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What do adolescents know about food energy?

K.E. Lacy¹, M. Burton², J. Mouchacca¹ and S.A. McNaughton³

¹*Institute for Physical Activity and Nutrition, Deakin University, Geelong, Victoria, Australia*

²*School of Exercise and Nutrition Sciences, Deakin University, Geelong, Victoria, Australia*

³*Health and Well-Being Centre for Research Innovation, School of Human Movement and Nutrition Sciences, University of Queensland, St Lucia, Queensland, Australia*

In Australia, many adolescents are not meeting dietary guidelines, particularly for low-energy-dense foods such as vegetables⁽¹⁾. Adolescents' diets also include high amounts of discretionary foods⁽¹⁾, which tend to be energy dense and nutrient poor. Decreasing dietary energy density could moderate energy intake⁽²⁾ and improve overweight and obesity prevalence among adolescents. Communicating with adolescents about the energy in foods may be important for teaching them strategies to decrease their dietary energy density, but this requires careful consideration to ensure that key messages use language and concepts that are appropriate for adolescents. This study aimed to explore adolescents' perceptions of food energy, understanding of food energy-related terminology and consideration of energy when making food and drink choices. The present study used face-to-face interviews with a structured schedule of open-ended and closed questions informed by previous research among adolescents as well as gaps in the literature. Some interview questions included prompts with visual cues (lists of food-related terms and factors previously associated with adolescent food choices) to encourage deeper discussion. Interviews were recorded, professionally transcribed and analysed using a six-phase thematic analysis. Thirty adolescents (mean age 14 years, range 12–17 years) from regional Victoria participated in interviews that lasted an average of 39 minutes (range 28–62 minutes). Most adolescents perceived energy in food as the fuel required to move the body or the 'power' stored in food. Adolescents identified that different foods contain varying amounts of energy, and they classified foods as high energy ('good energy') or low energy ('bad energy'). Adolescents were more familiar with the term 'calories' than 'kilojoules' when asked about these words. Approximately half of adolescents described thinking about the energy in food in making food choices when prompted with the question 'Do you ever think about energy when you're choosing a food to eat?', but most adolescents did not consider the energy in a drink as an influence on their drink choice when prompted with a similar question. In conclusion, this study, which was the first to explore adolescents' perceptions of food energy and energy-related terminology in Australia, found some inconsistencies around adolescents' understanding of food energy and that the metric system term 'kilojoules' was less familiar to adolescents than 'calories'. Additionally, food energy may be an important inclusion in nutrition education, but the lower reported consideration of energy in drinks may have important implications for beverage consumption messages (e.g., around sugar-sweetened beverages). Practical implications of the results include that it may be helpful to use examples that distinguish between the energy we feel (e.g., our 'energy levels') and the energy in foods in nutrition education among adolescents. Additionally, nutrition education among adolescents may need to promote understanding of both kilojoules AND calories.

References

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2. Smethers AD, Roe LS, Sanchez CE *et al.* (2019) *Physiol Behav* **204**, 210–218.