



Lolly Folly Research

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There were two reasons I couldn't believe my ears when listening to the Health Report on Radio National last night (May 30, 2016), when researchers from Murdoch Children's Research Institute discussed their meta-analysis findings, recently published in the American Journal of Clinical Nutrition, that children who eat more candy are likely to be leaner.

Firstly, there was no mention of the fact, confirmed in reading the article, that studies for their meta-analysis were excluded if BMI was the indicator of fatness. We know categorically that BMI in children's longitudinal studies provides misleading information. Secondly there was no mention that studies were excluded if relationships between confectionary consumption and fatness were not statistically adjusted (or better still experimentally controlled) for the effects of physical activity. Again, that this was not a condition was confirmed on reading the article. In not considering physical activity this has led the researchers to miss discussing the most obvious explanation for their findings; that children who consume more confectionary are not necessarily fatter, and possibly leaner, because they are more physically active.

Two studies published in recent years from the Lifestyle of our Kids (LOOK) study of healthy Australian children elucidate these two points.

Firstly, the LOOK longitudinal (within-child) data showed that body mass index (BMI, body weight (kg)/height (m) squared), or any standardized form of BMI such as z-scores, are flawed measures of adiposity in paediatric longitudinal studies. While mean BMI increased in our cohort between the ages of 10 and 12 years, DXA-derived percent body fat was unchanged (Telford et al 2012). That BMI is a misleading proxy of percent body fat has also been reported during adolescence (Wickramasinghe et al, 2005), so conclusions drawn from data and articles which use BMI to indicate change in percent body fat during longitudinal studies in youth should be interpreted with extreme caution; and to be blunt, ignored.

Secondly, we investigated why some children in our approximately LOOK cohort were fatter than others, and why some children became fatter over the four years of primary school. Our team of dieticians employed one-day and two-day diaries, with careful recording instructions to teachers and parents and follow-up phone interviews. With solid evidence to show that under-reporting by the fatter children was unlikely, we found that fatter children at each age group to consume no more kilojoules, sugar or fat or proportions of sugar or fat than their leaner counterparts (Telford et al 2012). The explanation was clear; fatter children were less physically active; and the children who

became fatter reduced their physical activity. A reasonable inference is that more active children are better able to balance energy in and out.

It's no wonder the general public are often left scratching their heads as they try to interpret the stream of mixed messages emanating from articles on diet, even those published in so-called reputable journals. In a current environment where the majority of our children don't go close to meeting internationally recommended guidelines for physical activity, and where physical education and sport in primary schools has declined in recent decades, any suggestion that consuming more sugar doesn't contribute to storing more fat is folly. However, consideration of well-conducted studies of the roles of physical activity and dietary intake in body composition control do provide strong support for strategies that put physical activity upfront with dietary intake in any campaign aimed at reducing the incidence of child obesity.

References

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