

CONCLUSIONS

We found a considerable weight of evidence in favour of consumption of LES in place of sugar as helpful in reducing relative EI and BW, with no evidence from the many acute and sustained intervention studies in humans that LES increase EI. Importantly, the effects of LES-sweetened beverages on BW also appear neutral relative to water, or even beneficial in some contexts.

A selection of animal and observational studies is often cited as the primary basis for strong assertions that LES are a contributing factor toward risk of overeating and obesity.⁵ In contrast, the present review of a large and systematically identified body of evidence from human intervention studies, with varying designs, settings and populations (including children and adults, males and females, and lean, overweight and obese groups), provide no support for that view. The question then is whether those hypotheses should be rejected or whether, as seems unlikely, the relevant human intervention studies are consistently flawed in a way that leads, in most cases, to exactly the opposite outcome.

Commentaries on LES and energy balance frequently suggest that further research is needed, but stop short of proposing any specific new hypothesis to test or new study designs. Although no single study by itself is conclusive, the correspondence of results from the studies reviewed here gives no reason to expect another similar study would yield remarkably different results. Continued selective citation and extrapolation from observational and animal studies on this topic is also likely to be of limited value. Mattes & Popkin¹ concluded that replacement of sugar by LES has 'the potential to aid in BW management, but whether they will be used in this way is uncertain' (p 10). This seems a reasonable conclusion