



KELLOGG NUTRITION SYMPOSIUM

2006

Brought to you by the Team of Registered Dietitians & Nutrition Professionals at *Kellogg's*

Taking Healthy Lifestyles from Research to Practice

Highlights of the 2006 Kellogg Nutrition Symposium

Presented in conjunction with the Dietitians of Canada Conference in Halifax, Nova Scotia, Friday, June 9, 2006

Christine Lowry, MSc, RD

Focused on Meeting Consumer Needs

Vice President, Nutrition, Kellogg Company

Christine Lowry welcomed participants to the 2006 Kellogg Nutrition Symposium, a milestone year, marking the 30th year since the inaugural Symposium and the 100th anniversary of Kellogg Company. W. K. Kellogg founded the company with a passion for health and nutrition that has sustained the company over the past century and continues to be a priority today.

The Kellogg Nutrition Symposium is focused on providing dietitians with up-to-date nutrition science and policy activities that are relevant to the needs of consumers, and to putting them into context to help address today's nutrition challenges and opportunities. This year's panel of highly esteemed experts shared their insight and strategies on how to translate current science-based recommendations and guidelines into relevant, actionable, consumer friendly messages designed to encourage healthy food and life style choices.

Julie Miller Jones, PhD, LN, CNS

Why Fibre Matters So Much

Professor of Food and Nutrition, College of St. Catherine, St. Paul, MN

Dietary fibre promotes physiological benefits.

Dietary fibre promotes a number of beneficial physiological effects, including laxation, and/or blood cholesterol attenuation, and/or blood glucose attenuation. Fibre is defined as the edible parts of plants or analogous carbohydrates that are resistant to digestion and absorption in the human small intestine with complete or partial fermentation in the large intestine.

RECOMMENDATIONS

Adults (2002 DRI):

25 g/day for females
38 g/day for males

Children:

Age + 5 g

North Americans are not eating enough fibre.

Daily fibre intakes average only about 12 to 15 grams, in the U.S.²⁻³ Canadian intakes also appear to be well below recommendations. Children are doing particularly poorly, with studies showing that 55 to 90% of children in Nova Scotia and the US have inadequate fibre intakes.⁴⁻⁵ Total fibre intakes have decreased over a 10 year interval, particularly the fibre from fruit and vegetables. The only increase is in fibre from ready-to-eat cereals.

Dietary fibre acts like a 'human broom.'

Fibre's water binding capability softens stools making them easier to pass, promoting faster transit times. It decreases constipation in most people. The increased fecal biomass that accompanies higher

fibre intakes also helps dilute and remove naturally occurring carcinogens. It also diminishes potential for the production of harmful metabolites and interaction of constituents which might adversely affect colonic cells.

Fibre has many other beneficial effects.

Fibre's binding of bile acids facilitates their excretion. This reduces secondary bile acid production and, in turn, lowers serum cholesterol. The fermentation of fibre produces short chain fatty acids, such as butyrate, which act as fuel for healthy cells and encourage death of aberrant cells. Fermentation also creates prebiotics, which promote the growth of beneficial bacteria. This changes the production of cytokines and modifies the immune response.

Cereal fibre reduces chronic disease risk.

Cereal fibre and whole grains have been shown in both epidemiological and intervention studies to reduce risks of diabetes

RELATIVE RISK OF TYPE 2 DIABETES

Intake Quintile	1	2	3	4	5
Whole Grain	1.0	0.99	0.98	0.92	0.79
Fibre	1.0	1.09	1.0	0.94	0.78

Meyer et al Am J Clin Nutr 200;71(4):921-30. Nurses Health Study



2006 KELLOGG NUTRITION SYMPOSIUM | 2006 KELLOGG NUTRITION SYMPOSIUM | 2006 KELLOGG NUTRITION SYMPOSIUM | 2006 KELLOGG NUTRITION SYMPOSIUM | 2006 KELLOGG NUTRITION SYMPOSIUM

and coronary disease. Both are associated with improved markers of glycemic control and heart disease risk factors, positive effects on satiety and weight control, and gene and immune modulating effects. Cereal fibre contains many phytochemicals which have positive antioxidant, antimutagenic, and anticancer effects.

The Bottom Line

The full array of polysaccharides, oligosaccharides, resistant starch, lignin and associated phytochemicals in fibre and whole grains benefit overall health.

References

1. Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids, 2002
2. Gangi and Betts. Eur J Clin Nutr, 1995; 49:915 [I can't find this ref in Pub Med]
3. Slavin. Am J Med, 1999; 106:1A 465-495; discussion 505-515
4. Veugeliers P et al. Can J Public Health, 2005; 96(3):212-6
5. Saldanha LG et al. Pediatrics, 1995; 96:5 Pt 2 994-7

New Ways to Get There

Karen Tilley

Senior Vice President,
Managing Partner,
Leo Burnett, Toronto, ON

Communicating successfully in a changed world.

Marketing and health professionals share a similar challenge in providing people with information in a way that provokes a behaviour change, that can often be quite difficult to achieve. With the significant fragmentation of media, an explosion of food product options and their accompanying plethora of messaging, consumers are experiencing information and choice overload.

Effective communicators know how to connect.

Brand marketing concepts can help us learn how to communicate complex, and at times confusing information in order to positively change attitudes and behaviours. Successful marketers realize it is critical to know their audience as intimately as they know their own products. They understand their attitudes and values, how they think and how they feel. This enables the creation of compelling messaging that connects with people on a human level, to inspire and motivate new behaviours and reinforce existing ones.

Consumer confusion is creating an era of cynicism.

Today's consumers are more aware of diet and nutrition and they express a strong desire to live a healthier lifestyle than they do now. The trouble is that they remain confused about what exactly healthy eating means. Increasingly, they are left wondering "what exactly am I supposed to do?"

Communicating to make an emotional connection.

In the marketing business, long-term competitive advantage comes from repeat behaviour. Most marketing dollars are spent trying to

CONSTRUCT A FRAMEWORK

Intensity of Problem	+	Power of Promise	+	Desirability of Process	>	Magnitude of Cost
Must be dissatisfied with current situation		Must be motivated by the goal		Must understand how to get there		Must be honest about the sacrifice

move a product to brand status. A product is something that delivers a functional benefit, for example something that makes your teeth white. A brand fills an emotional need. People develop a relationship with and are committed to a brand.

Reframing messages to create an emotional response.

Connecting with people in a way that motivates a behavioural change is not about conveying any new information. The key lies in understanding people's underlying emotional drivers and speaking to them in a way that can create a shift. Marketers and advertisers strive to speak to people's aspirations, needs and wants to create that deeper connection and emotional attachment.

Challenge marketing helps address consumer apathy.

Kellogg's All Bran Two Week Challenge is an example of an effective strategy for changing consumer behaviour in the face of apathy. In this case, we know that Canadians understand the benefits of fibre; yet clearly are not eating enough when they know they should. The campaign reversed declines in sales by repositioning the benefit of laxation to one of overall feeling good.

Striking an emotional cord can drive new behaviours.

We want consumer dissatisfaction with the current situation, as well as:

- a motivating vision of the goal (the power of the promise)
- an understanding of the ultimate benefit to them; and,
- an understanding of how to get there (a simple process).

And these three factors need to outweigh the sacrifice (or emotional and hard costs) associated with the behaviour change.

The Bottom Line

In communicating with people, we must understand that the rational, functional reasons people should change are not necessarily going to affect behaviour. We need to speak to the emotions that drive behavior.

Adam Drewnowski, PhD

The Contribution of Snacks
to a Healthy Diet

Director,
Centre for Public Health Nutrition,
University of Washington, Seattle, WA

Snacking prevalence has increased dramatically.

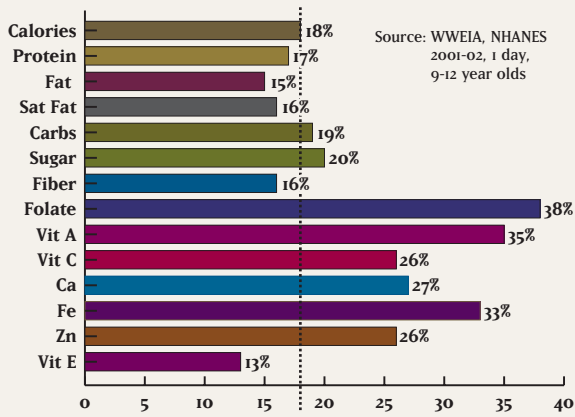
Regular meals are being replaced by frequent snacks. US data indicates there is a snacking explosion among 9 to 12 year olds.¹ This group's current eating habits may include up to four to six snacks daily and snack calories account for 27% of their total energy intake. Fewer children now report eating regular meals. The concern is that most snacks are energy-rich but nutrient poor.

We know that not all snacks are created equal.

The increase in snack energy has been paralleled by an increase in energy density of the diet and by higher energy intakes overall. Increases in total daily calories in 9 to 12 year olds is largely due to snacks.¹ On average, in this group, snacks contribute more energy relative to essential nutrients.



CONTRIBUTION OF BREAKFAST TO INTAKE 2001



We need a way to make calories count more.

If the present snacking trends are linked to economic and time constraints on household wage earners and the erosion of the family meal, they may not be easily reversed. Thus, we need a way to identify more nutrient-rich snacks, based on their nutrient content in relation to the calories they provide. The naturally nutrient rich (NNR) score is a useful nutrient-to-energy ratio.²

Nutrition profiling of individual foods can help.

A nutrition profiling approach can be used to assign nutrient density values to snack foods within and across food groups. The NNR score is based on mean percentage daily values for 14 nutrients in 2,000 kcal of food. Using the NNR scores can help parents and school districts to identify nutrient dense snacks, while allowing flexibility where discretionary calories are concerned.

The Bottom Line

Today, consumers recognize that some foods are better choices. We have been defining foods by the absence of nutrients that are perceived to be problematic. It is time we focus on the beneficial nutrients that foods provide. The goal of the NNR score is to help people choose naturally nutrient-rich foods first, and then the less nutrient-dense foods as calorie needs allow.

References

1. Unpublished data. Diets of children 9-12 years of age analyzed by Dr. Alanna Mosfegh, USDA Beltsville HNRC - Food Surveys Research Group. Based on NHANES 2001-02 data and NFCS 1977-78 data.² Gangi and Betts. Eur J Clin Nutr, 1995; 49:915 [I can't find this ref in Pub Med]
2. Drewnowski A. Am J Clin Nutr, 2005; 82:721-32

Linda McCargar, RD, PhD

Active Living Counselling
- An Adjuvant Therapy?

Professor,
Clinical Nutrition, University of Alberta,
Edmonton, AB

Towards a more holistic approach to health.

Healthy eating and active living are recognized as important lifestyle choices for health and wellbeing. Research shows engaging in both behaviours can have a significant impact on chronic disease prevention and treatment. Dietitians are in an ideal position to

promote a holistic approach to health, by incorporating active living as an adjuvant therapy to dietary change.

Dietitians expressed a need for more training.

A series of six focus groups were held in Alberta to determine the perceived needs of dietitians in the area of active living counselling. There was strong support for incorporating active living messages in dietetic counselling. However, key barriers included a lack of knowledge, a lack of training opportunities and concern regarding the perceptions of other professionals and the public vis à vis dietitians taking on this role.

Training improved dietitians' knowledge and self-efficacy.

Subsequently two-day workshops focusing on physical activity were held for dietitians. The key concepts taught included assessing client's readiness for physical activity using the stages of change model, use of several monitoring tools, use of Canada's Physical Activity Guide and building a referral base to fitness professionals. Further study demonstrated that those who attended these training sessions had improved knowledge, attitudes and self-efficacy regarding active living counselling, compared to controls.



Training influences referrals to exercise professionals.

A year following these workshops, dietitians throughout Alberta completed a web-based survey about counselling practices related to active living. Of all the dietitians who responded to the survey:

- 89% reported promoting physical activity in daily practice.
- 97% reported that they themselves were physically active on a regular basis.

Those who had attended the workshop were more likely to refer clients to physical activity professionals than those who did not attend the workshops.

The Bottom Line

Targeting messages at single behaviours may be a starting point for broader lifestyle changes over the long term. Simple tools can help sustain behaviour change. Partnering with physical activity professionals for enhanced programs and services is also considered an effective strategy.



FROM RESEARCH TO PRACTICE



In The Words of Our Speakers...

"Pay attention to breakfast: it is the meal that provides most vitamins and minerals in relation to calories."
"Improve the nutrient content of children's snacks - many snacks are energy-rich but nutrient-poor."

Dr. Adam Drewnowski says...

"It is important to encourage higher fibre intake. The intake of dietary fibre and whole grain in North America is only one-half to one-third of the recommended levels."
"Dietary fibre and the whole grains that provide fibre have been shown to lower risk for coronary heart disease, hypertension, obesity and diabetes and other chronic diseases."

Dr. Julie Miller Jones says...

"Partner with physical activity professionals for enhanced programs and services."
"Healthy eating and active living are important therapies for prevention and/or treatment of chronic disease."

Dr. Linda McCargar says...

"Keep messaging simple, focused and consistent over time and across touch points."
"Successful communication can empower the consumer as an ally, allowing them to actually experience a tangible benefit."

Karen Tilley says...

And the final words from Johanne Trudeau

Director,
Nutrition & Consumer Affairs
Kellogg Canada Inc.

"There are endless opportunities for dietitians in the current environment. Look beyond traditional roles and adopt learnings from other professions to continue to raise the bar for the dietetics profession in Canada."

...final words



REGISTERED DIETITIANS
at Kellogg Canada Inc.