

# The Obesity and Climate Change Nexus

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In this issue of *Obesity*, Magkos et al. (1) present an analysis of the estimated extra greenhouse gas (GHG) emissions caused by obesity. Overall, they estimate that the current global burden of obesity adds ~700 megatons of extra carbon dioxide equivalent emissions per year or about 1.6% of total global emissions. This GHG burden of obesity has three components: greater oxidative metabolic demands, largely caused by the higher lean body mass associated with obesity (7% of the total); increased food production needed to provide the higher energy intake (52%); and greater fossil fuel use to transport heavier bodies (41%).

This adds valuable estimates to this growing literature examining the nexus between obesity and climate change. A systematic review by An et al. (2) in 2018 found 21 studies on the common origins of obesity and climate change, 13 studies on the effects of climate change on obesity, 13 studies on the effects of obesity on climate change (like the current study), and 3 studies examining the bidirectionalities. The recent *Lancet* Commission on Obesity report (3) combined these interrelationships and common drivers in its definition of “The Global Syndemic of Obesity, Undernutrition, and Climate Change”. The Commission decided that the most important relationship to focus on was the common underlying determinants of all three components of the syndemic. This was because it was the least understood, yet the most important, relationship, which points to potential double duty and triple duty for addressing two or three of the syndemic components.

As Magkos et al. (1) clearly point out, there is real risk for exacerbating the already strong weight bias against people with obesity by suggesting that they are now also partly responsible for climate change as well as increased health care costs. This social bias of being partly to

blame for climate change would definitely not be applied to people who are more physically active (they also produce more CO<sub>2</sub> and require a higher food intake), but society’s existing, largely unconscious, weight bias makes people with obesity an easy target.

The authors also point to the importance of revising dietary guidelines to include sustainability, and this is a fundamental triple-duty action because the guidelines flow into other policies such as school food provision, labeling, and nutrition education. Unfortunately, sustainability is nowhere in sight in the current revision of the US Dietary Guidelines; none of the 40 reviews for this process asks questions about sustainability (4). This wasted opportunity is unsurprising given the current US politics, but perhaps it opens the door for other authoritative US scientific bodies to create parallel sustainable dietary guidelines.

While the contribution of obesity to GHG emissions is small, acting on the underlying drivers of them both is of paramount importance. 

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