

EDITORIAL

How many more numbers do we need?

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Two recent studies published in our top medical journals, the *New England Journal of Medicine*¹ and *The Lancet*,² have again addressed the prevalence of obesity and its damaging consequences for health. The Global Burden of Obesity collaborators¹ have analyzed data on 68.5 million children and adults obtained between the years 1980 and 2015. The authors document the high and increasing prevalence of obesity worldwide where 108 million children and 604 million adults were obese by 2015; a doubling in more than 70 countries. Concomitantly, the disease burden related to overweight has increased since 1990 with a total of 4 million deaths being attributed to overweight and obesity. In the *Lancet* paper² the authors have systematically analysed the association between overweight/obesity and cardiometabolic multimorbidity, defined as developing at least two conditions from type 2 diabetes mellitus, coronary heart disease and stroke. Their impressive analysis was based on individual-participant data for 120 813 adults, (mean age of 51 years), pooled from 16 cohort studies and a mean follow-up of ~10 years. When compared with a group of normal weight adults, cardiometabolic multimorbidity increased with the degree of overweight with a 15-times greater risk in those severely obese. Moreover, higher mortality rates were observed in both, overweight and obese adults. These risk estimates were independent of sex, ethnic background, lifestyle, sociodemographic factors and methodological issues in exposure assessment or outcome ascertainment. The highest odds ratios were 18.6 for diabetes *per se* and 29.8 for diabetes followed by vascular disease.

Current approaches for the prevention and treatment of obesity strongly focus on individuals. Following the energy balance paradigm, lifestyle interventions moderating or reducing energy intake with a concomitant increase in physical activity of individual subjects, have long been advocated as the solution to the problem. Unfortunately lifecourse approaches to reducing obesity and cardiometabolic risks at the time of preconception, during pregnancy, obesity prevention in infants, preschool children, school-age children and adolescents, interventions to address obese subjects as well as policies tackling obesity at the societal level, have all had minor and non-sustained effects.^{3–6} This failure to redress the obesity epidemic through individual lifestyle behavior modification is a worry and argues for the need of an urgent alternative approach to tackling these issues.

Do we presently have any alternative vision to successfully address the obesity epidemic and non-communicable disease (NCD) beyond individualised lifestyle interventions? At the occasion of the UN General Assembly on NCDs in 2011, *The Lancet* had published a special issue on obesity.⁷ These ideas were proposed at the highest political level to introduce policies aimed at obesity prevention. Their general conclusions were:

- The obesity epidemic will not be reversed without government leadership,
- Business as usual would be costly in terms of population health, health-care expenses and loss of productivity and,
- A system-approach was needed with multiple sectors involved.

The need for 'collaborative societal changes in many aspects of our environment to avoid the morbid consequences of overweight and obesity' was obvious.⁷ Accordingly, the WHO Global Action Plan for the Prevention and Control of NCDs was ambitious in their target of no increase in the prevalence of obesity between 2010 and 2025.⁸ In 2015, the authors of another *The Lancet* obesity issue⁹ concluded that when compared to the year 2011 '..unfortunately, little progress has been made beyond the acknowledgement that there is a worldwide problem with far reaching consequences for health and wellbeing.' That second Obesity Series '.. proposed a reframing of obesity as a consequence of the reciprocal nature of interaction between environment and the individual., where feedback loops perpetuate food choices and behaviours.' The authors concluded that there is need of 'an urgent re-thinking of the causes, enablers, and barriers to change to begin to make a difference in the global obesity pandemic'.

In that context it is worthwhile to remember the words of Margaret Chan, the former Director-General of the WHO, who said:^{10,11} 'Not one single country has managed to turn around its obesity epidemic in all age groups. This is not a failure of individual will-power. This is a failure of political will to take on big business....When industry is involved in policy-making, rest assured that the most effective control measures will be downplayed or left out entirely. This, too, is well documented, and dangerous! It becomes obvious that political and societal changes are necessary to overcome the obesity epidemic. Presently, these changes are difficult to realize. Furthermore no single group, be they policy makers or health professionals can solve these health problems individually. The obesity issue is more about the food environment in the contexts of economic growth which has to be balanced with health needs of humans.'^{12,13}

The strong link of obesity with increased morbidity and mortality risk has been repeatedly shown, and is again expertly documented by these two recent publications mentioned here.^{1,2} This knowledge however is not sufficient to make an impact on public health, through obesity prevention at the population level. As with type 2 diabetes,¹³ the present evidence strongly suggests that 'society as a whole must act to address the obesity epidemic',^{14,15} and those of us who care enough, have to 'rise up...against the organization of the misery' (Pablo Neruda, cited in ref 16).

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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REFERENCES

- 1 The GBD 2015 Obesity Collaborators. Health effects of overweight and obesity in 195 countries over 25 years. *N Engl J Med* 2017; **377**: 13–27.
- 2 Kivimäki M, Kuosma E, Ferrie JE, Luukkonen R, Nyberg ST, Alfredsson L *et al*. Overweight, obesity, and risk of cardiometabolic multimorbidity: pooled analysis

- of individual-level data for 120813 adults from 16 cohort studies from the USA and Europe. *Lancet Public Health* 2017; **2**: e277–e285.
- 3 Müller MJ, Danielzik S. Childhood overweight: is there need for a new societal approach to the obesity epidemic? *Obes Rev* 2007; **8**: 87–90.
 - 4 Waters E, Gibbs L, Tadic M, Ukoumunne OC, Magarey A, Okely AD *et al*. Cluster randomized trial of a school-community child health promotion and obesity prevention intervention: findings from the evaluation of fun'n healthy in Moreland!. *BMC Public Health* 2017; **18**: 92.
 - 5 The Look Ahead Research Group. Cardiovascular effects of intensive lifestyle intervention in type 2 diabetes mellitus. *N Engl J Med* 2013; **369**: 145–154.
 - 6 Heymsfield SB, Wadden TA. Mechanisms, pathophysiology, and management of obesity. *N Engl J Med* 2017; **376**: 254–266.
 - 7 *Lancet* 2011; **378**: 741–848.
 - 8 WHO. Global Action Plan for the Prevention and Control of NCDs 2013–2020 http://www.who.int/nmh/events/ncd_action_plan/en/ (accessed on 8 August 2017).
 - 9 *Lancet* 2015; **385**: 2323–2432.
 - 10 Chan M. WHO. Director-General addresses health promotion conference. Opening address at the 8th Global Conference on Health Promotion, Helsinki, Finland, 10 June 2013. (accessed on 7 August 2017). Available at: www.who.int/dg/speeches/2013/health_promotion.../en/.
 - 11 WHO. *Consideration Of The Evidence On Childhood Obesity For The Commission On Ending Childhood Obesity: Report Of The Ad Hoc Working Group On Science And Evidence For Ending Childhood Obesity* 2016. (accessed on 7 August 2017).
 - 12 Lobstein T. Maternal and child obesity: some political challenges. *Proc Nutr Soc* 2011; **70**: 506–513.
 - 13 McPherson K. Reducing the global prevalence of overweight and obesity. *Lancet* 2014; **384**: 728–730.
 - 14 Soares MJ, Muller MJ. Type 2 diabetes in Asia: where do we go from here? *Eur J Clin Nutr* 2017; **71**: 801–802.
 - 15 Rutter H, Bes-Rastrallo M, de Henauw S, Lahti-Kosti M, Lehtinen-Jacks S, Mullerova D. Balancing upstream and downstream measures to tackle the obesity epidemic: a position statement from the European Association for the Study of Obesity. *Obes Facts* 2107; **10**: 61–63.
 - 16 Fair societies, healthy lives. The Marmot review. Strategic review of health inequalities in England post 2101. 2010 Available at: <http://www.parliament.uk/documents/fair-society-healthy-lives-full-report.pdf> (accessed on 8 August 2017).