

Can Coca Cola promote physical activity?

In their *Lancet* Manifesto (March 8, p 847)¹ Richard Horton and colleagues state: "Our tolerance of neoliberalism and transnational forces dedicated to ends far removed from the needs of the vast majority of people, and especially the most deprived and vulnerable, is only deepening the crisis we face." I agree, and so do many colleagues in Brazil.

The Fifth International Congress on Physical Activity and Public Health, held in Rio de Janeiro, April 8–11, 2014, was sponsored by Coca Cola. This is the first time, to my knowledge, that a major conference on physical activity held in Brazil has been sponsored by an organisation whose policies, practices, or products conflict with those of public health. The sponsorship was not only financial; Coca Cola was everywhere—at side meetings, in the sponsors' hall, giving away its products and propaganda.

At a time when sweetened soft drinks are recognised by independent organisations as a major cause of the present uncontrolled obesity pandemic, which notably affects children and developing countries, such as China, India—and Brazil, this is worrying.

Big Food corporations are spending billions of US\$ on their strategy to claim that obesity is caused by physical inactivity. Their engagement with physical activity and public health organisations and professionals is part of their corporate social responsibility strategy. Their campaigns include techniques to evade regulation and to influence science,^{2,3} using methods similar to those used by tobacco corporations in the past.⁴

Is this a kind of retribution to Latin America—where laws to protect children against ultra-processed food were implemented in Mexico, Chile, and Costa Rica, and where civil society organisations oppose Big Food

corporations to limit advertising of ultra-processed products to children in Brazil?⁵

Brazil is hosting the World Cup this month, and the Olympics in 2016. Both events are committed to sponsorships from McDonald's and Coca Cola, among others. Again, it is easy to understand why they would sponsor such events. This outrageous practice is pushed by international sports federations, putting pressure on national governments.

We cannot accept big transnational fast food and soft drinks corporations to support sports and physical activity.

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Top 15 UK research priorities for preterm birth

Preterm birth is the most important determinant of adverse infant outcomes including survival, quality of life, psychosocial effect on the family, and health-care costs.¹ Prioritising research is a pathway to potential solutions for the global problem of preterm birth.^{2,3} The Preterm Birth Priority Setting Partnership aimed to identify and prioritise research areas in preterm birth that are most important

to service users and health-care practitioners in the UK, using methods established by the James Lind Alliance.

First, a priority setting partnership was established with families with experience of preterm birth, charities and other organisations representing them, obstetricians, neonatologists, midwives, neonatal nurses, and relevant health-care professionals. Research uncertainties were then gathered from surveys of service users and health-care practitioners, and from analyses of systematic reviews and clinical guidance. Priority setting followed two steps: first an online voting and surveys, and second a facilitated workshop of service users and clinicians (held in London in January, 2014, with 46 participants).

For more on the **Preterm Birth Priority Setting Partnership** see <http://eppi.ioe.ac.uk/pretermbirth/>

For more on the **James Lind Alliance** see <http://www.lindalliance.org/>

Submissions should be made via our electronic submission system at <http://ees.elsevier.com/thelancet/>

Panel: Top 15 UK research priorities for preterm birth

- Which interventions are most effective to predict or prevent preterm birth?
- How can infection in preterm babies be better prevented?
- Which interventions are most effective to prevent necrotising enterocolitis in premature babies?
- What is the best treatment for lung damage in premature babies?
- What should be included in packages of care to support parents and families or carers when a premature baby is discharged from hospital?
- What is the optimum milk feeding strategy and guidance (including quantity and speed of feeding and use of donor and formula milk) for the best long-term outcomes of premature babies?
- What is the best way to judge whether a premature baby is feeling pain (for example, by their face, behaviours, or brain activities)?
- Which treatments are most effective to prevent early onset pre-eclampsia?
- What emotional and practical support improves attachment and bonding, and does the provision of such support improve outcomes for premature babies and their families?
- Which treatments are most effective for preterm premature rupture of membranes?
- When is the best time to clamp the umbilical cord in preterm birth?
- What type of support is most effective at improving breastfeeding for premature babies?
- Which interventions are most effective to treat necrotising enterocolitis in premature babies?
- Does specialist antenatal care for women at risk of preterm birth improve outcomes for mother and baby?
- What are the best ways to optimise the environment (such as light and noise) in order to improve outcomes for premature babies?

Overall 593 uncertainties were submitted by 386 respondents to the survey (58% were service users, 30% were health-care professionals, and 12% had both roles), and 52 were identified from literature reviews. After removing questions already addressed by systematic reviews or ongoing research and merging similar questions, 104 were distributed for voting. 584 participants voted. From the 30 uncertainties which received most votes, 15 priorities were established during the workshop and are shown in the panel.

These 15 priorities provide guidance for researchers and funding bodies to ensure that future research addresses questions that are important both to service users and to clinicians.

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Metabolic mediators of body-mass index and cardiovascular risk

Estimation of the proportion of cardiovascular disease due to adiposity that can be explained by metabolic mediators (high blood pressure, cholesterol, and glucose) has important public health implications. In the study by the Global Burden of Metabolic Risk Factors for Chronic Diseases Collaboration (March 15, p 970),¹ the excess risk mediated was estimated by contrasting hazard ratios (HRs) with

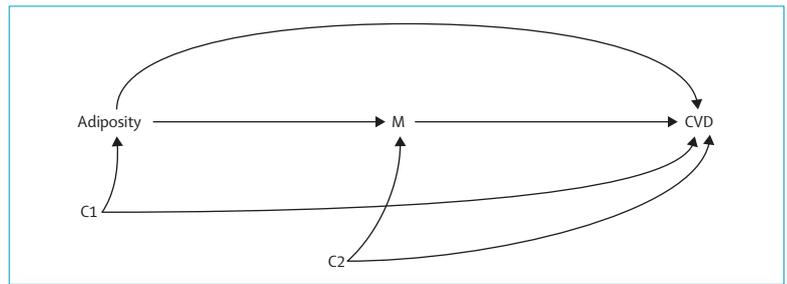


Figure: Directed acyclic graph of causal relations between adiposity, metabolic mediators, and cardiovascular disease. CVD=cardiovascular disease. M=metabolic mediators. C=confounders. C1 are confounders of the association between adiposity and CVD. C2 are confounders of the association between M and CVD.

and without adjustment for these mediators. Although confounders of the association between adiposity and cardiovascular disease were considered, the analyses described do not account for confounders of the mediator-outcome relation (figure), which can bias the direct effect estimate.^{2,3} Simple sensitivity analyses allow estimation of the plausible direction and magnitude of this bias.⁴ Family history of cardiovascular disease is potentially one such confounder.⁵

The excess risk mediated by elevated blood pressure was $(1.27-1.19)/(1.27-1.00)=30\%$ for the risk of coronary heart disease associated with an additional 5 kg/m² of body-mass index.¹ If we assume that 30% of participants with elevated blood pressure and 20% of participants with normal blood pressure have a family history of cardiovascular disease, and if the HR for coronary heart disease associated with family history is 1.5,⁵ the HR for the direct effect would be $1.19/[(1+(1.5-1.0)\times 30\%)/(1+(1.5-1.0)\times 20\%)]=1.09$ after accounting for family history of cardiovascular disease. Under these assumptions, the excess risk mediated by elevated blood pressure would be $(1.27-1.09)/(1.27-1.00)=49\%$, a larger estimate than the 30% reported.

Other factors, such as diet or physical activity, would probably also contribute to mediator-outcome confounding, and further sensitivity analyses could gauge the magnitude of bias incurred by ignoring these factors.

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- 1 Lu Y, Hajifathalian K, Ezzati M, Woodward M, Rimm EB, Danaei G. Metabolic mediators of the effects of body-mass index, overweight, and obesity on coronary heart disease and stroke: a pooled analysis of 97 prospective cohorts with 1.8 million participants. *Lancet* 2014; **383**: 970–83.
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The Global Burden of Metabolic Risk Factors for Chronic Diseases Collaboration¹ reported that nearly half of the excess risk of body-mass index (BMI) on coronary heart disease and three-quarters of that on stroke is mediated through blood pressure, cholesterol, and markers of glycaemia. Although these findings correctly support the idea that the adverse effects of high BMI can be substantially mitigated by targeting its metabolic mediators, the report's results underestimate by about 25% the extent to which these metabolic