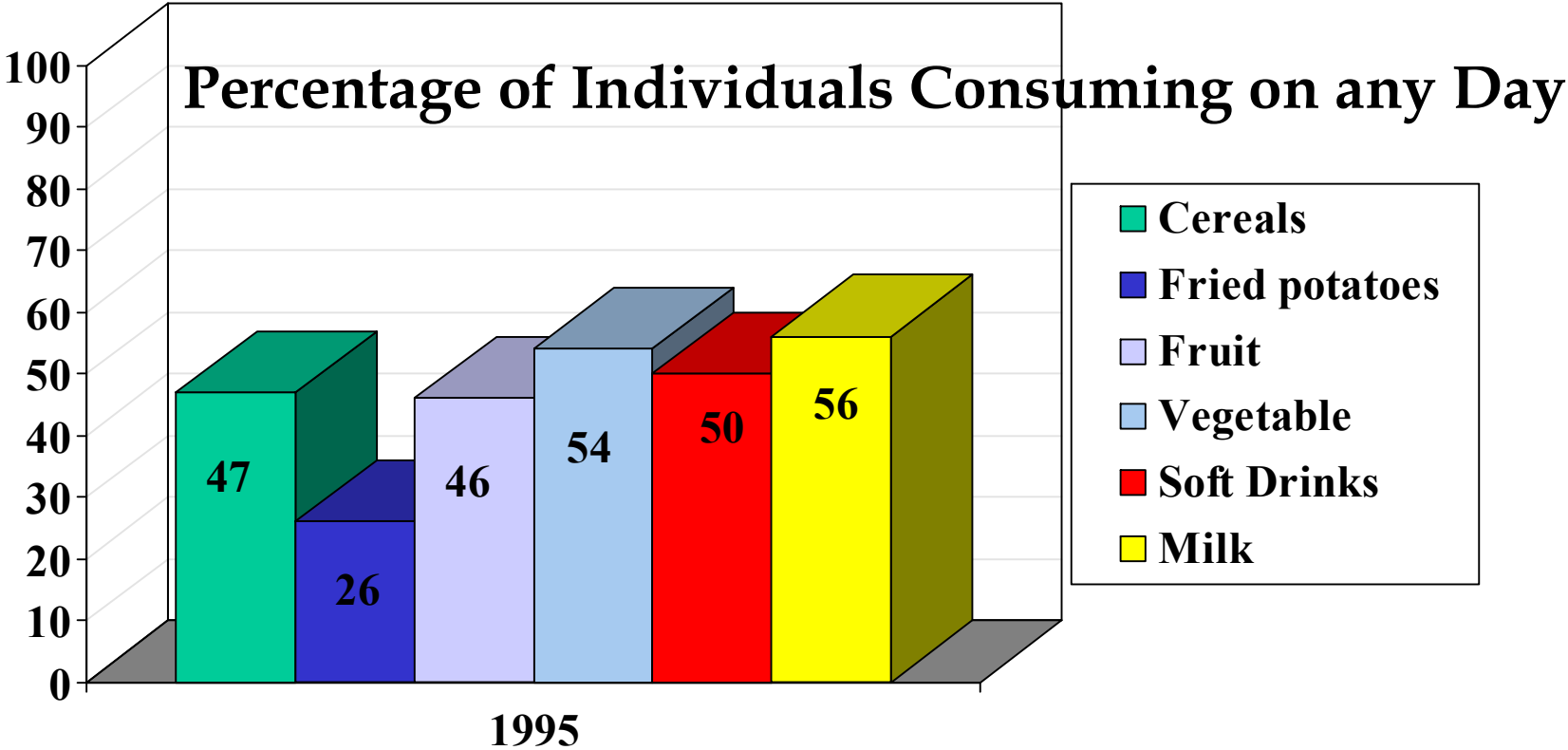
Healthy Eating Index (USA)

- **<20% met , grains, vegs and fruits guide**
- **<20% met guide for fat and sat. fat**
- **<30% met milk and meat guides**
- **<30% achieved variety guide**

Percent of Population Meeting Guidelines



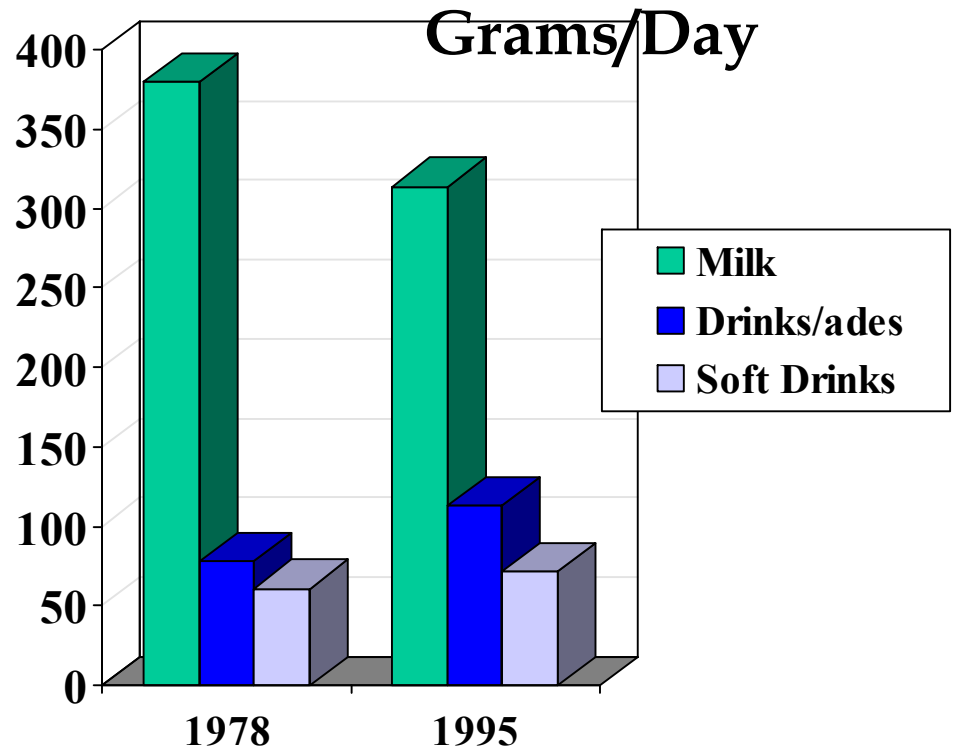
Daily Food Group Consumption



Food Intakes vs Guidelines (children <5 years)

Other Facts

- 50% of potatoes eaten by children/teens are french fries
- Children < 5Y drink more non-citrus (+300%), fruit drinks and ades (+45%) and soft drinks (+18%) and less milk than (-18%) than in 1977



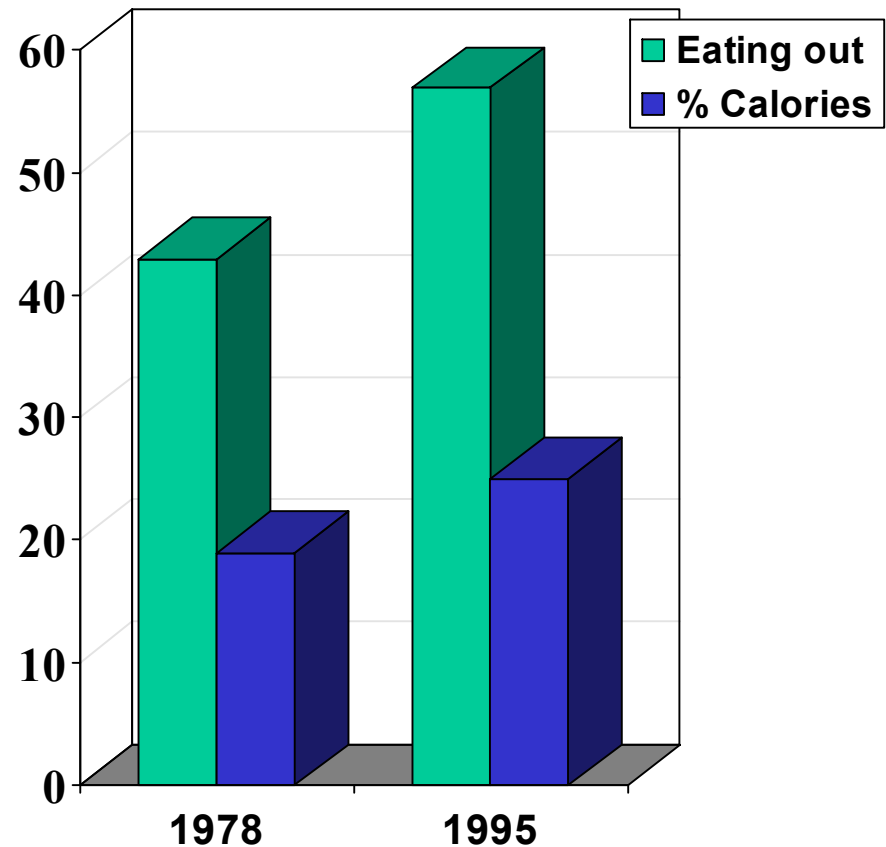
Food Intakes vs Guidelines

(adolescents)

- Adolescents drink twice as much soft drinks as milk, consumption doubled in girls and tripled in boys from 1977 to 1994
- From 1977 milk intakes have declined 33%, soft drinks doubled

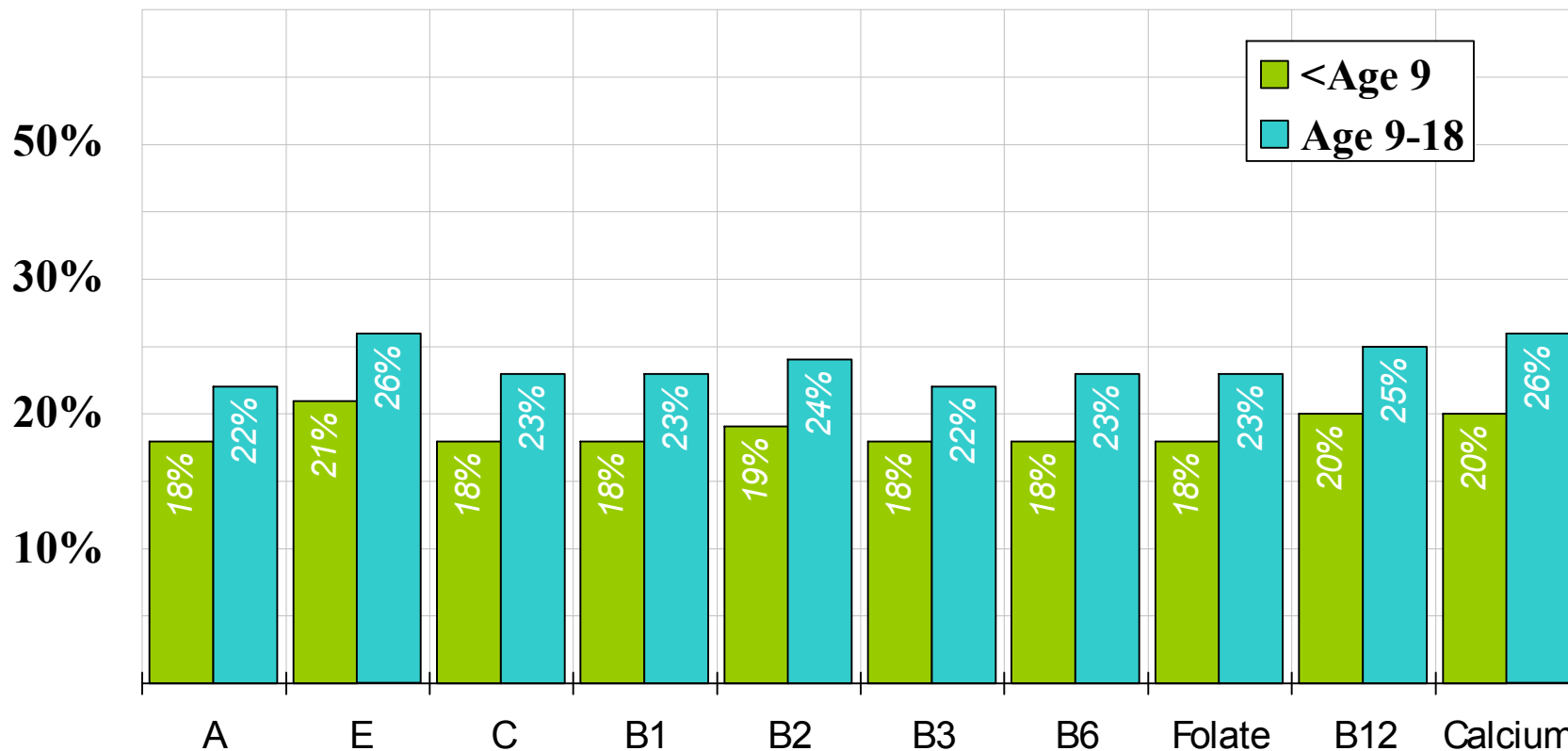
Eating Out in America (1996)

- Increased 33% from 1978 to 1995
- 61% Males eat out daily
- 51% females eat out daily
- About 25% of most nutrients but >30% of fats from eating out.



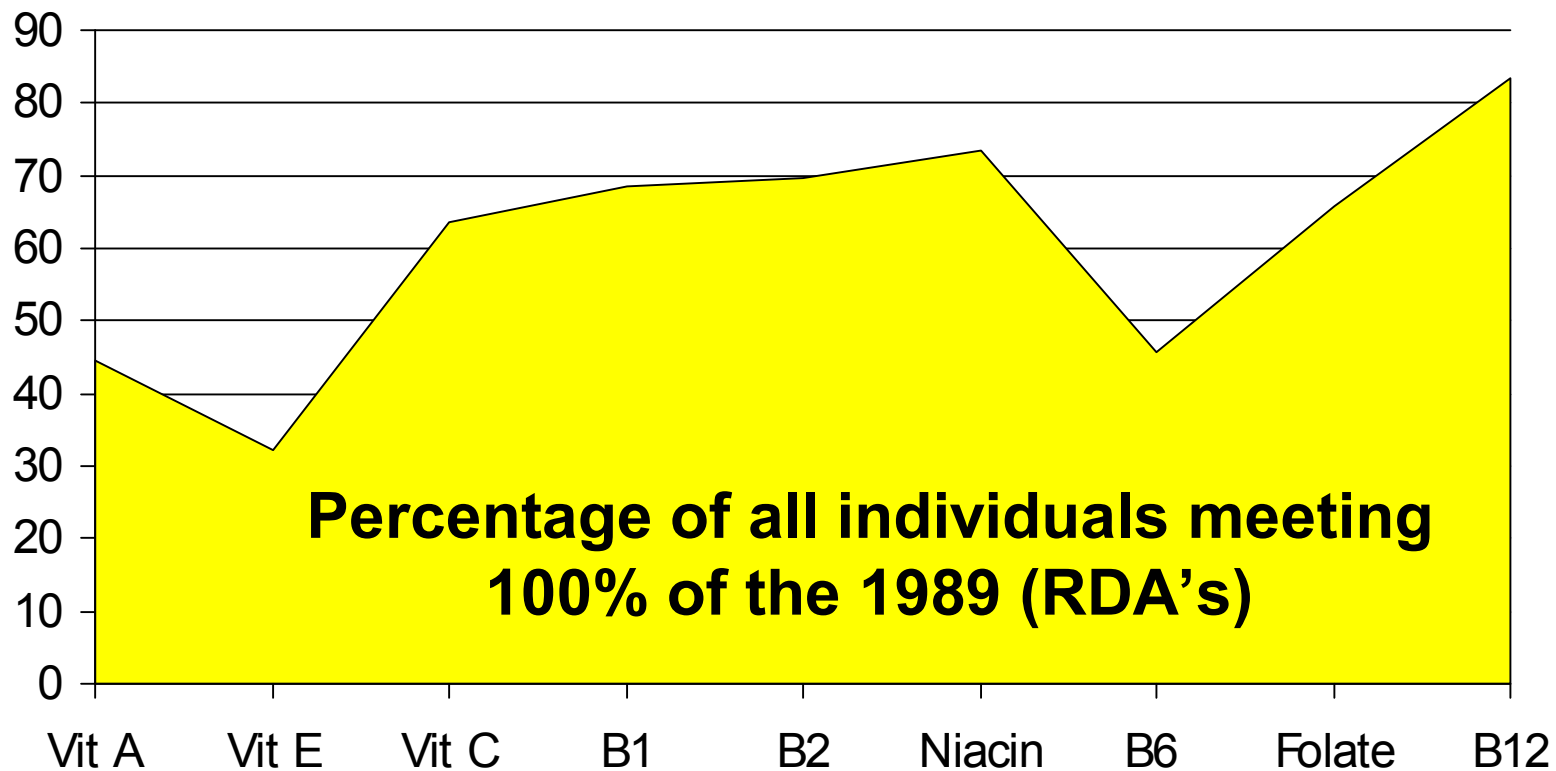
USDA Survey of Nutrient Intake

% of Nutrients in Current Diets Derived from Foods away from Home



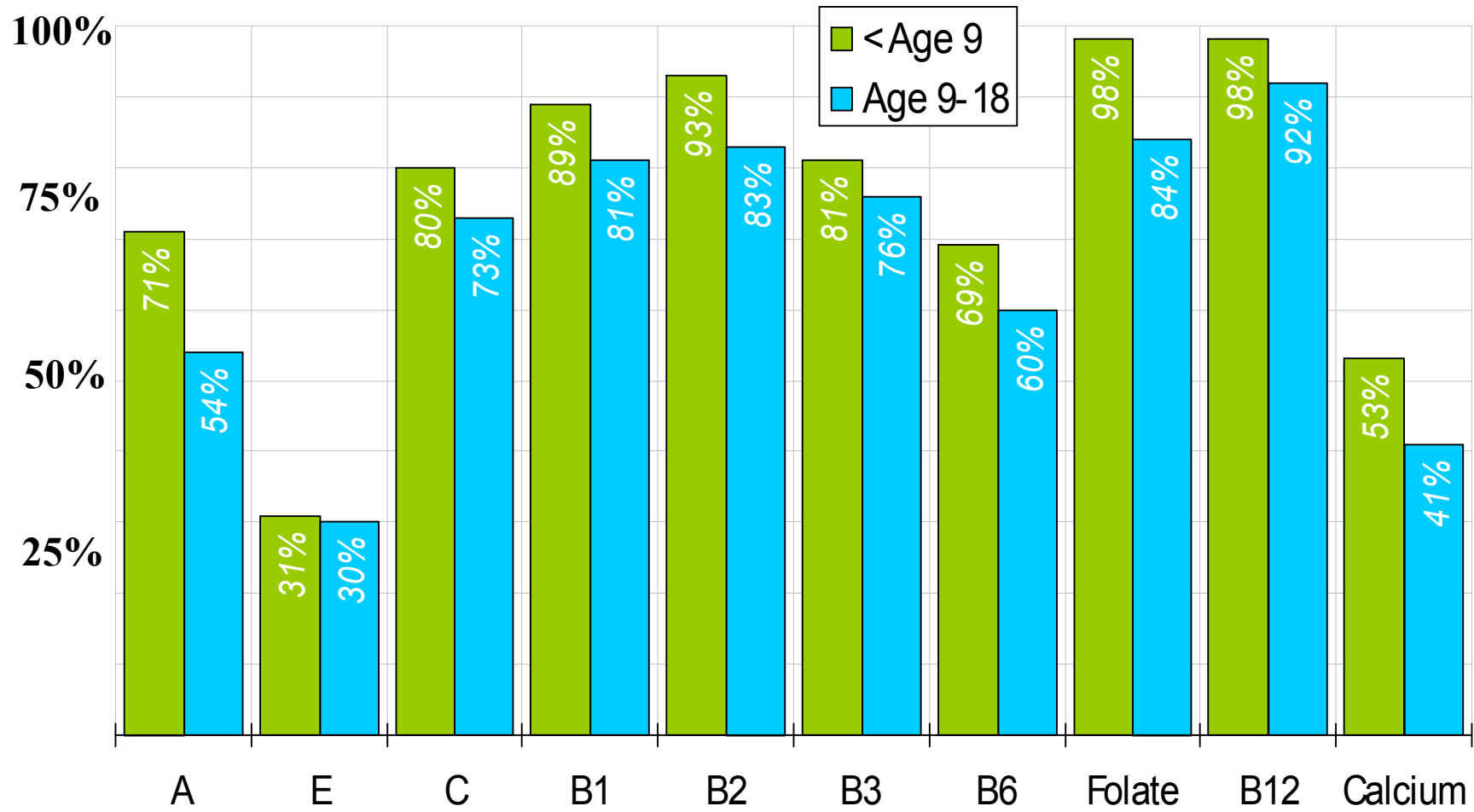
USDA Survey of Nutrient Gaps and Knowledge 1992-94, 1998

1994 USDA Continuing Food Intake Survey



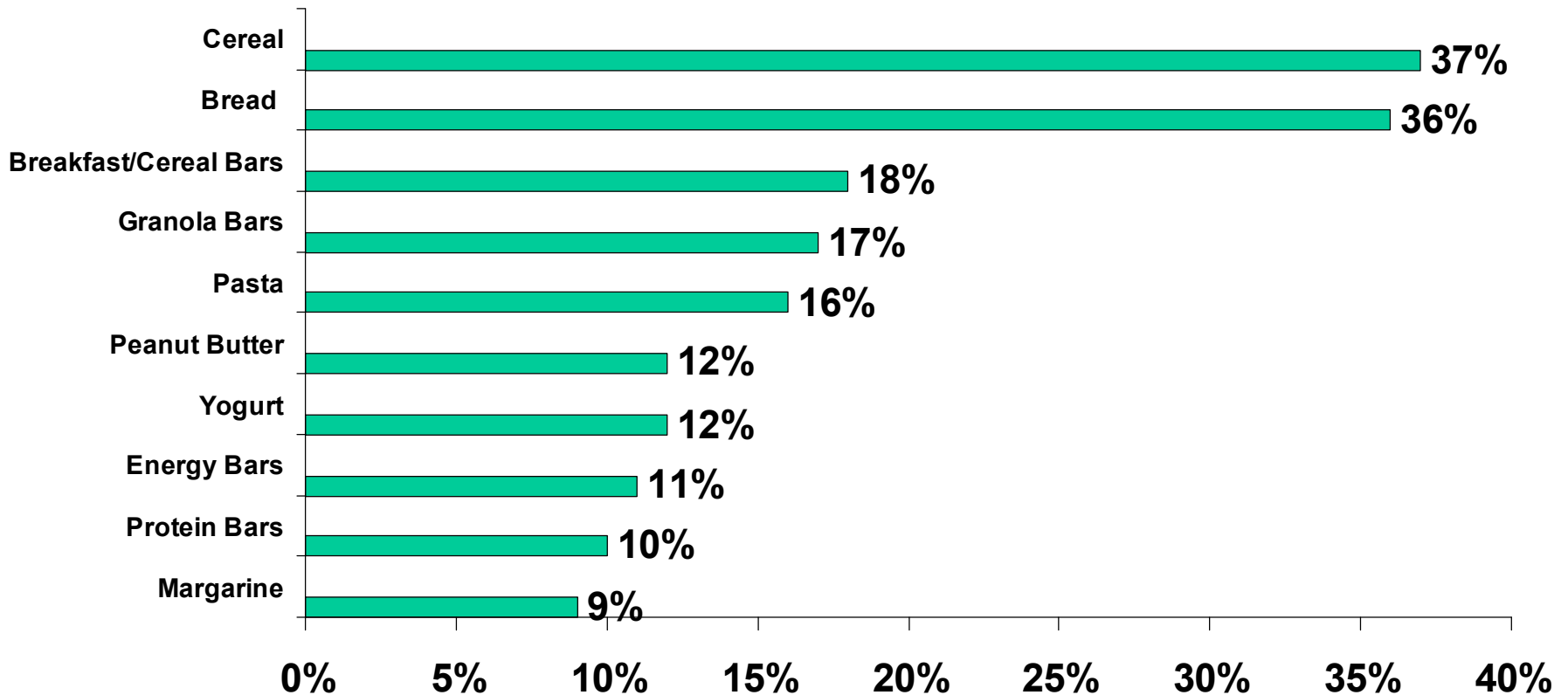
USDA Survey of Nutrient Intake

% of Individuals with Diets Meeting 100% RDA



Top 10 Fortified Foods For Which an Effort is Made to Consume

(based on all adults)

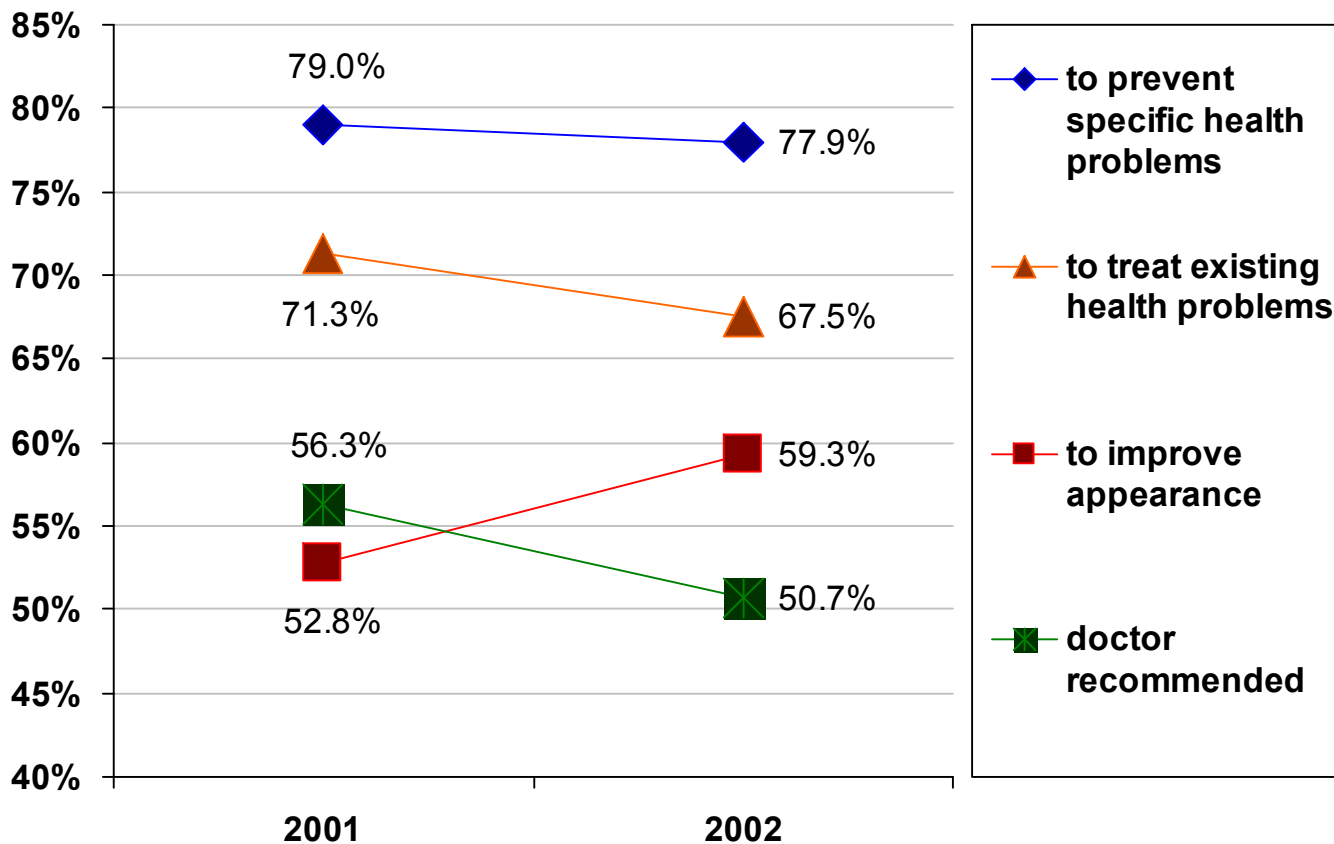


NMI Top 10 Macro Health & Wellness Trends

- ◆ A General Renewed Sense of Wellness
- ◆ Health & Wellness Consumer Polarization
- ◆ The Importance of Product Specificity
- ◆ Organics --- More Than Just Foods and Beverages
- ◆ Consumers Want More Information
- ◆ The Constant Struggle of Weight Loss
- ◆ Lifestyle Wellness Functionality
- ◆ The Opportunity For Targeted Health & Wellness Platforms
- ◆ Disease-Specific Solutions
- ◆ The Groundswell of Environmentalism & Values

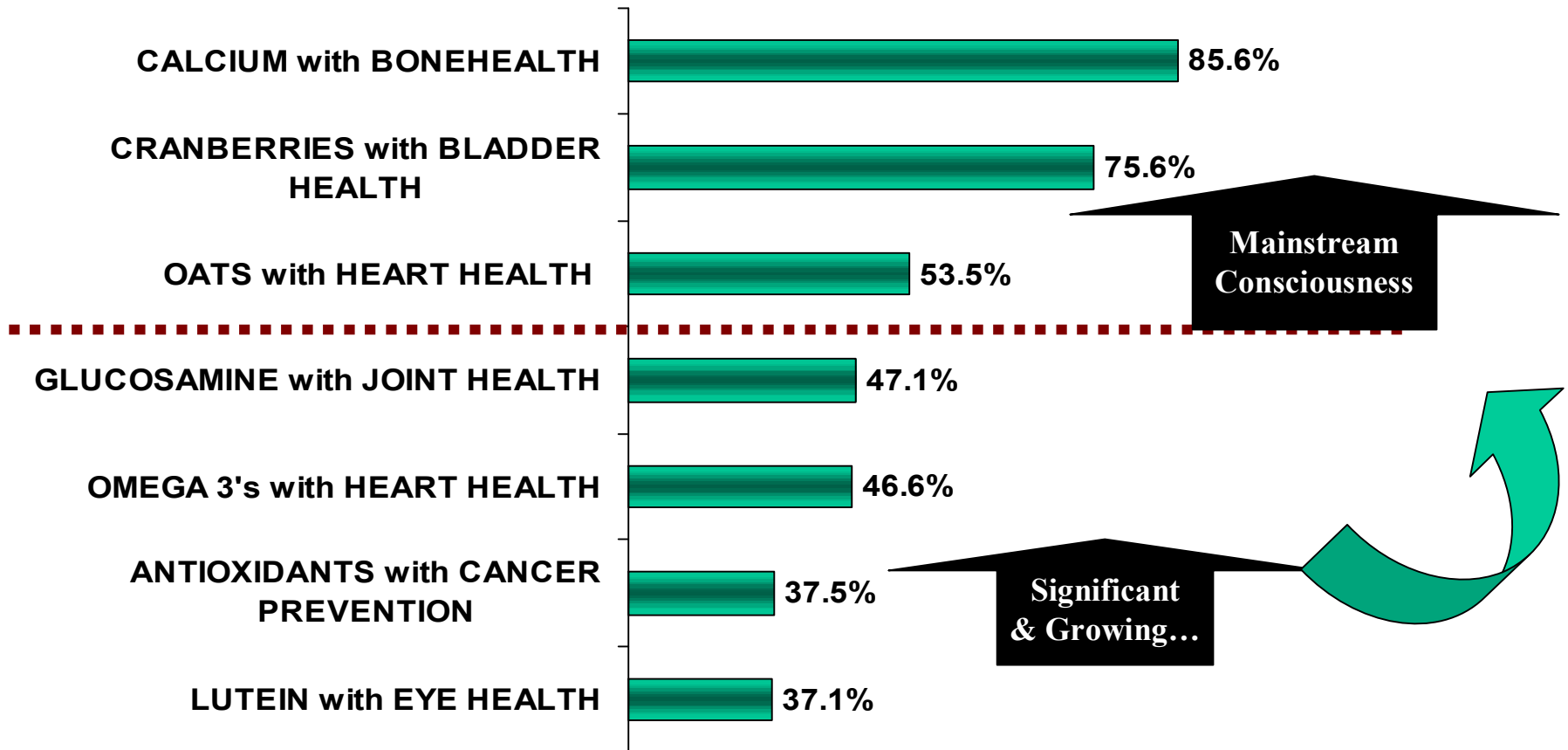
Trends In Why Consumers Maintain A Healthy Lifestyle: *Prevention Is Tops...*

(% general population stating “extremely/very important in WHY they maintain healthy lifestyle)



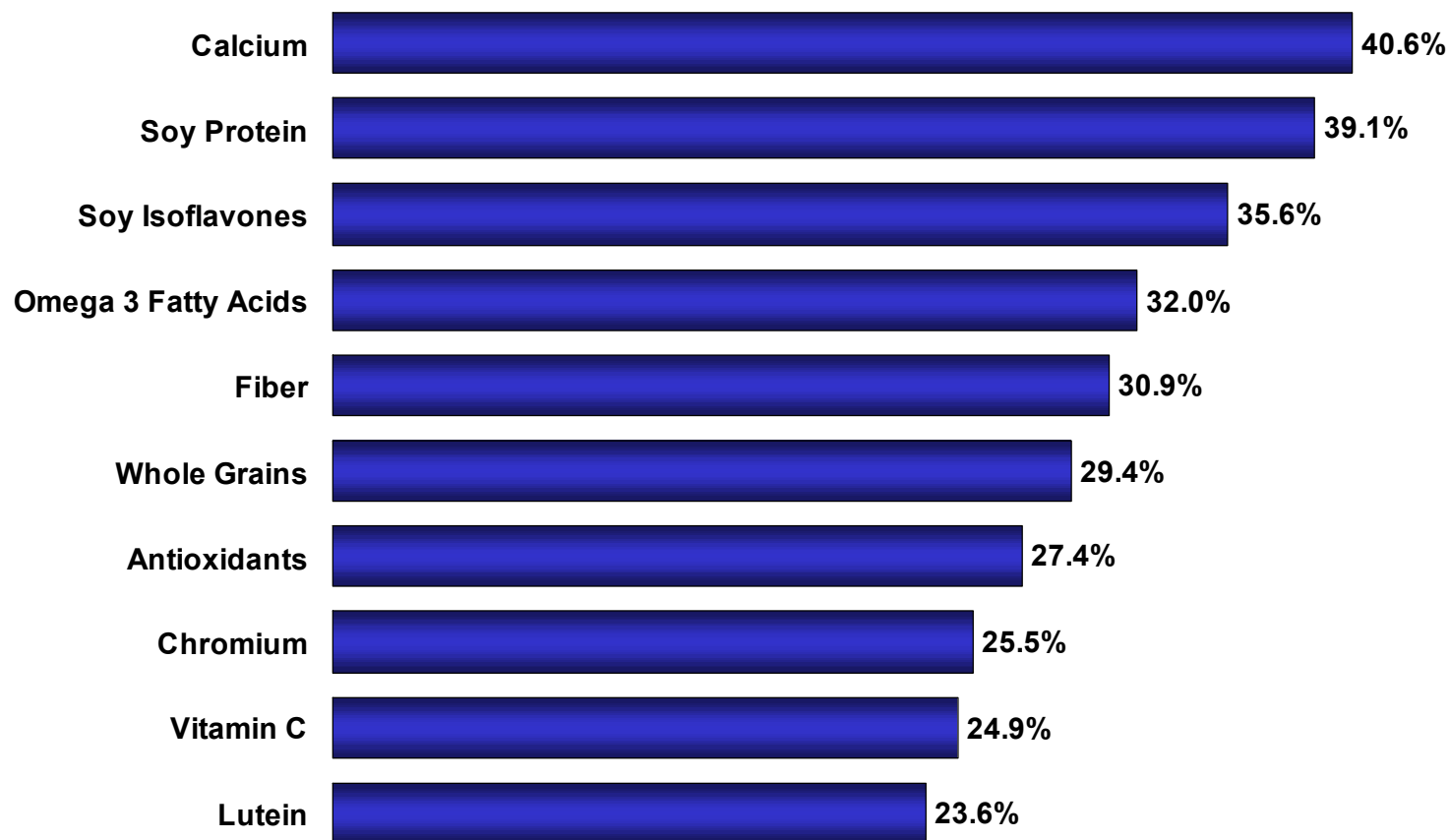
Some Associations Of Specific Ingredients With Specific Health Benefits Are Very Strong

(% general population indicating association of INGREDIENT with SPECIFIC HEALTH BENEFIT)



Opportunities For Supplementation & Fortification: The Top 10 Perceived Nutrient Deficiencies

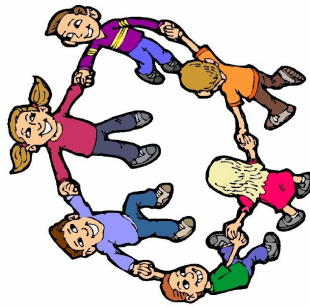
(% general population stating they consider the following to be deficient in their diet....)



Survey on Fortification Opportunities:

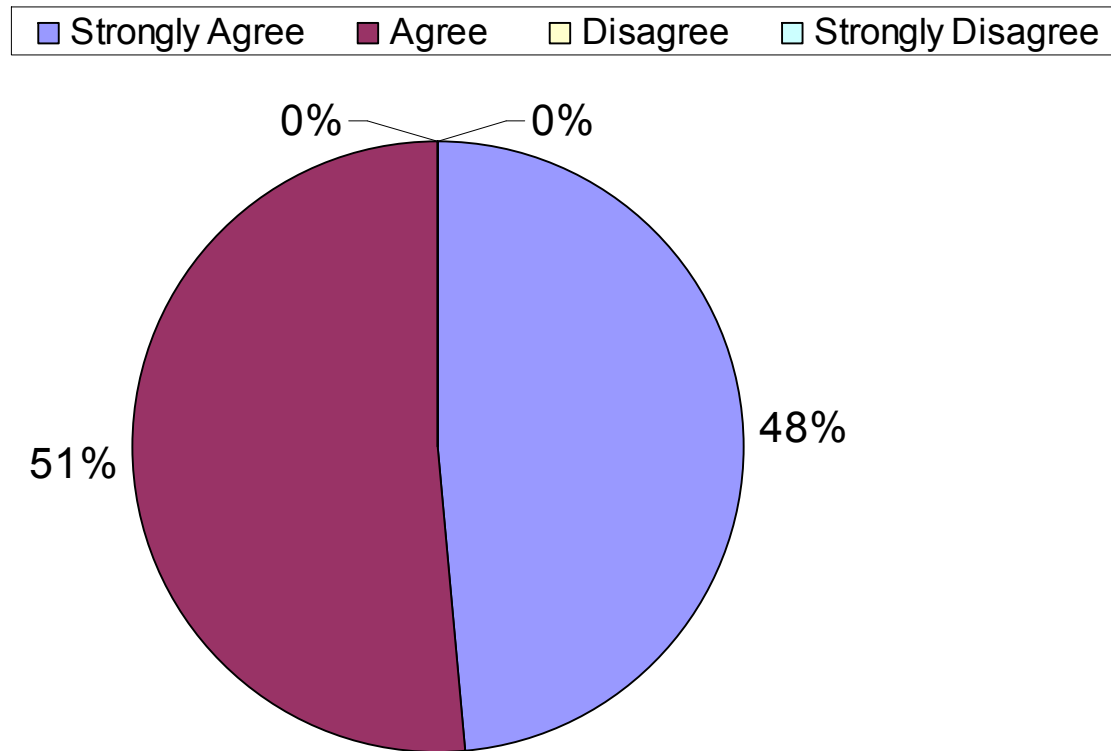
American School Foodservice Association Show
Reno, NV July 2003

Compiled by Roche Vitamins Inc. Marketing



Do you see an opportunity to address child nutrition gaps through fortification?

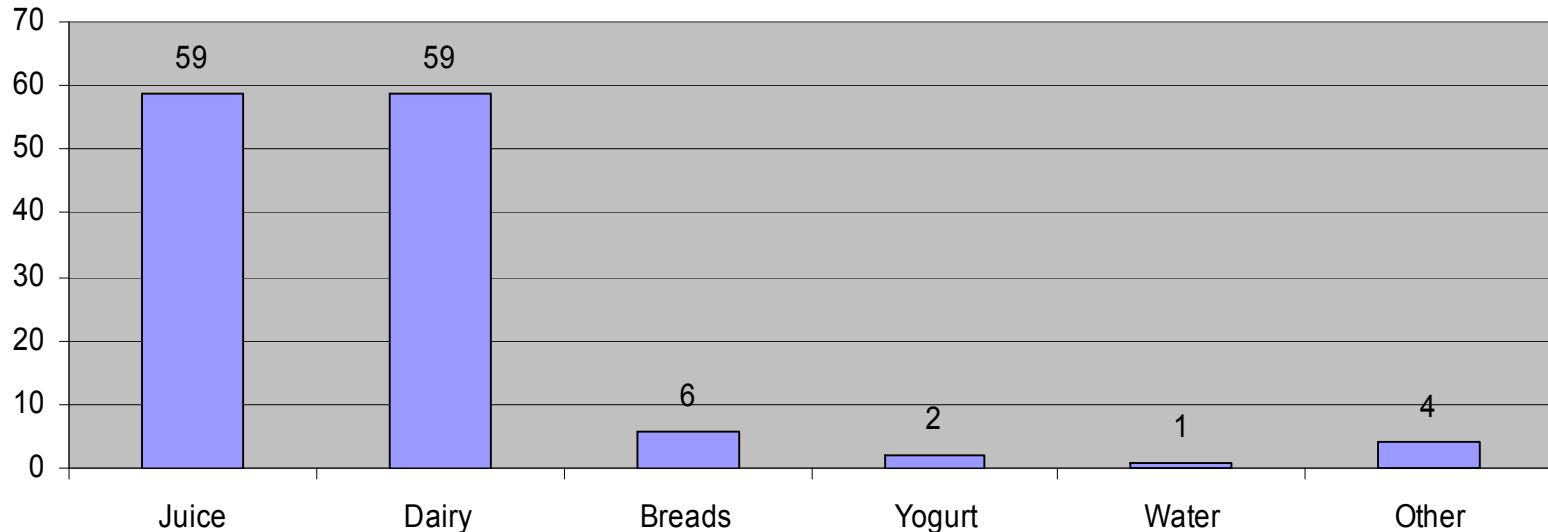
Of 116 total respondents, 115 either strongly agreed or agreed that there is an opportunity to address school age nutritional gaps through fortification.



What are the best delivery foods for fortification?

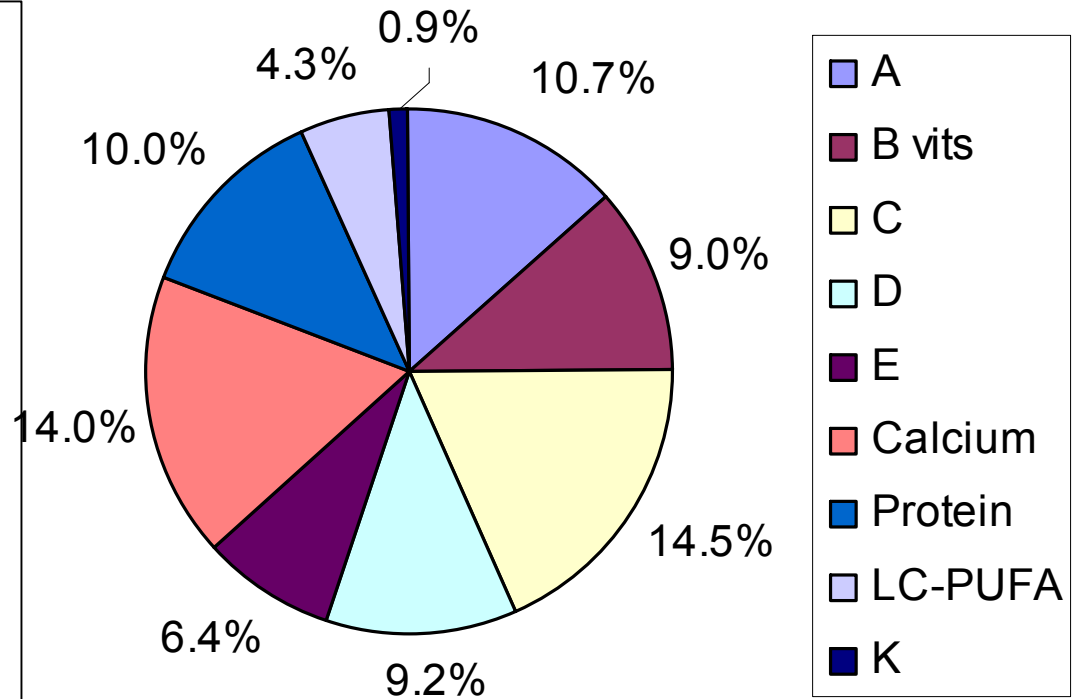
(Respondents could choose any or all from a list)

Overwhelmingly juice and dairy were seen as the best delivery foods for added fortification because they were already deemed to contain healthy ingredients.



What nutrients are you attempting to increase on the school menu?

- **Vitamin C, Calcium and Vitamin A** were the top three nutrients
- The USDA “Study on Nutrient Gaps and Knowledge” noted, **Vitamin E and B6** need to be increased in school age diets.
- Respondents said “It’s tough to get kids to eat more fish.” They were concerned on how to introduce **LC-Omega-3 oils** into the diet.



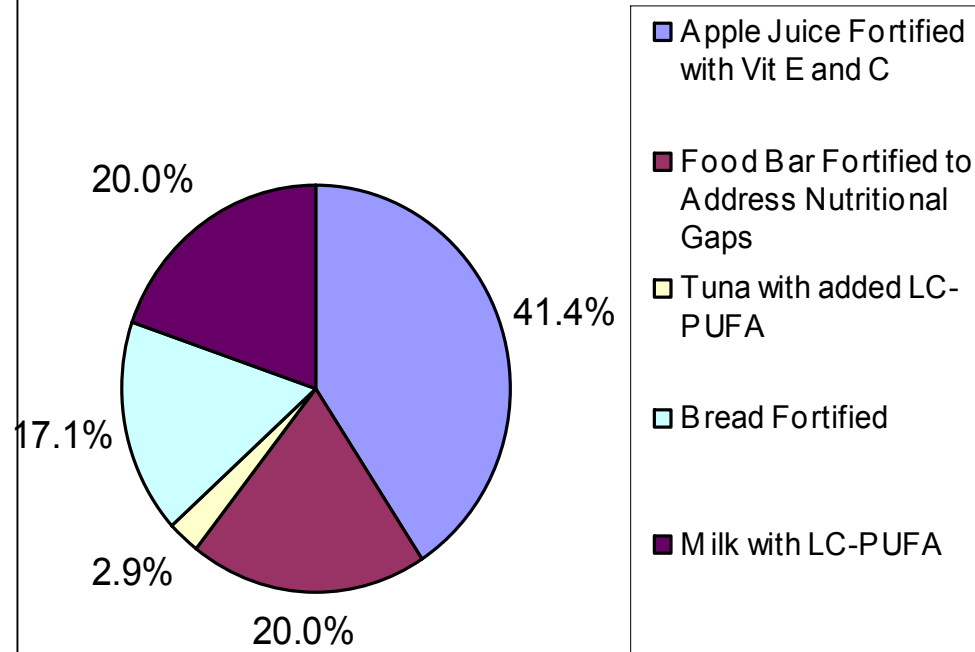
What concept is most appealing to fulfill your goal?

(Respondents could choose any or all)

41% responded positively to the concept of **Apple Juice with added Vit C and E.**

“We like the idea of improving nutrition in a product that kids already like and good for them.”

20% responded positively to Milk fortified with LC-Omega 3 and a fortified Food Bar to for identified nutritional gaps.



Top 15 Characteristics by Total Global Launches 2000-2002 (Across All Categories)

Rank	Characteristic	Total Global Launches
1	Single serve	3532
2	Natural	3057
3	High Vitamins	2367
4	Kids: Age 4-12	2257
5	Low Fat	1786
6	Organic	1293
7	No Preservatives	1242
8	High Calcium	1221
9	Microwaveable	1154
10	Low Calories	955
11	High Fiber	912
12	High Protein	905
13	High Minerals	857
14	No Artificial Colors	728
15	No Sugar	674

A look at the top product characteristics for this 3 year period indicates several recurring themes:

- **Product format matters**

Consumers are interested, and often driven by, convenience. This is exemplified by “single serve” at the top of the list and “microwaveable” at #9.

- **Food purity enters mainstream**

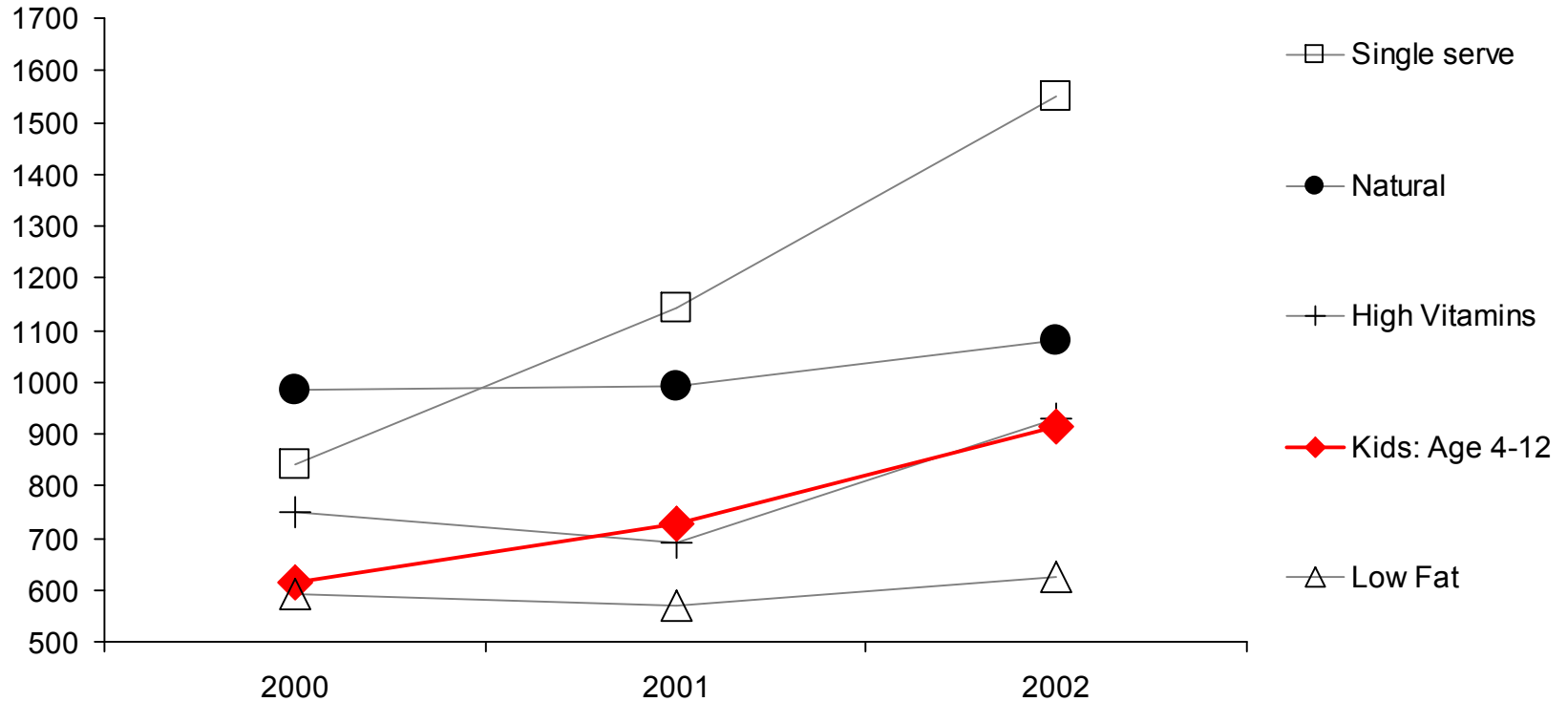
Over 5,000 products were launched as either natural, organic, no preservatives, or no artificial colors.

- **Nutritional characteristics are important**

A range of categories utilize nutritional functionality as their “new platform,” with many having high vitamins, high calcium, high fiber, high minerals, etc.

3-Year Trends for Top 5 Global Characteristics

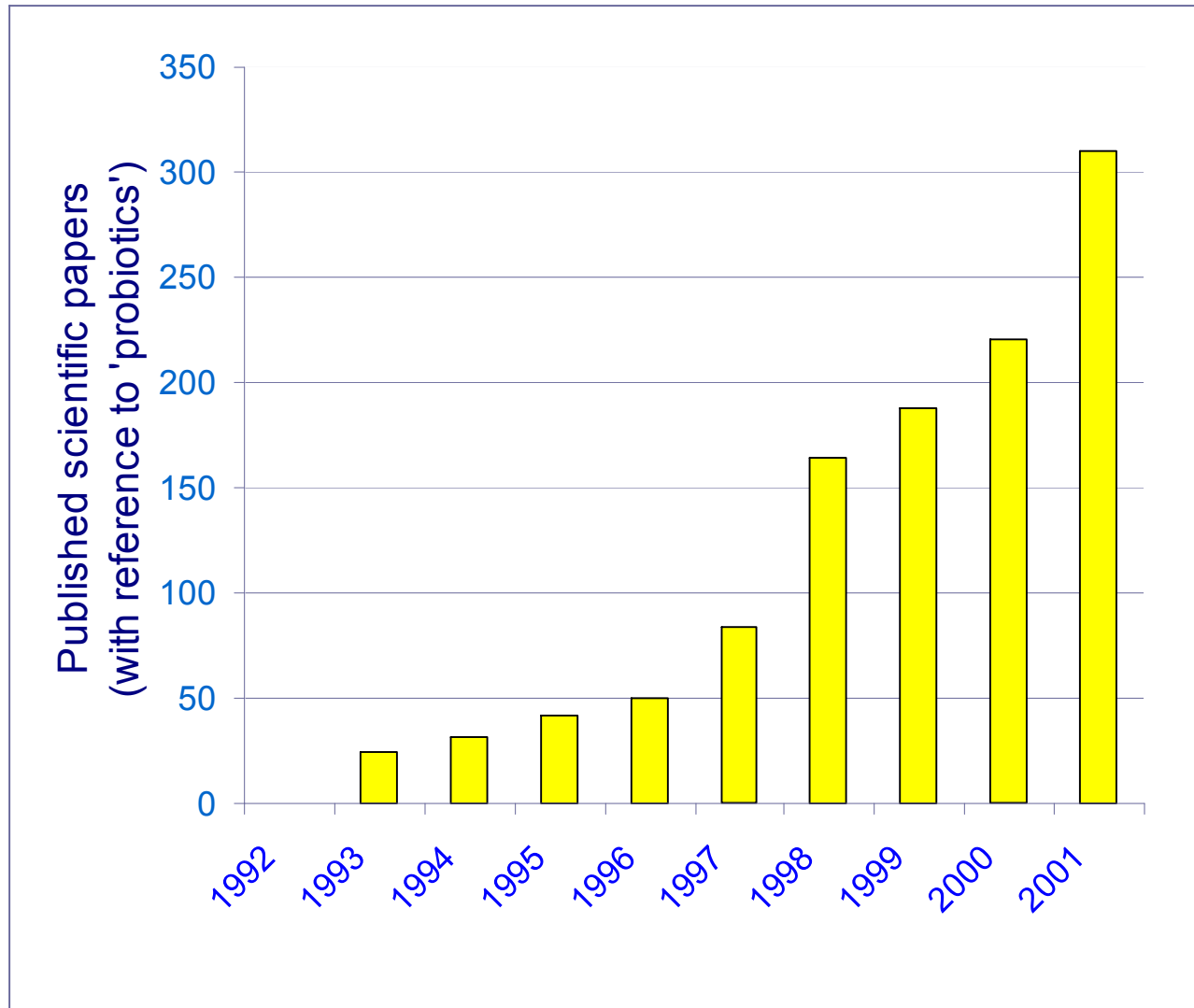
(Based on Total Number of Global Launches Over 3 Years Across All Categories)



The single serve characteristic exhibits the largest increase, followed by products targeted to kids 4-12.

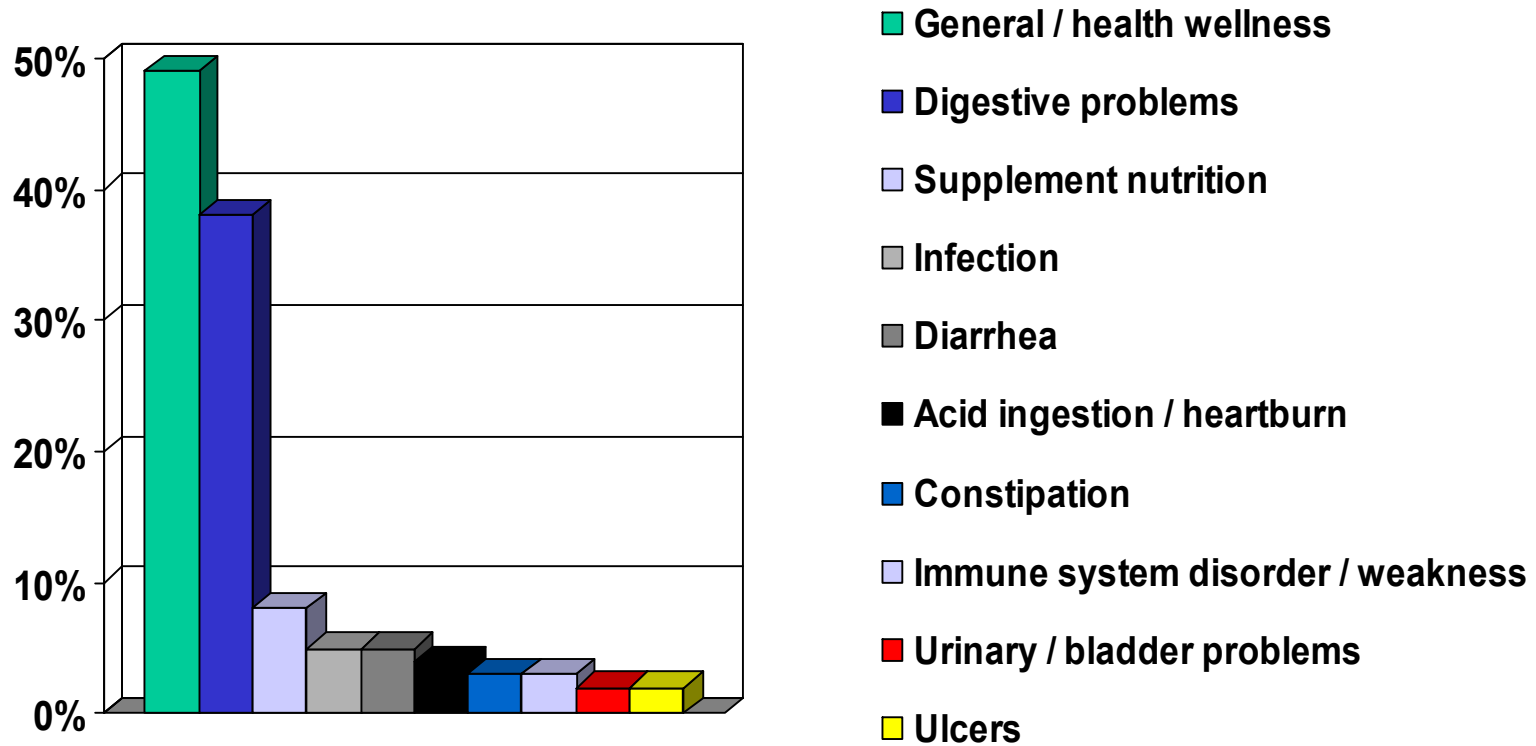
After a slight decline in 2001, products with high vitamins showed a dramatic increase in 2002 new product launches.

Interest in probiotics -> Science



Consumers and probiotics

Reasons for consumption of probiotics



DSM LAFTI Products

Second-Generation

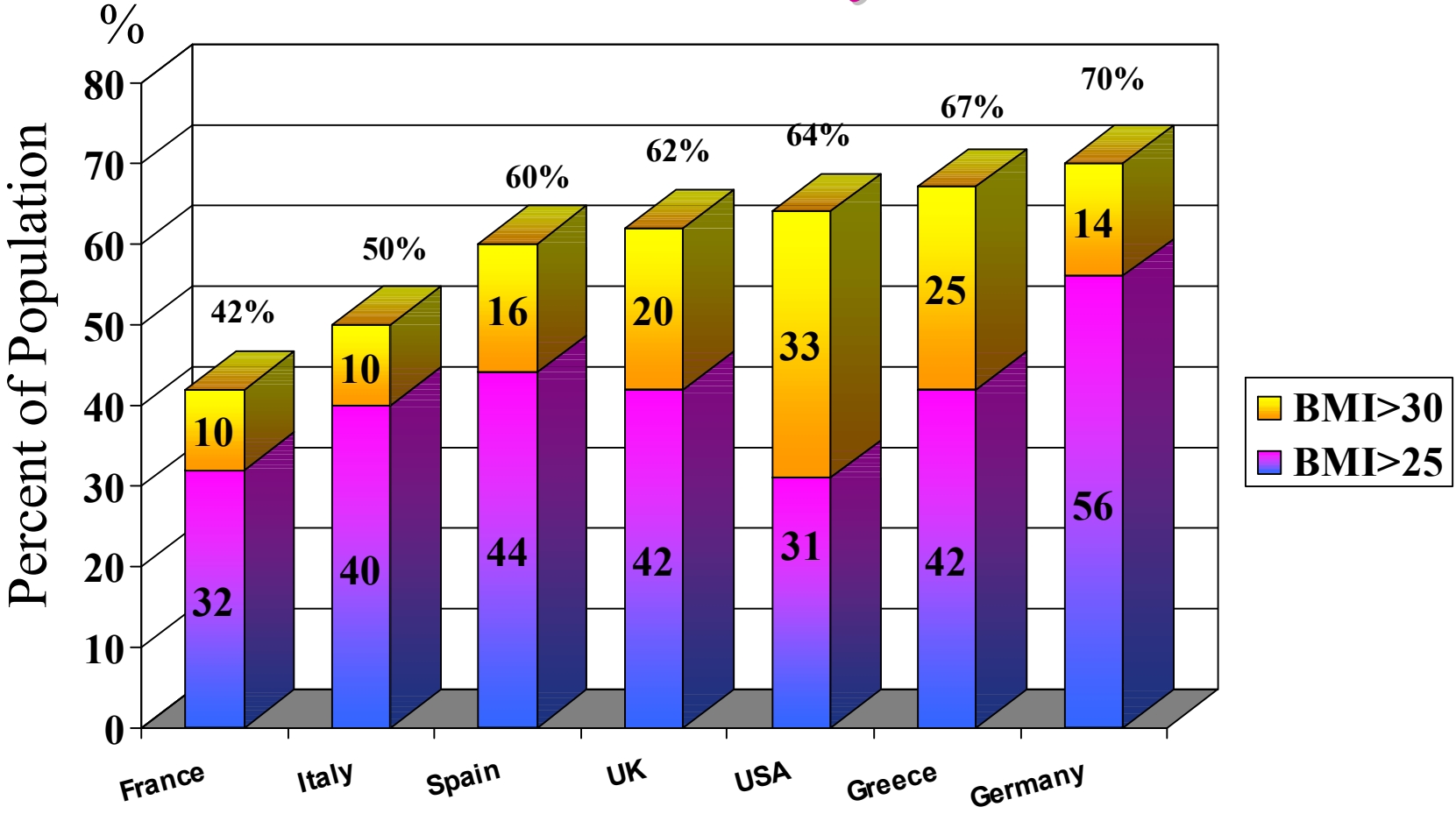
LAFTI[®] L10

- proprietary & branded second generation probiotic
- proven strain specific probiotic effects
- delivers an efficacious dose to the appropriate GI location
 - shelf life stability at room temperature
 - good survival in the gastro-intestinal tract
- continuous new science and clinical data support

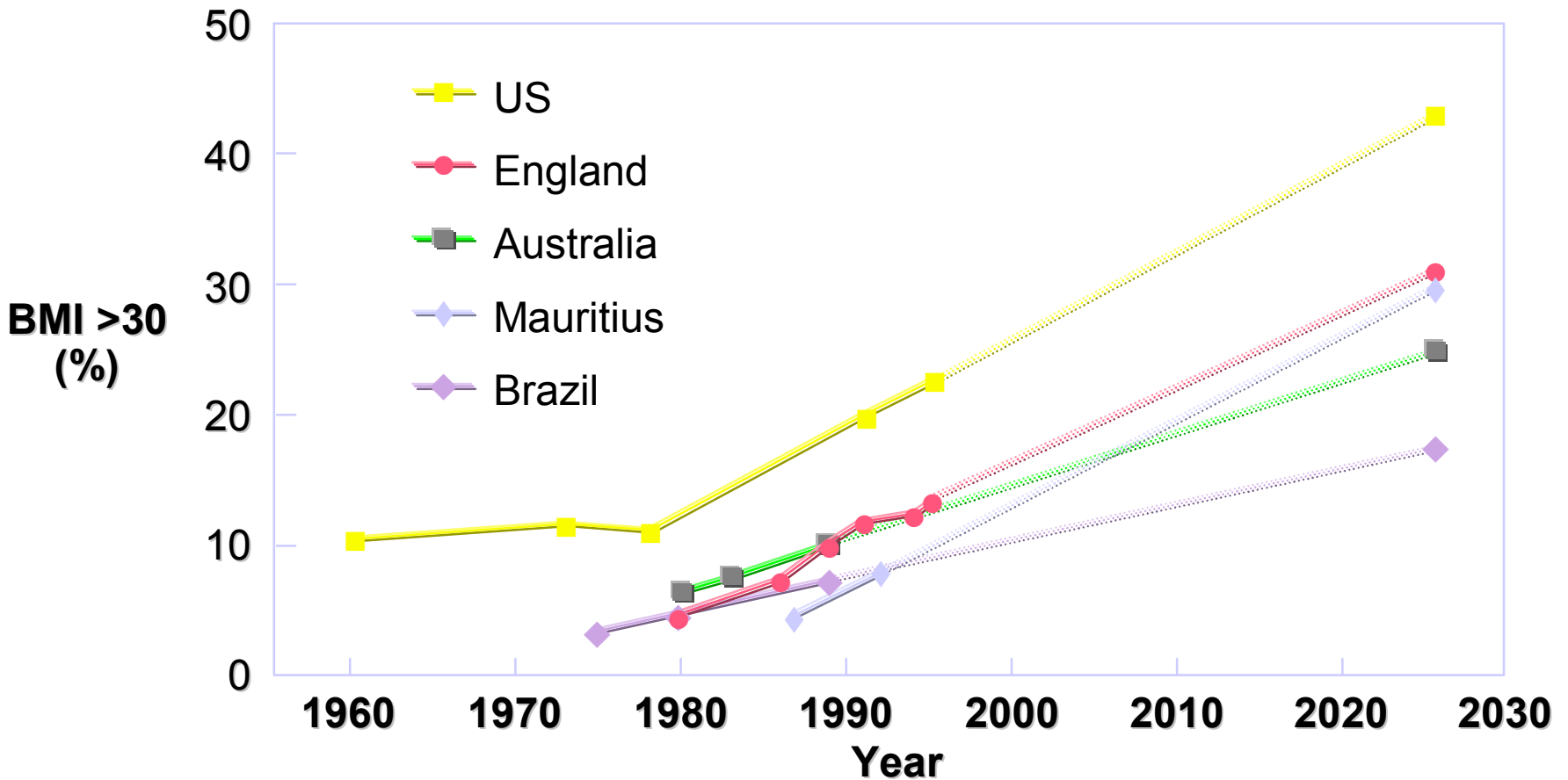
The Fortification Game..... now it's serious

- **Start with basic nutrients such as vitamins/minerals**
- **Only use GRAS approved ingredients**
- **Fortify reasonably, around 25% of RDA**
- **Make foods tasty, fun and convenient**
- **Add a dose of education**
- **Obesity is taking over the agenda**

Prevalence of Obesity & Overweight Globally



Obesity Rates Could Double in 30 Years

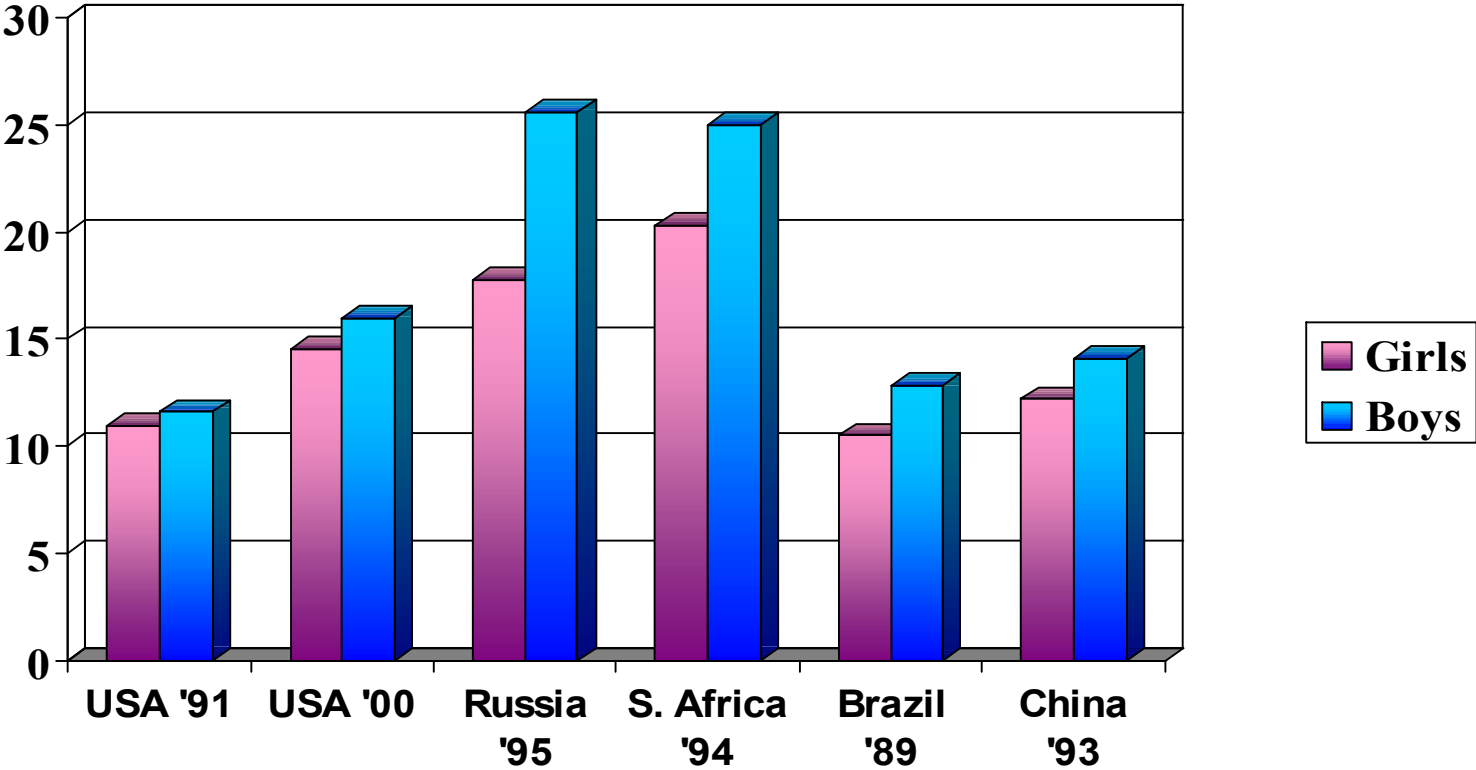


Adapted from International Obesity Task Force Web site.

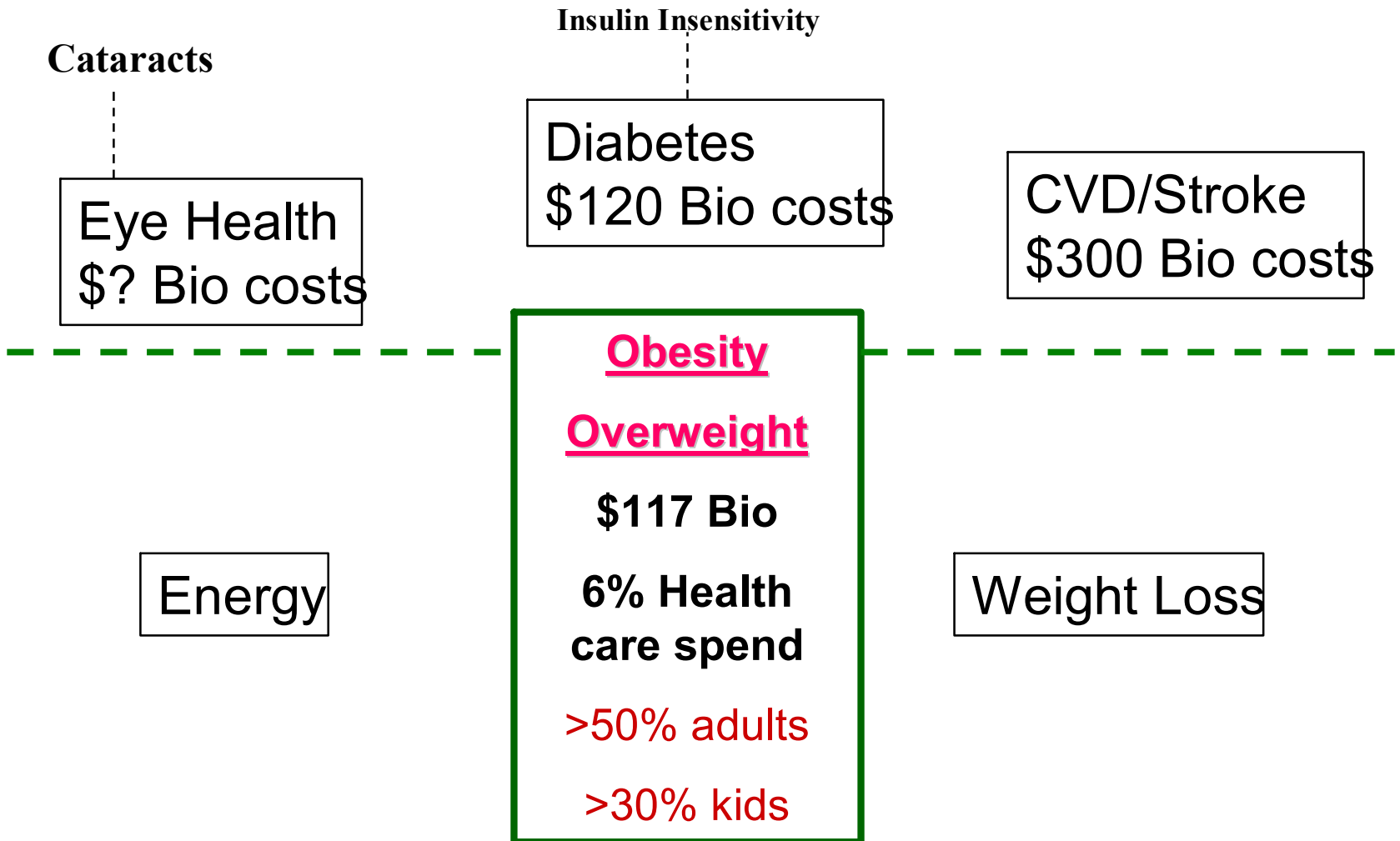
Available at: <http://www.rri.sari.ac.uk/iotf/slides/graph12.gif>.

Accessed August 11, 1998.

Child Obesity Not Just a US Problem

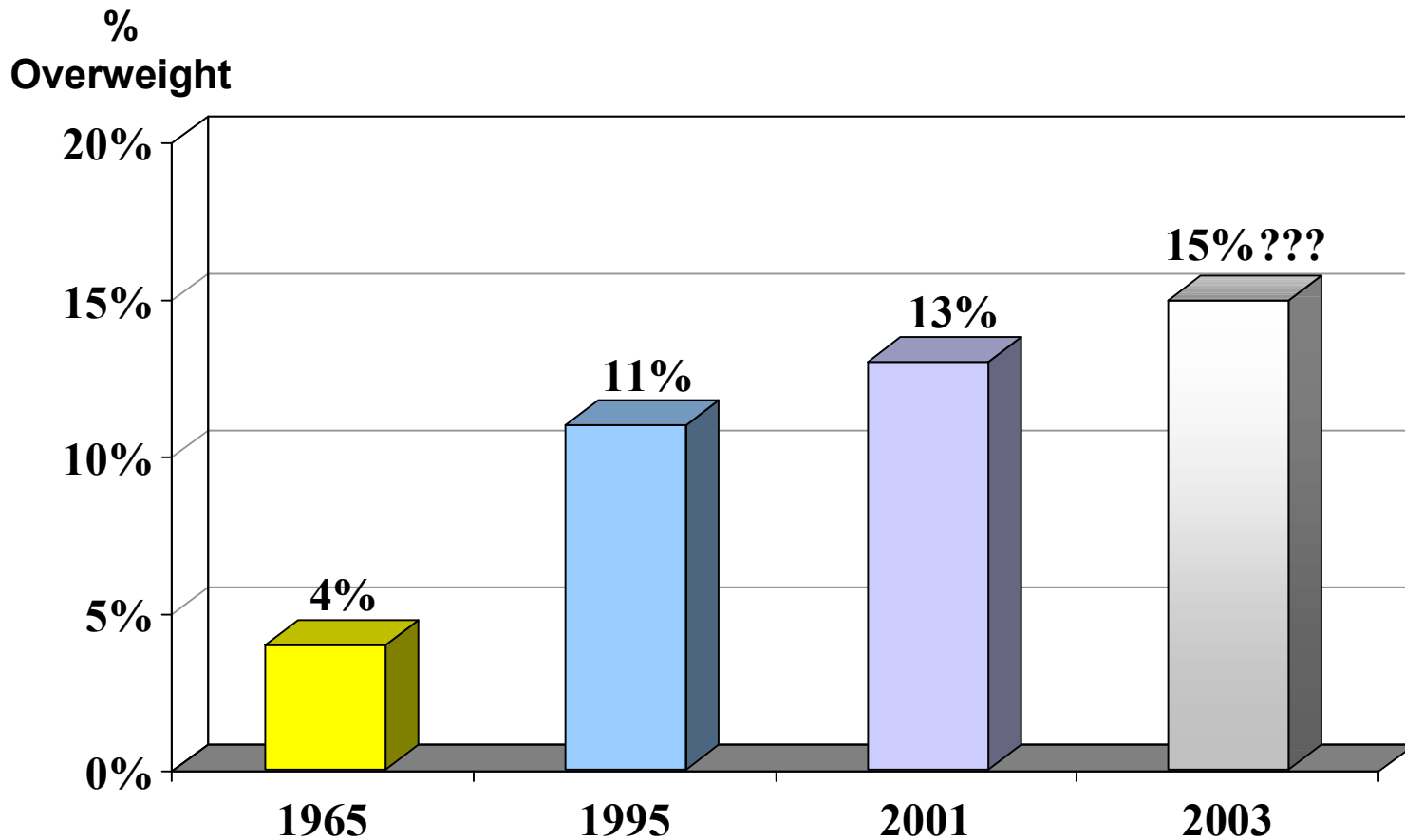


Obesity the Root Cause of Many Diseases.



KIDS SNACKING

Kids Overweight (6 - 11 yrs)



Kid's Nutrition

Thank you