

EDITORIAL

Catherine Krejany, Epi Kanjo, and Moyez Jiwa

Melbourne Clinical School, University of Notre Dame Australia, Melbourne, VIC, Australia

<p>To Cite: Krejany C, Kanjo E, Jiwa M. Snacking cessation: It's time to challenge this eating behaviour. <i>JHD</i>. 2021;6(1):351–355. https://doi.org/10.21853/JHD.2021.127</p> <p>Corresponding Author: Catherine Krejany Melbourne Clinical School The University of Notre Dame Australia 300 Princes Highway, Werribee, VIC 3030 Australia catherine.krejany@nd.edu.au</p> <p>Copyright: ©2021 The Authors. Published by Archetype Health Pty Ltd. This is an open access article under the CC BY-NC-ND 4.0 license.</p>	<p>SUMMARY</p> <p>Our habits have changed over the generations. In particular, our eating behaviours continue to adapt and are intrinsically linked with changing social norms and myriad other influences leading us to consume more. In light of the obesity epidemic that threatens to be our greatest health challenge, the race is on to find new ways to modify or alter our food choices to those considered more “healthful”. Somewhere along the way snacking has become an acceptable eating pattern. We are uncomfortable foregoing these readily available and hedonistic food rewards. It may be time to change more than our food choice and question the need to snack at all.</p> <p>Key Words snacking cessation; snacking; eating behavior; obesity; public health</p>
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INTRODUCTION

Most people eat between meals. They “snack”. People snack because they associate it with pleasure. For many people snacking has become part of a daily routine. When humans are tired or stressed they seek relief through sensory pleasure. This “pleasure” narrative that currently surrounds snacking is very successful. People have accepted and embraced snacking as a social norm, and it appears to be an established and persistent habit in most cases.

Over time snacking trends have increased dramatically in both frequency and proportion.^{1, 2} Many people now eat more snacks than meals throughout the day, and the proportion of people who snack more than once a day has increased.^{3, 4} People’s eating behaviours are integrally linked with changing social norms. Since the 1950s, food companies have promoted meals on-the-run, convenience foods, and “to go” snacks. As a result, between-meal indulgences are a relatively common phenomenon. Snacks have become anchored with our drinking behavior: people now regularly consume a high energy-dense, sweet snack with takeaway or socially shared coffees.⁵ These practices are more entrenched in Western countries such as the US, Canada, and Australia. Rather than a necessary fuel, snacks are now reimagined in a stressed, lonely, weight-conscience society as a portion-control mechanism, an adjunct to mental health, or a comforting and inclusive social ritual, and these associations are fundamentally blurring our relationship with food.

The food industry promotes “healthy” snacking. Many companies now market “healthy” snacks as a new and expanding business model. They are not alone. Scholars and academics are focusing on interventions and nudges that would have us selecting “healthier” snack food choices.^{6, 7}

Snacking recommendations have been built into many countries' health guidelines, but there is little consistency on appropriate frequency of snacking nor the quality or quantity of snacks that should be consumed.⁸ The justification for these recommendations range from the provision of additional energy and nutrients, improving dental health, targeting of additional specific foods to the diet, and rationalising foods to limit.⁸ These recommendations set up unhelpful habits in Western countries, where current snacking contributes to unnecessary additional energy intake and the risks of increasing BMI.⁹ Unhealthy snacking habits are common in overweight and obese adults.¹⁰ Analysis of snacking choices globally show that foods eaten as snacks tend to be nutrient poor and energy dense.⁷

There is some literature to support the notion that 4 to 5 smaller meals has advantages over 3 larger more spaced out eating occasions. Such “grazing” styles of eating may help to counter temptation for high energy-dense snacks and are purported to encourage an increased variety and nutritional diversity less attainable by the traditional 3 meals a day.¹¹ This may be true for those able to stick to a true grazing style eating pattern where portions are small at every eating occasion, and where people monitor and maintain nutritional diversity. When people adopt the “grazing” approach, they must compensate at other eating occasions throughout the day for calories consumed during snacking. Directing people to alter their food choices alone does not address the issue of excess energy intake. Studies show that consumption of a higher amount of fruit and vegetables does not improve energy balance nor does it lead to satiety and reduction in further daily eating.⁹ Without compensation, snacking on anything adds to increased overall energy intake and weight gain. For those people who are already overweight or obese, and who lack compensation capacity, the amount of weight gain is higher.⁹ There is no evidence regarding benefits in the universal application of a snacking pattern of eating. The market share of snacks of very little nutritional value would suggest that healthful snacking is a mirage.

Snacking has become big business. Globally the snack food sector is worth USD \$389 billion annually.¹² Global confectionary revenues top USD \$826 billion annually, of which the US contributes \$176 billion.¹³ In everyday terms, in 2020 this equates to consumption of 62.3kg of confectionary product per capita in the US, and 40.2 kg per capita in Australia.¹³ These two countries have the highest prevalence of childhood snacking patterns and the highest consumption of energy-dense snacks during these eating occasions.¹⁴ Recent media reports suggest that the average American would spend up to USD \$30,000 in their lifetime on snacks.¹⁵ The snack and confectionary industries exert power and influence. The pervasive and largely unregulated marketing machine of these two industries contributes to the public perception and acceptability of snacking in the absence of hunger. Currently, no public health messaging exists to counter this perception. In an accompanying editorial, we illustrate strong parallels between snacking marketing and tactics employed by the tobacco industry in the smoking advertisements of days gone by.¹⁶ Our experience with smoking should prove a cautionary tale. Table 1 illustrates the major public health interventions that were designed to curb smoking and change public perception and clearly illustrates, by comparison, that snacking lacks any of these same controls. Consumers can purchase as many nutritionally poor snacks as they like, in any quantity they like, from just about any food retail outlet.

The entire perception that snacking is good for you is problematic. The recasting of snacking as

a reward, a mental health circuit breaker, and culturally and socially accepted is also concerning. These rationalisations for eating further erode our compensation capacity—our ability to regulate our calorie intake based on recent consumption. More and more, the reasons for snacking have little to do with hunger. We are no longer accustomed to being hungry between meals. Our most recent illustration of this unhealthy eating relationship came with the Covid-19 pandemic. Many reports are emerging from around the globe indicating significant weight gain due to snacking and the combination of boredom, anxiety, lockdown, and increased food accessibility.^{17,18} Snacking is neither an appropriate nor healthy way to deal with such challenges.

Table 1: Comparison of the controls in place for smoking versus snacking

	Smoking	Snacking (including fast food)
Advertising at sporting events in 2020	No; banned in 1989 (AU)	Yes
TV advertising in 2020	No	Yes
Advertising to children	No	Yes
Warning labels ¹⁹	Yes; first introduced in the US in 1965 US, 1969 AU	No
TV public health anti-smoking messaging in prime time ¹⁹	Yes; mandated in 1967 in US; in Australia in 1971	No
Plain packaging for products	Yes; first introduced in Australia in 2012	No
Availability to purchase	Restricted	Unrestricted
Cost (average price per unit) (AUD)	\$47.56 *	\$13.09 ¹² **
‘Cessation’ term coined ¹⁹	1970 [#]	No
Direct healthcare costs (AUD)	\$19.2 Billion ²⁰	\$5.4 Billion ²¹

* Cost of 25 packet of Marlboro cigarettes at the time of writing this editorial at Coles supermarket in Australia.

** Average price per unit in the snack food segment of the consumer market in Australia.

The term smoking cessation came into use after the US Surgeon General’s landmark report on smoking and health in 1964. By 1970 “smoking cessation” was the common terminology and smoking cessation clinics were in operation throughout the US.

We seem to be drawing errant and flawed conclusions from the available literature. We observe that snacking is a pervasive behavior. We acknowledge that most people are not snacking in a healthy way and that this behaviour is contributing to excess energy intake—and subsequently, weight gain. The research and public health response to date has been to try and change what people eat. We posit instead that we need to challenge the need to eat between meals at all rather than accept the notion that it is necessary for any reason. Societies are reframing their relationship with food and casting it in a role of comforter rather than as a source of nutritional sustenance. We are, through snacking, blurring the distinction between other discomforts and the neural and endocrine signals that tell us we are hungry. Snacking behaviour will only continue to add to the global expansion of our waistlines and risks us travelling down the familiar trajectory of accepting social norms that are harmful to our health.

REFERENCES

1. Dunford E, Popkin B. 37 year snacking trends for US children 1977–2014. *Pediatric obesity*. 2018;13(4):247–55. doi: 10.1111/ijpo.12220
2. Fayet-Moore F, Peters V, McConnell A, et al. Weekday snacking prevalence, frequency, and energy contribution have increased while foods consumed during snacking have shifted among Australian children and adolescents: 1995, 2007 and 2011–12 National Nutrition Surveys. *Nutrition journal*. 2017;16(1):65. doi: 10.1186/s12937-017-0288-8
3. Dunford EK, Popkin BM. Disparities in snacking trends in US adults over a 35 year period from 1977 to 2012. *Nutrients*. 2017;9(8): 809. doi: 10.3390/nu9080809
4. Nishi SK, Jessri M, and L'Abbé M. Assessing the dietary habits of Canadians by eating location and occasion: Findings from the Canadian community health survey, cycle 2.2. *Nutrients*. 2018;10(6):682. Doi: 10.3390/nu10060682
5. Jiwa M, Kanjo E, Krejany CJ. Could a coffee culture be ruining our health? *The Journal of Health Design*. 2019;4(3): 205–9. Doi: 10.21853/JHD.2019.91
6. De Cock N, Vangeel J, Lachat C, et al. Use of Fitness and Nutrition Apps: Associations With Body Mass Index, Snacking, and Drinking Habits in Adolescents. *JMIR Mhealth Uhealth*. 2017;5(4): e58. doi: 10.2196/mhealth.6005
7. Hess JM, Jonnalagadda SS, and Slavin JL. What Is a Snack, Why Do We Snack, and How Can We Choose Better Snacks? A Review of the Definitions of Snacking, Motivations to Snack, Contributions to Dietary Intake, and Recommendations for Improvement. *Advances in Nutrition*. 2016;7(3):466–75. doi: 10.3945/an.115.009571
8. Potter M, Vlassopoulos A, and Lehmann U. Snacking Recommendations Worldwide: A Scoping Review. *Advances in Nutrition*. 2018;9(2):86–98. Doi: 10.1093/advances/nmx003.
9. Hunter SR, and Mattes RD. The Role of Eating Frequency and Snacking on Energy Intake and BMI. *Handbook of Eating and Drinking: Interdisciplinary Perspectives*. 2020: 659–78. Doi: 10.1007/978-3-030-14504-0_115
10. Wiśniewska K, Ślusarczyk K, Jabłonowska-Lietz B, et al. The frequency of snacking and night-time eating habits in the adult obese patients. *Proceedings of the Nutrition Society*. 2020;79(OCE2).E472 doi: 10.1017/S0029665120004206
11. Marangoni F, Martini D, Scaglioni S, et al. Snacking in nutrition and health. *International Journal of Food Sciences and Nutrition*. 2019;70(8):909–23. Doi: 10.1080/09637486.2019.1595543
12. Consumer market outlook: snack food worldwide. [Data file] Statista: Hamburg, Germany; 2020 [cited 2020 Oct 1]. Available from: <https://www.statista.com/outlook/40110000/100/snack-food/worldwide?currency=usd>
13. Consumer market outlook: confectionary worldwide. [Data file] Statista: Hamburg, Germany; 2020. [cited 2020 Oct 1]. Available from: <https://www.statista.com/outlook/40101000/100/confectionery/worldwide?currency=usd>.
14. Wang D, Van der Horst K, et al. Snacking patterns in children: A comparison between Australia, China, Mexico, and the US. *Nutrients*. 2018;10(2):198. Doi: 10.3390/nu10020198
15. Renner B. Munchie money: The average American will spend nearly \$30,000 on snacks. [Internet]. Study Finds 2019 Los Angeles (CA) [updated 2019 Dec 7; cited 2020 Oct 1]. Available from: <https://www.studyfinds.org/munchie-money-the-average-american-will-spend-nearly-30000-on-snacks/>.
16. Jiwa M, Krejany C, and Kanjo E. Is snacking the new smoking? *Journal of Health Design*. 2020;in press.

17. Pellegrini M, Ponzo V, Rosato R, et al. Changes in weight and nutritional habits in adults with obesity during the “lockdown” period caused by the COVID-19 virus emergency. *Nutrients*. 2020;12(7):2016. Doi: 10.3390/nu12072016
18. Sidor A, Rzymiski P. Dietary Choices and Habits during COVID-19 Lockdown: Experience from Poland. *Nutrients*. 2020;12(6):1657. Doi: 10.3390/nu12061657
19. National Centre for Chronic Disease Prevention and Health Promotion (US), Office for Smoking and Health The health consequences of smoking—50 years of progress: a report of the Surgeon General [internet]. Atlanta, (GA): Centers for Disease Control and Prevention (US); 2014. Fifty years of change 1964–2014. [cited 2020 Oct 1]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK294310/>
20. Scollo M, Greenhalgh E. Tobacco in Australia: Facts and Issues. [internet]: Melbourne (VIC): Cancer Council of Victoria; 2019. 17.2 The costs and benefits of smoking to the Australian economy. [cited 2020 Oct 1]. Available from: <https://www.tobaccoinaustralia.org.au/chapter-17-economics/17-2-the-costs-of-smoking>.
21. Cooper C. New statistics: Australia's obesity epidemic reaches crisis point. Bupa Australia 2020. Melbourne (VIC) 2019. [updated 2019 Mar 27; cited 2020 Oct 1]. Available from: <https://media.bupa.com.au/obesity-statistics-australia/>

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