United Nations’ dietary policies to prevent cardiovascular disease
Modest diet changes could halve the global burden

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On 19 September 2011, the United Nations General Assembly convenes a landmark high level meeting on non-communicable diseases. Cardiovascular disease will be high on the agenda. The potential health and financial benefits of cardiovascular disease prevention are astonishing. Each year, cardiovascular disease kills about 20 million people, including 10 million prematurely (before age 65 years) and inflicts high morbidity, disability, and socioeconomic costs.1 In high income countries, preventing or postponing 100 cases saves about $1m (£0.6m; €0.7m).

The relative socioeconomic savings of prevention are even higher in low and middle income countries, in which cardiovascular disease strikes at younger ages and there are fewer resources for care; this results in familial burdens, lost productivity, and cyclical escalation of poverty, which in turn contributes to cardiovascular disease.1

Diet is a powerful common determinant of cardiovascular disease, obesity, diabetes, and several cancers.2-4 Natural experiments have shown rapid reductions in cardiovascular disease after dietary improvements in populations.7 Unfortunately, both the optimal dietary targets and evidence based interventions to achieve them have been unclear for decades. Numerous arrays of specific nutritional factors have been considered over time. This has caused confusion and often misguided dietary priorities. These challenges, compounded by resistance and misdirection by industry, have to date produced a relative dearth of effective dietary policies.

Recent scientific advances allow eight dietary targets to be prioritised for the prevention of cardiovascular disease (see web table).2-5,8 Six are aimed at increasing consumption of healthy foods and two at limiting specific harmful nutrients. The proposed targeted changes are modest, reflect changes achieved in population based interventions, and are supported by observed consumption distributions within and across countries. Meeting any one target would produce substantial benefits. The eight targets together could halve global cardiovascular disease, annually preventing more than five million premature deaths from cardiovascular disease (and 10 million deaths from cardiovascular disease overall), while simultaneously reducing obesity, diabetes, and common cancers.2-5 Over just a few years, these modest dietary improvements could prevent one million deaths from cardiovascular disease in the US and 30 million worldwide (table1).

New policy research also allows prioritisation of specific interventions, optimally as multicomponent strategies.2-8,9 These include pricing policies to subsidise healthier foods and drinks and tax less healthy ones, as well as long term agricultural-government strategies to promote the infrastructure needed for the production, transportation, and marketing of healthier foods. Salt and industrial trans fat content should be limited by direct restrictions that drive product reformulations, and strict guidelines should govern marketing of foods and drinks to children. In addition, sustained and focused media and education campaigns should encourage specific healthy foods, and mandatory product and menu labelling—with an emphasis on the appropriate dietary priorities above—should also stimulate product reformulations. Neighbourhood design and policy should increase the availability of local markets that provide healthier food. Workplaces should incorporate healthier food options in cafeterias and vending machines and have comprehensive wellness programmes with a strong dietary focus. School based interventions should incorporate dietary curriculums, training for teachers, parental and family components, supportive school policies, and the availability of healthy food and drink.

Inevitably, most evidence for the effectiveness of these strategies comes from high and middle income, rather than low income, countries.2-8,10 Nonetheless, although absolute rates vary across populations, the relative impact of major cardiovascular risk factors is shared across nations.11 Similarly, the relative benefits of these population strategies will inform policy priorities across many nations.

Drug based and hospital based prevention approaches that target those at highest risk reduce cardiovascular disease but can be
relatively costly, which limits their applicability and sustainability in many countries. In contrast, modest population-wide behavioural changes can produce larger benefits.\(^2\)\(^8\)\(^10\) Effective population-wide prevention programmes are generally highly cost effective or even cost saving.\(^2\)\(^8\)\(^10\) One analysis estimated nearly $6 return per $1 spent on population approaches to improve nutrition and other health behaviours.\(^7\) Recent modelling studies showed net cost savings with any population-wide interventions that achieved even modest reductions in cardiovascular risk.\(^2\)\(^8\)\(^10\)

The specific dietary priorities and applicable population level interventions are clear, providing a road map for governments to prevent cardiovascular disease. The UN must provide clear leadership to prioritise these dietary targets and policies across multiple stakeholders representing economic (for example, the World Bank), agricultural (for example, Food and Agriculture Organization), and health (for example, World Health Organization) domains. Comprehensive initiatives in member countries should complement this global strategy and tackle region specific gaps and priorities. New strategic initiatives must translate this evidence into political action, bringing together policymakers, researchers, political scientists, economists, advocacy groups, and other stakeholders. Efforts should be supported by recruitment of legislative champions, public awareness campaigns to garner momentum for policy improvements, and development of public-private partnerships focused on population health rather than profit margins alone.

None of the available evidence is flawless. However, imperfect evidence does not condone inaction, as painfully learnt from decades of delays in tobacco control. For any public health intervention, probabilities of benefits and risks must be balanced. The overall scientific rationale for prioritising these dietary targets and specific population-wide strategies is now sufficient.

The UN meeting offers a unique opportunity to review and set targets and specific population-level strategies is now sufficient. The overall scientific rationale for prioritising these dietary targets and specific population-wide strategies is now sufficient. The Framework Convention on Tobacco Control was a major global health achievement, and the UN and member countries could do even better with diet.

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