What America’s Missing
A 2011 Report on the Nation’s Nutrient Gap
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HOW THE STUDY WAS CONDUCTED

The data and figures in this report were compiled from a number of national data sources, including NHANES (National Health and Nutrition Examination Survey) — a program of studies from the Centers for Disease Control’s National Center for Health Statistics designed to assess the health and nutritional status of adults and children in the United States. The survey is unique in that it combines interviews and physical examinations, and includes a nationally representative sample of about 5,000 people each year.

Other data sources throughout the report include the National Cancer Institute’s Risk Factor Monitoring and Methods Branch and the 2010 Dietary Guidelines Advisory Committee scientific report. Individual data sources are identified throughout the report.

Unless specified, the data in the report is based on food consumption surveys for all Americans, aged 2 and older.

This report was created by the Milk Processor Education Program, with the assistance of the Dairy Research Institute, which is affiliated with the Innovation Center for U.S. Dairy. It is based on national food consumption surveys including the National Health and Nutrition Examination Survey (NHANES), a program of the National Center for Health Statistics, which is part of the Centers for Disease Control and Prevention.
Obesity has dominated the dialogue on nutrition for the last several years — and there’s good reason, considering that two-thirds of adults and one-third of children in this country are overweight or obese.

Even so, the topic of nutrition adequacy is often overlooked. Yet the facts are clear: Many Americans, including children and adolescents, are falling short of the essential nutrients they need. In fact, 9 out of 10 Americans are missing key nutrients.

How could we possibly be a nation that’s overweight yet undernourished? It’s an ironic paradox. However, that’s exactly the situation we’re in.

Calories count, but the quality of those calories matter too. That’s why it’s important to focus on nutrient-rich foods that fit within calorie needs. It means spending calories wisely.

*What America’s Missing* explores the nation’s nutrient gap — the discrepancy between what we need and what we’re getting. The report identifies the specific nutrients and food groups we’re missing, and what it will take to help close the gap.

One small step that could make a big difference is drinking an extra glass of lowfat milk a day. Most Americans fall short of the recommended 3 glasses of milk. Simply adding a single serving of milk a day will go a long way to help close the country’s nutrient gap.

Milk is a good source of 9 essential nutrients — including many of the vitamins and minerals that America is missing. There’s a lot of power in pouring one more.
Despite the obesity epidemic, which is a significant public health threat, there’s a growing concern that many Americans — including children and adolescents — are inadequately nourished.

Undoubtedly, Americans eat too many solid fats (mostly saturated and trans fats) and added sugars, or SoFAS, which provide most of the non-essential or extra calories that Americans consume, according to the 2010 Dietary Guidelines Advisory Committee report. Yet they fail to get enough calcium, vitamin D, potassium, dietary fiber and other essential nutrients that are found in lowfat milk, fruits, vegetables and whole grains.

**AMERICA’S 11 GAP NUTRIENTS**
*Based on Daily Values*

1. Calcium  
2. Vitamin D  
3. Fiber  
4. Potassium  
5. Zinc  
6. Vitamin B12  
7. Vitamin B6  
8. Vitamin A  
9. Magnesium  
10. Iron  
11. Folate
THE NUTRIENT GAP

Of the 16 nutrients assessed in this report, 11 nutrients were identified as “gap” nutrients, indicating that America’s average intake falls short of the recommended amount or the Daily Values.

The Daily Values (DV) are based on a 2,000 calorie diet. These nutrient levels were established by the Food and Drug Administration (FDA). You’ll find % DV on nutrition labels indicating the percentage of nutrients provided by a single serving of a food.

The report found that 9 out of 10 Americans fall short of essential nutrients in their diets. The nutrients most likely to be lacking include potassium, fiber; vitamin D and calcium — the four top “nutrients of concern” identified in the 2010 Dietary Guidelines Advisory Committee report. These are the nutrients most frequently underconsumed by the public and represent a public health risk.

**PERCENTAGE OF AMERICANS NOT MEETING NUTRIENT RECOMMENDATIONS**

- **Potassium**: 97%
- **Fiber**: 96%
- **Vitamin D**: 69%
- **Calcium**: 64%
- **Magnesium**: 48%
- **Vitamin A**: 44%
- **Vitamin C**: 31%
- **Vitamin B6**: 14%
- **Zinc**: 12%
- **Folate**: 8%
- **Iron**: 5%
- **Thiamin**: 5%
- **Phosphorus**: 5%
- **Riboflavin**: 3%
- **Niacin**: 3%


A NOTE ABOUT THE NUTRIENT GAP

In this report, the Daily Values were used to determine the nutrient gap. Daily Values for the recommended nutrients in a 2,000 calorie diet are based on government nutrient recommendations and appear on all labeled food products as a quick, single-number reference to compare nutrient content in food products. However, the Daily Values (DV) are just one indicator of the daily nutrient goals.

The Institute of Medicine determines a full Dietary Reference Intake (DRI) for each nutrient. These recommendations vary for different age groups and populations.

Other analyses, including some assessments in the 2010 Dietary Guidelines Advisory Committee report, have used DRI or other data to determine nutrient shortfalls. Based on specific DRI data for specific population groups, in addition to the gap nutrients in the What America’s Missing report, the 2010 Dietary Guidelines Advisory Committee report also identifies vitamin K, vitamin E and choline as shortfall nutrients and does not include iron, folate, vitamin B6 and vitamin B12 — a nutrient may be identified as a shortfall nutrient if there’s a high prevalence of inadequate intake among any segment of the population.

While methods and assessments may vary, regardless of methodology it’s clear that America’s diet is falling short on a number of key nutrients — nutrients that can be supplied with nutrient-rich foods like fruits, vegetables, whole grains and milk/milk products.
ADDITIONAL GAP NUTRIENTS

Beyond the big four, other nutrients are also frequently underconsumed. Vitamins B6, B12 and A, zinc, folate, iron and magnesium are additional gap nutrients. Children and adults are not currently consuming enough nutrient-rich foods to meet their needs for these vitamins and minerals.

CURRENT NUTRIENT INTAKES AT OR ABOVE RECOMMENDATIONS

On the positive side, Americans are doing better when it comes to other nutrients. On average, there’s currently no gap for vitamin C, thiamin, riboflavin, phosphorus and niacin.
THE FOOD GROUP GAP

The nation’s nutrient shortages are due to the inadequate intake of foods that supply these specific nutrients. Simply put, people are not eating enough nutrient-rich foods to provide the vitamins, minerals and fiber they need every day.

Expert advice encourages lowering overall calories and replacing foods that are high in solid fats and added sugars (or SoFAS) with nutrient-rich forms of vegetables, fruits, whole grains and lowfat milk and milk products to increase intakes of shortfall nutrients.

A TOTAL DIET APPROACH

Dietary Guidelines encourage the consumption of nutrient-rich foods, while moderating calorie intake, to help achieve a nutritionally adequate diet. Yet currently, Americans consume only 52% of the recommended amount of milk/milk products — meaning most children and adults need to double their intake.

Dr. Barbara V. Venneman, Executive Director of the Food and Nutrition Board, National Academies of Sciences, Engineering, and Medicine, sums up the message in a 2010 video series titled “Let’s Eat Right” in which she says, “Eating right a little bit every day is the key to a healthier you.”

DIETARY INTAKES COMPARED TO RECOMMENDATIONS

- **Milk**: 52% of recommended intake
- **Fruits**: 42% of recommended intake
- **Vegetables**: 59% of recommended intake
- **Whole Grains**: 15% of recommended intake

milk intake to meet daily recommendations. Americans consume only 42% of the fruit they need and 59% of the vegetables they need. The whole grain gap is especially wide; Americans consume only 15% of the whole grain recommendation. On average, adults and children do not meet recommendations for milk, fruits, vegetables and whole grains. Usual intake of the meat and bean group are below recommended amounts for adolescent girls and many adult women.

Intakes of milk and milk products are less than the recommended 3 cups/day for most adults and children aged 9 to 18 years, and less than the recommended 2 cups/day for many children, aged 4-8 years. Overall, 85% of Americans fall short of daily milk recommendations.

FOOD GROUP RECOMMENDATIONS

<table>
<thead>
<tr>
<th>AGES</th>
<th>MILK/MILK PRODUCTS (lowfat OR fat free)</th>
<th>FRUIT</th>
<th>VEGETABLES</th>
<th>WHOLE GRAINS</th>
<th>MEAT AND BEANS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHILDREN</td>
<td>2-3</td>
<td>2 cups</td>
<td>1 cup</td>
<td>1 cup</td>
<td>1.5 ounces</td>
</tr>
<tr>
<td></td>
<td>4-8</td>
<td>2 cups</td>
<td>1-1.5 cups</td>
<td>1.5 cups</td>
<td>2-2.5 ounces</td>
</tr>
<tr>
<td>TWEEN BOYS</td>
<td>9-13</td>
<td>3 cups</td>
<td>1.5 cups</td>
<td>2.5 cups</td>
<td>3 ounces</td>
</tr>
<tr>
<td>TWEEN GIRLS</td>
<td>9-13</td>
<td>3 cups</td>
<td>1.5 cups</td>
<td>2 cups</td>
<td>3 ounces</td>
</tr>
<tr>
<td>TEEN BOYS</td>
<td>14-18</td>
<td>3 cups</td>
<td>2 cups</td>
<td>3 cups</td>
<td>3.5 ounces</td>
</tr>
<tr>
<td>TEEN GIRLS</td>
<td>14-18</td>
<td>3 cups</td>
<td>1.5 cups</td>
<td>2.5 cups</td>
<td>3 ounces</td>
</tr>
<tr>
<td>MEN</td>
<td>19+</td>
<td>3 cups</td>
<td>2 cups</td>
<td>2.5-3 cups</td>
<td>3-4 ounces</td>
</tr>
<tr>
<td>WOMEN</td>
<td>19+</td>
<td>3 cups</td>
<td>1.5-2 cups</td>
<td>2-2.5 cups</td>
<td>3 ounces</td>
</tr>
</tbody>
</table>

USDA average MyPyramid food group recommendations
**MILK IN AMERICA**

The milk gap in America is wide. It starts around age 9 and continually gets wider. In general, women and girls drink less milk than men and boys.

The usual intakes of milk and milk products are:
- **1.4 cups** for adult women
- **1.7 cups** for adolescent girls, aged 14-18 years
- **2.1 cups** for girls, aged 9-13 years

Milk contributes calcium, vitamin D and potassium — targeted nutrients of concern — so it’s no wonder that these nutrients are underconsumed due to the low intakes of milk.

**Typical Intakes of Milk and Milk Products**

Most Americans are missing out on the recommended amount of milk. Only children aged 8 and younger are meeting the recommended amount of milk and milk products. Their usual intakes meet or exceed the 2 cups/day recommendation. However, at least 25% of children in this age range do not consume the recommended amount of milk and milk products. More than 90-95% of all women and girls aged 14 and up consume less than the recommended amount of milk and milk products.
A Closer Look at Fluid Milk

Americans average only about one serving of milk a day. Teenage girls and adult women have the lowest intakes — averaging less than a single 8-ounce serving.

Nearly one out of four children under age 5 doesn’t drink milk.
WHOLE GRAINS IN AMERICA

No age group is even coming close to meeting the whole grain recommendations.

FRUIT IN AMERICA

Only children under age 9 are eating enough fruit.
Most age groups meet or exceed the daily recommendations for meat except most teen girls and many adult women.

The vegetable gap spans all age groups.

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**VEGETABLES IN AMERICA**

![Usual Intakes of Vegetables](https://riskfactor.cancer.gov/diet/usualintakes/pop/veg_all.html)

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**MEAT IN AMERICA**

![Usual Intakes of Meat, Poultry, Fish, Eggs, Soy, Nuts and Seeds](https://riskfactor.cancer.gov/diet/usualintakes/pop/allprotein.html)
The best strategy to close the nutrient gap in this country is to eat more foods that supply the specific nutrients we’re missing. The key is to focus on nutrient-rich options that provide substantial amounts of vitamins and minerals and relatively few calories.

CLOSING THE GAP FOR THE 4 NUTRIENTS OF CONCERN

Calcium: Milk is the top source of calcium in our diets, providing more than $\frac{1}{4}$ of America’s calcium.

Vitamin D: Milk provides more than half of the vitamin D in our diets. No other single food comes close to milk’s contribution.

Potassium: Milk is a good source of potassium, contributing about 13% of America’s total intake, and fruits and vegetables are a key source of this important mineral.

Fiber: Whole grains, fruits and vegetables are the dominant suppliers of dietary fiber.

While the gap is still substantial, following is how nutrient-rich foods currently make up America’s calcium, vitamin D, potassium and fiber intakes, on average.
WHERE AMERICA GETS ITS CALCIUM, POTASSIUM, VITAMIN D, FIBER

WHERE AMERICA GETS ITS CALCIUM

- **MILK/MILK DRINKS**: 28%
- **CHEESE**: 7%
- **GRAIN PRODUCTS**: 9%
- **FRUITS/VEGETABLES**: 8%
- **OTHER FOODS/BEVERAGES**: 3%
- **DESSERTS**: 3%
- **EGGS/LEGUMES/NUTS**: 2%
- **MEATS/FISH**: 3%
- **YOGURT**: 2%
- **FATS/OILS**: 1%

**DAILY VALUE**: 1,000 mg
**GAP**: 54 mg

NHANES 2003-2006, Ages 2+ yr

WHERE AMERICA GETS ITS VITAMIN D

- **MILK/MILK DRINKS**: 54%
- **MEATS/FISH**: 7%
- **GRAIN PRODUCTS**: 5%
- **EGGS/LEGUMES/NUTS**: 3%
- **FRUITS/VEGETABLES**: 4%
- **CHEESE**: 3%
- **FATS/OILS**: 2%
- **DESSERTS**: 2%
- **OTHER FOODS/BEVERAGES**: 2%
- **YOGURT**: 1%

**DAILY VALUE**: 400 IU
**GAP**: 216 IU

NHANES 2003-2006, Ages 2+ yr

Total may exceed 100% due to rounding

Milk is the top source of calcium in our diets—no other single food comes close to milk’s contribution.
Milk provides 13% of the potassium in the American diet—in fact, milk is the top contributor of potassium, compared to any single food in the diet.

Less than 5% of Americans get the recommended fiber in their diet.
**PROTEIN**
Milk and milk products currently supply 18% of the total protein from foods.

**PHOSPHORUS**
More than ⅓ of teen girls have inadequate intakes.

**MAGNESIUM**
Half of the population has inadequate intakes.

**VITAMIN A**
Fruits, vegetables, grains and milk are the top sources of much-needed vitamin A.

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NHANES 2003–2006, Ages 2+ yr | What We Eat In America 2005–2006, Ages 1+ yr;
Totals may exceed 100% due to rounding.
ZINC
Meats and fish are key contributors of zinc in America's diets

VITAMIN B12
Milk and milk products supply more than ¼ of the vitamin B12 from foods

RIBOFLAVIN
Together, grains and milk contribute about half of America's riboflavin
Pouring one more serving of milk a day may be all it takes to help fill in those nutrients that are in short supply — especially calcium, vitamin D and potassium, 3 of the 4 “nutrients of concern” identified in the 2010 Dietary Guidelines Advisory Committee report.
MILK’S NUTRIENT POWER

Milk and milk products make powerful nutrient contributions to the American diet.

Each 8-ounce glass of milk is a good or excellent source of 9 key nutrients.

PERCENT DAILY VALUES

- **30% Calcium**: Helps build and maintain strong bones and teeth
- **25% Vitamin D**: Promotes the absorption of calcium for healthy bones
- **20% Phosphorus**: Works with calcium and vitamin D to help keep bones strong
- **20% Riboflavin**: Helps convert food into energy
- **16% Protein**: Helps build and maintain lean muscle
- **13% Vitamin B12**: Works closely with folate to make red blood cells
- **11% Potassium**: Helps regulate the balance of fluids in your body
- **10% Niacin (as niacin equivalents)**: Helps enzymes function normally in your body
- **10% Vitamin A**: Supports good vision, healthy skin and helps maintain integrity of the immune system

**FAT FREE MILK**

Nutrition Facts

<table>
<thead>
<tr>
<th>Amount Per Serving</th>
<th>Calories</th>
<th>Calories from Fat 0%</th>
<th>% Daily Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fat 0g</td>
<td>0%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Saturated Fat 0g</td>
<td>0%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Trans Fat 0g</td>
<td>0%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Cholesterol 5mg</td>
<td>4%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Sodium 105mg</td>
<td>4%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Potassium 380mg</td>
<td>11%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Total Carbohydrate</td>
<td>12g</td>
<td>4%</td>
<td></td>
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<tr>
<td>Dietary Fiber 0g</td>
<td>0%</td>
<td>0%</td>
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</tr>
<tr>
<td>Sugars 12g</td>
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<td></td>
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<tr>
<td>Protein 8g</td>
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</tbody>
</table>

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

** as niacin equivalents; label for educational purposes only

USDA National Nutrient Database for Standard Reference, Release 23
THE 4 NUTRIENTS OF CONCERN: WHAT HAPPENS IF WE POUR ONE MORE?

BRIDGING THE NUTRIENT GAP BY POURING ONE MORE

Take a look at the power of one more. Here’s what would happen if America drank an extra serving of milk a day.
CLOSING THE MILK GAP WITH ONE MORE SERVING

One more serving of milk would close the gap for tweens and teen boys, and shrink the gap for teen girls and adults.

Even with an otherwise healthy diet, without milk women would fall short on 4 key nutrients — the recommended 3 cups of milk and milk products daily would fill the gap.
America’s diet is too high in calories, yet too low in nutrients. The solution is to reduce overall calorie intake, increase physical activity and choose more nutrient-rich foods.

Milk is a nutrient-rich food that has the potential to help close the gap for many of the country’s missing nutrients, including 3 of the 4 nutrients of concern: calcium, vitamin D and potassium.

Adding one more serving of fat free milk would shrink the gap for 10 of the 11 gap nutrients, and completely close the gap for calcium, vitamin B6 and vitamin B12. The additional serving of milk would also help close the food group gap for boys and shrink the gap for teen girls and adults.

Although many improvements in the American diet may be needed, simply “pouring one more” serving of milk can help fill in the nutrient gap and improve the overall quality of the diet. It’s truly one small step that can make a big difference.
What America's Missing

Report on the Nation's Nutrient Gap