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Nutritional Gatekeepers and the 72% Solution

More than ever, we make food choices in distracting, media-filled, food-rich environments. It is not surprising that some clients—even some registered dietitians—become fatalistic about the limited influence they believe they have over the nutrition of their family. They come to believe that they have little power when competing against incessant advertising and easily available, inexpensive, tempting foods.

As food and nutrition professionals, it is difficult to encourage or empower a fatalistic person to provide better nutrition for their family. It can even lead us to be pessimistic, "How can we possibly empower anybody when we are overworked, overstressed, and over budget?"

While new data suggest some new answers, the question has deep roots. It begins with an insight from a famous anthropologist. Margaret Mead first hinted at it over 60 years ago—in 1945—here in the *Journal of the American Dietetic Association*.

AN ORGAN MEAT LESSON FROM THE WORLD WAR II HOMEFRONT

During World War II, the United States faced a nutrition crisis. Because much of our meat was being sent overseas to feed troops and allies, there was concern we would face a protein-related nutrition crisis on the homefront (1). Though it was believed that educating people about alternative forms of protein (such as organ meats—liver, kidneys, beef brains, and so forth) would solve this problem, there was a limited budget to do so.

Under the direction of anthropologist Margaret Mead, the Committee

on Food Habits of the National Research Council assembled leading dietitians, food researchers, and social scientists to determine how to best encourage families to eat organ meats as nutritious alternative sources of protein (2). While some experts believed the education effort should be focused on the traditionally bread-winning husband, others believed it should focus on the traditionally bread-baking wife. Still others believed attention should also be spread across the entire family with special attention paid to educating and developing nutritious habits with the children (3).

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The early research of the committee showed a surprising twist. Wives conservatively believed their husbands and children had de facto gatekeeping control based on their approval or disapproval of what food was served. To avoid disapproval, she was often hesitant to stray too far from conventional recipes. The twist was that husbands and children did not share this perception. They instead indicated that they would eat most anything she served. They also believed most if not all of the food they ate was either knowingly or unknowingly controlled by the wife. It was food she had either purchased, grown, baked, or bartered (4).

This was a tremendous insight for the Committee on Food Habits (5). With limited resources and limited time, the committee did not need to concern itself with educating the entire American population, they could focus on the specific people who ac-

quired the food and prepared it—the "nutritional gatekeepers" (4). During these war years, the majority of these gatekeepers were women. The first task was to convince her that she had much more latitude and food influence than she believed. The food decisions were not being made and ratified by her family. They were being determined by her, acquired by her, and prepared by her. They were then accepted by the rest of the family.

HOW INFLUENTIAL IS TODAY'S HARRIED NUTRITIONAL GATEKEEPER?

Much has changed in 60 years. Yet with all that has changed in who does the cooking, ordering, or carry-out, every home still has a nutritional gatekeeper (6). And while the person who purchases the majority of food is not always the person who does the majority of the cooking or serving, 92% of the time they still are—whether male or female, young or old, parent or relative (7).

The question is this: In today's distracting and cluttered media environment, how much influence does the nutritional gatekeeper still have over their children's food intake and nutrition?

To estimate this, three different groups of people were approached in three different ways (in-person, by phone, and over the Internet), at three different time intervals over the past 8 years. In total, 1,784 parents were asked, "Of the total amount of food your children consume (in home and away), what percent do you think you directly or indirectly influence?"

1. An In-person Survey of Nutrition Educators

At the summer 2005 meeting of the American Association of Diabetes Educators, I asked 641 members in the Nutrition Education track to estimate this percentage prior to one of my presentations. Many of these dietitians, nurses, and physicians watch patients and their families eat day in

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7 out of 10 boys and
9 out of 10 girls
don't get the calcium
they need.^{1,2}

Pediatricians Call for Calcium Check-up

The 2006 American Academy of Pediatrics report³ on optimizing bone health supports dairy's role in the bone health of children and adolescents.

Talk to your patients about including three servings of dairy a day (milk, cheese or yogurt) to help build stronger bones.

- **Assess Calcium Intake:**

Work with your clients to assess their calcium intake and develop an eating plan to achieve their calcium needs. Refer to the AAP report "Optimizing Bone Health and Calcium Intakes of Infants, Children, and Adolescents" for an assessment questionnaire.

- **Share Bone Building Tips:**

Most people can achieve the recommended dietary intake of calcium by eating three servings of milk, cheese, or yogurt each day. Low-fat and fat-free versions are encouraged.³ Non-dairy food sources and supplements are an alternative, but these products do not offer the same nutrient benefits of dairy foods.

- **Model Healthy Habits:**

All family members should evaluate their calcium intake and consider three servings of dairy a day (4 for adolescents) for building stronger bones.

- **Be Active:**

Encourage physical activity, primarily weight-bearing exercise as part of an overall healthy bone program.

Recommendations for Adequate Dietary Calcium Intake (mg/day) and Servings of Dairy per Day in the United States

Kids/Adolescents		
Age	Calcium Intake, mg/day ²	Servings of Dairy per Day ³
1-3 years	500	3*
4-8 years	800	3**
9-18 years	1300	4**

* Age-appropriate servings

** One serving equals 8 ounces of milk or milk equivalent



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Visit www.nationaldairycouncil.org to download a calcium assessment questionnaire for use with patients and www.aap.org for additional resources.

¹ US Department of Agriculture, Agricultural Research Service. Data tables: results from USDA's 1994-96 continuing survey of food intakes by individuals and 1994-96 diet and knowledge survey. Riverdale, MD: US Department of Agriculture; 1999; (data for males and females ages 12-19 years).

² Institute of Medicine, Food and Nutrition Board. *Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride*. Washington, DC: National Academy Press; 1997.

³ American Academy of Pediatrics, Optimizing bone health and calcium intakes of infants, children, and adolescents. *Pediatrics*, 117 (2):578-585; February, 2006.

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Table. Percent of children's food intake parents believe they control in study of normal weight vs obese parents (n=139)

	Body Mass				F value (P value)
	Normal (n=71)	Overweight (n=38)	Obese (n=30)	Average (n=139)	
What percent of the foods your children eat at home did you or your spouse purchase?	82.7	86.6	79.1	82.6	0.38 (0.68)
What percent of the foods your children eat at school do you believe you have direct or indirect control over?	34.4	26.9	29.1	31.0	0.27 (0.76)
Of the total amount of food your children consume (in home and away), what percent do you think you directly or indirectly influence?	59.6	73.0	68.1	65.5	1.15 (0.32)
How many children (under 18) do you have living at home?	2.1	2.4	2.5	2.4	0.51 (0.60)

and day out. On average, these experts estimated that the nutritional gatekeeper of a household controlled—for better or worse—72% of the food that was eaten by their children both inside and outside the home.

They commented that nutritional gatekeepers bought most of what was eaten at home, but they also emphasized that these gatekeepers had a direct and an indirect impact on what their children ate outside the home. They did this every time they made their children's lunches and every time they gave them enough money to afford whatever lunch or snack they wanted. They also did this whenever they influenced the restaurant orders of their family by what they recommended or ordered themselves.

2. A Telephone Survey of Good vs Average Cooks

In the winter of 1998, my Food and Brand Lab (then at the University of Illinois at Urbana-Champaign) conducted a random-digit telephone survey of 1,004 North Americans. These gatekeepers were divided into two groups based on whether they had rated themselves as an above average cook (on a series of 9-point scales) or whether they had rated themselves as average or below.

Do good cooks influence more of their family's food intake than less good cooks? They think they do. While those rating themselves as average cooks (n=562) believed they influenced 71% of their children's food intake, good cooks (n=442) believed

they influenced 82%. What is surprising here is not the difference between these two groups ($\chi^2=6.4$; $P<0.05$), but it is that both groups estimated such a high percentage *regardless* of what they claimed their cooking ability to be. This was regardless of whether the meal was cuisine or carryout, regardless of whether it was fresh pasta or frozen pizza.

3. An Internet Survey of Normal Weight vs Obese Parents

In the fall of 2005, a Cornell colleague (Collin Payne) and I conducted an Internet survey of 150 parents who had been involved in previous studies with us. In addition to being asked their height, weight, and the basic question about how much food they believed they controlled, they were also asked two additional questions: 1) What percent of the foods that your children eat at home did you or your spouse purchase? 2) What percent of the foods that your children eat at school do you believe you have direct or indirect control over?

The 139 parents who completed the study believed they controlled about two thirds (65.5%) of their children's food intake both in terms of what and how much. Even when it came to what their children ate when away from home, these individuals believed they influenced about one third (31%) of what was eaten either directly or indirectly. One individual reported sending "supplemental snacks" with her children (apples, carrots, or granola) claiming, "They're going to eat something for a snack. They

might not eat this [supplemental snack], but at least they have a healthy option to consider." As the Table indicates, there were no differences between the estimates of those of normal weight (body mass index [BMI] <25), overweight (BMI 25 to 30), or obese (BMI >30). All people believed their gatekeeping decisions influenced their children to a similar extent.

IMPLICATIONS FOR FOOD AND NUTRITION PROFESSIONALS

A home's nutritional gatekeeper is the biggest food influence in the nutrition life of most people. They are the biggest food influence in the lives of their children as well as in the life of their spouse or partner. Regardless of the gatekeeper's sex or age and regardless of whether they are a great cook or whether they are culinarily challenged, they have a huge day-to-day influence on their family's nutrition. Across the 1,784 individuals in these three studies, the average person estimated that the nutritional gatekeeper directly or indirectly controls 72% of the food eaten by their children.

This is the 72% solution. While it may not account for all of the food that is eaten by one's family, it suggests our clients have much more control than they think. Some of this control over food choices and quantities is for the better. It involves fruits and vegetables that are put on the counter or in the crisper that would not otherwise have been there. But some of this control over food choices is for the

worse. It involves the bags of cookies and chips that are put on the counter or in the cupboard that would also not otherwise be there.

What is interesting is how easy it is for a gatekeeper to forget or to undervalue the influence they have over their family (8). In the midst of an exhausting, media-filled, food-rich environment, it is easy for our clients to wrongly believe they have less influence over their children's nutrition than they do. This includes both what is eaten both inside and outside the house.

The importance of these 60-year-old articles from the *Journal* and the importance of the 72% solution is that each provides a lesson that can make us more effective food and nutrition professionals.

First, although our profession is based on education, we each have a limited amount of time and energy to educate. It is important to carefully select where we want to focus our efforts. The findings from the World War II studies on homefront nutrition indicated that since the nutritional gatekeeper made most of the family's meal decisions, it would be best to focus efforts specifically on them than ineffectively spread them across the entire family (4). While this can immediately change nutrition behavior, it has a secondary benefit of eventually educating the rest of the family as they witness the modeling behavior of the gatekeeper.

Second, in order for clients to exert more positive control over their children's nutrition, they cannot be fatalistic about their influence. For better or for worse, a great deal—an average of 72%—of what and how much their children eat is estimated to be either directly or indirectly determined by these nutritional gatekeepers. It is important that they be conscious of how they are influencing their family by the foods they buy for home. It is also important they understand the wide range of parameters they control about what might be eaten away from home. Gatekeepers can have an indirect influence in away-from-home food choices depending on the options they give their children, such as supplemental snacks they provide or in the amount of lunch and snack money they give (9).

The danger of many eating decisions is that people unknowingly re-

linquish much more control over them than is necessary (8). Thinking they cannot influence 100% of the food decisions of their children, they either throw up their hands in frustration or throw in the towel. As a result, they end up having a more negative influence on the remaining 72% than they would otherwise have. If we remember our history (10) and the 72% solution, we have a better idea of who to focus our education efforts on and what to say to them (11).

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