

Programme and abstract book

Mondelēz International symposium held in conjunction
with the IUNS 21st International Congress of Nutrition
Buenos Aires, Argentina, 15-20 October 2017

Mindful eating applied to snacking: a promising behavioral approach supported by research

Tuesday 17 October 2017, 17.00 - 19.00

A symposium organized by Mondelēz International



www.mondeleznutritionscience.com

Editorial



Dr. Michel INFANTES

Global Nutrition Director
Mondelēz International R&D

Dear attendees,

It is with great pleasure that we welcome you to this symposium on Mindful eating applied to snacking: a promising behavioral approach supported by research, held in conjunction with the IUNS 21st International Congress of Nutrition in Buenos Aires. This symposium is hosted by Mondelēz International.

A balanced diet is a key factor in maintaining life-long health and well-being. In this regard, mindful eating is an emerging approach that has been investigated in more and more clinical studies. Its principles provide guidance regarding how to behave before and while eating.

For this symposium, Mondelēz International has invited three experts in the fields of nutrition and food behavior, psychology and

marketing to share their in-depth knowledge and the latest research advances regarding snacking and its impact on diet quality, the impact of mindful eating on eating habits and the applicability of mindfulness to snacking practices.

We hope that you will find this symposium informative, and welcome you to visit our booth in the exhibition area for further discussion.

We wish you a very fruitful visit at the International Congress of Nutrition.

Scientific program of the symposium

Welcome and introduction

Chair: Dr. Jean Kristeller

Department of Psychology, Indiana State University, Terre Haute, Indiana, USA

Snacking in different parts of the world: a marker of dietary anarchy or a useful contributor to diet quality and weight control?

Dr. France Bellisle

Nutritional Epidemiology Team, Paris 13 University, France

Eating mindfully as a sustainable healthy behavior: Theory and evidence.

Chair: Dr. Jean Kristeller

Department of Psychology, Indiana State University, Terre Haute, Indiana, USA

How mindfulness can benefit to snacking?

Dr. Yann Cornil

Sauder School of Business, University of British Columbia, Canada

Introduction of discussion

Co-chair: Dr. Sophie Vinoy

Nutrition Research, Mondelēz International R&D

Panel discussion

All speakers

Session close

Dr. Jean Kristeller

Snacking in different parts of the world: a marker of dietary anarchy or a useful contributor to diet quality and weight control?



Dr. France Bellisle

Nutritional Epidemiology Team, Paris 13 University, France

Following degrees in experimental psychology (McGill and Concordia Universities, Montreal), France Bellisle worked at the College de France in Paris in the laboratory of Jacques Le Magnen. She obtained Doctorate Degrees from the University of Paris and, from 1982 until 2009, worked at French National Research Institutes (CNRS, INRA). She developed original research in the field of human ingestive behaviours. She is now continuing her scientific activities with the Nutritional Epidemiology Team of University Paris 13 and as an Adjunct Professor of Laval University, Quebec. Her research interests cover all types of determinants of food and fluid intake in human consumers, including psychological, sensory and metabolic factors as well as environmental influences. She is a member of the Scientific Board of the Institut Paul Bocuse Research Center.

Abstract

The present “epidemic” of obesity has been attributed to a growing trend for snacking (Murakami, 2015). Dietary surveys in various parts of the world reveal that “snacks” (eating occasions at other moments than main meals) do bring a significant amount of energy and nutrients to the daily diet. Even in countries where the traditional pattern of three “main meals” is maintained, most individuals snack at least once daily. One daily snack is frequent in France (mostly at the occasion of the traditional afternoon “goûter”) but up to 8 or 12 habitual daily snacks have been reported in Scandinavian countries (Bellisle, 2014; Lund, 2014). In the USA, snacks have increased in frequency over the last decades and three or more snacks a day now bring over 23% of the daily energy in men and women (Kant, 2015). Snacks can represent between 4% (China) and more than 50% (Finland) of daily energy intake (Lund, 2014; Duffey, 2014). Clearly, the important contribution from snacks to the daily intake can affect body weight control and quality of the diet. A review of the abundant literature about snacking reveals at least two contrasting pictures (Bellisle, 2014; Hess, 2016). In many studies, snacking is presented in a favorable way, highlighting its contribution to the daily intake of valuable micronutrients and the flexibility it confers to adjust the daily energy intake to fluctuating energy needs. By contrast, other reports view snacking as a source of excessive energy intake, facilitating weight gain, with little contribution to the quality of the diet (Murakami, 2015). The potential value of snacking is obviously modulated by the selection of good nutritional quality foods, but also by other types of factors, for example: eating in the absence of hunger in response to external non-physiological cues, irregular as opposed to regular snacking, snacking while watching television or screen. Evidence exists that paying attention to the act of eating facilitates both satiation and satiety, perhaps by optimizing the sensory experience of ingestion and facilitating the memory processes that contribute to inhibiting further eating. The regularity of snacks can make them small “meals” that occur predictably in the daily schedule. The French “goûter” ingested by all children and many adults in the middle of the afternoon not only allows them to cope with the very long time interval between lunch and dinner, but generates the physiological responses usually triggered by regular meals. Physiological cues typically present at the outset of a “main” meal (among which a small decline in glycemia) are also present at the beginning of a regular “goûter”, preparing the organism to respond to the nutrient load. Such physiological responses are not present when snacking is triggered by external cues in the absence of hunger. The potential beneficial effects of snacking (intake of valuable micronutrients, facilitated adjustment of intake to needs) take place when snacking is a regular, mindful eating event as opposed to an irregular, externally triggered, impulsive behavior.

Keywords: snack; energy intake; diet quality; weight control; mindfulness.

Eating mindfully as a sustainable healthy behavior: Theory and evidence.



Dr. Jean Kristeller

Department of Psychology, Indiana State University,
Terre Haute, Indiana, USA

Dr. Jean Kristeller is a clinical and research psychologist who has worked for over 30 years in the areas of eating disorders, obesity and the therapeutic effects of meditation, and was the co-founder of The Center for Mindful Eating. She has received multiple NIH grants to investigate the treatment program she developed, Mindfulness-Based Eating Awareness Training (MB-EAT), is author of “The Joy of Half a Cookie: Using Mindfulness to Lose Weight and End the Struggle with Food,” and the forthcoming book “Mindfulness-Based Eating Awareness Training (MB-EAT): A Treatment Manual” (Guilford Press), and runs training workshops on MB-EAT at Kripalu Center for Yoga and Health, and elsewhere. She is Professor Emeritus in the Dept. of Psychology, Indiana State University. She received her doctorate from Yale University, and has held faculty appointments at Harvard University Medical School and the Univ. of Massachusetts Medical School. See www.mb-eat.com for further background information.

Abstract

Mindful eating is a unique way of relating to the many food choices we face every day. Our minds and our bodies can provide us much wisdom, not only to eat in a more healthy and flexible way, without dieting, but also to enjoy our food more – not less. Although snacking is often identified as an undesirable aspect of food intake, evidence suggests that regular meals can be supplemented by snacks within healthy parameters, particularly in regard to quantity, but also related to quality of foods chosen. One of the challenges of highly restrictive diet programs, which generally curtail virtually all commercially available snack foods is that little awareness is developed regarding how to eat such foods in a more balanced, limited but sustainable way.

This presentation will provide an introduction to the basic elements of the Mindfulness-Based Eating Awareness Training (MB-EAT) program, including a brief introduction to the theory of mindfulness meditation and the mindful eating experiences used in the program (Kristeller, 2016; Kristeller & Wolever, in press). Core goals within the MB-EAT program, a structured 12 session manualized intervention, include heightening interoceptive awareness of physical hunger, taste, and fullness; heightening awareness of non-nutritive cues for eating, including thoughts and feelings, and external triggers such as the presence of food, and social pressure; and mindful use of nutritional information. Heightening awareness of taste satisfaction and taste satiety (sensory-specific satiety) is a core element throughout. Multiple eating awareness exercises occur across the program, including use of snack foods such as high energy dense foods, and participants’ personally preferred snack foods. Rather than restricting these foods, which often results in rebound overeating, the message is to consider how to obtain maximal pleasure from smaller, rather than larger, quantities, and to make more mindful choices to reflect caloric and health needs. At the same time, healthier foods are also presented as important alternatives, but again, in a balanced rather than exclusive way.

The presentation will review research evidence from several NIH-funded clinical trials, application to a range of clinical populations, including those with binge eating disorder (Kristeller, Sheets & Wolever, 2013; Kristeller & Wolever, 2011), type II diabetes (Miller, Kristeller et al., 2012; 2014), and obesity-related eating patterns (Daubenmier, Moran, Kristeller et al., 2016). Our research to date suggests that individuals can bring compulsive overeating under control, improve emotional regulation related to eating, and decrease weight, and that improvement across a range of variables is associated directly with amount of mindfulness practice. The implications of this approach for helping individuals create a more balanced, sustainable, yet flexible relationship to eating and food, will be discussed.

Keywords: mindful eating; MB-EAT; sensory-specific satiety; binge eating disorder; weight loss.

How mindfulness can benefit to snacking?



Dr. Yann Cornil

Sauder School of Business, University of British Columbia, Canada

Yann Cornil is an Assistant Professor of Marketing at the University of British Columbia, Sauder School of Business, Canada. He received his Ph.D. in Marketing from INSEAD (France and Singapore) in 2015 and his M.Sc. in Management from HEC Paris in 2007. Yann Cornil's research focuses on finding solutions that simultaneously promote healthy eating and improve eating enjoyment among children and adults. His research on food choices, food sensory perception, and emotional eating appeared in leading academic journals such as *Psychological Science*, the *Journal of Marketing Research*, the *Journal of Consumer Psychology*, and *Appetite*.

Abstract

The growing trend for snacking among children and adults over the past forty years has been potentially identified as one of the factors contributing to the obesity epidemic. Because of the type of food being consumed (high in calorie, sugar and fat), but also the timing of consumption (between meals) and the mode of consumptions (for instance, while watching TV), a habit of snacking represents a challenge for energy balance and body weight control. By contrast, evidence exists that "mindfulness" can benefit to snacking. Mindfulness typically increases consumers' awareness of and responsiveness to internal signals of satiety, but it also increases food enjoyment and savoring. It can thus decrease the occurrence of impulse-based or mindless snacking episodes, but also promote more qualitative snacking, with the aim to appreciate the sensory quality of snacks rather than satisfying an appetitive impulse.

We know that satiety is only marginally influenced by the actual quantity of energy being ingested, and is largely driven by a vast array of cognitive factors, including consumption norms, visual perception of food quantity, and monitoring of eating (Cornil 2017). Hence, behavioral research has shown how purposeful changes in food marketing and environments can promote positive eating behaviors like mindful snacking, and more generally decrease food intake without reducing satiety or satisfaction (Chandon and Wansink 2012; Wansink and Chandon 2014). Small changes in package shape and dinnerware size can have a large impact on consumers' perception of food volumes, and therefore increase the perceived (but not the actual) amount of food being eaten (Krishna 2006; Van Ittersum and Wansink 2012). Size labels (for instance, labeling the same portion size "large" rather than "normal") and assortment sizes (for instance, adding an "extra large" or an "extra small" option in the choice set) influence consumption norms, and can thereby impact the satiating power of a snack for the same actual quantity (Aydinoglu and Krishna 2011; Sharpe, Staelin and Huber 2008). Also, subtle cues can encourage better monitoring of eating and limit mindless eating sequences, leading to faster satiation—for instance, inserting potato chips of different colors at regular intervals in a tube of chips as a way to "segment" consumption (Geier, Wansink and Rozin 2012).

Growing research inspired by mindfulness techniques has also shown that encouraging consumers to focus on the sensory characteristics of foods can increase eating enjoyment while reducing calorie intake (Tapper 2017). This is because a higher sensory focus increases awareness of and responsiveness to satiation cues, and in particular to "sensory-specific satiety", which predicts that the first few bites of a food are the most pleasurable, then pleasure declines with each subsequent bite. Hence, positioning a snack food as a way to emphasize its multisensory qualities (taste, aromas, texture) can increase the appeal of smaller portion sizes (Cornil and Chandon 2016). This shows that mindfulness techniques applied to foods can be a viable alternative to health warnings in order to encourage consumers to snack more healthily, while preserving—and even enhancing—the pleasure of eating.

Keywords: mindfulness; snacking; portion size; satiety.



Nutrition Science Corner

We invite you to visit our website to get an overview of Mondelēz International scientific research expertise in nutrition and well-being.

www.mondeleznutritionscience.com



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