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Information Brief



NON-COMMUNICABLE DISEASES, DIETS AND NUTRITION

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INTRODUCTION

Non-communicable diseases (NCDs) are now the leading cause of mortality worldwide; they are responsible for 70% of global deaths;¹ equivalent to 40 million people.² The health and economic repercussions of this trend are enormous. Millions of people will experience premature mortality or compromised quality of life, countries and regions will experience reduced productivity and arrested economic growth.

Increased prevalence of obesity, increased consumption of poor quality diets, and pervasive undernutrition are contributing to this epidemic. Today, every country in the world bears a combined burden of malnutrition and NCDs. No country is immune.

This brief provides short overviews on various technical and policy aspects of the NCDs nutrition nexus, including a condensed chronology of recent political processes in the areas of nutrition and NCDs, a summary of how nutrition, diet and NCDs are linked, and an overview of key intervention, programme and policy actions for the way forward.



1 <http://www.who.int/mediacentre/factsheets/fs310/en/index1.html>.

2 <http://www.who.int/mediacentre/factsheets/fs355/en/>.

POLITICAL SUPPORT FOR ADDRESSING NCDs

The right to the highest attainable standard of health as well as the right to food are enshrined in the United Nations' (UN's) Human Rights Framework.³ This seminal document identified, for the first time, fundamental human rights and called for their universal protection. International treaties, including the Convention on the Rights of the Child,⁴ and the International Covenant on Economic, Social and Cultural Rights,⁵ are part of this framework. Through them, states have committed to safeguard health and nutrition. Additional guidance on States' obligations in the context of food and health is provided by the UN bodies monitoring implementation of these treaties.

Since the year 2000, the following political processes have highlighted NCD prevention as critical to current global agendas to protect food security, nutrition and health:



3 <http://www.un.org/en/universal-declaration-human-rights/index.html>.

4 <http://www.ohchr.org/EN/ProfessionalInterest/Pages/CRC.aspx>.

5 <http://www.ohchr.org/EN/ProfessionalInterest/Pages/CESCR.aspx>.

- In **2004**, the Global Strategy on Diet, Physical Activity and Health⁶ was endorsed at the World Health Assembly, aiming to reduce two from the main risk factors for NCD's. In 2008, WHA endorsed the Global Strategy for the Prevention and Control of NCDs 2008-2013.⁷ The strategy includes the promotion of a healthy diet.
- In **2011**, the UN General Assembly (UNGA) adopted the Political Declaration on the Prevention and Control of Non-Communicable Diseases.⁸ This Declaration recognizes the urgent need for action at global, regional and national levels to prevent and control NCDs, and reaffirms the right of everyone to the highest standard of health.
- In **2013**, the World Health Assembly (WHA) endorsed the WHO Global Action Plan (WHO GAP) for the Prevention and Control of NCDs, 2013-2020.⁹ This Plan supports 9 voluntary NCD targets¹⁰ - 4 of which are diet related - as well as SDG target 3.4.¹¹
- In **2014**, the Second International Conference on Nutrition (ICN2) adopted the Rome Declaration on Nutrition and the Framework for Action (FfA) comprising 60 recommendations for action to sustainably improve nutrition. The FfA supports the 2013 WHO GAP through a food systems approach that reduces NCD risk factors by increasing access to and consumption of healthy diets.¹²
- In **2015**, 17 Sustainable Development Goals (SDGs) were endorsed by world leaders under the 2030 Agenda for Sustainable Development.¹³ Nutrition and NCDs are mentioned explicitly in 2 targets (SDG 2.2 and SDG 3.4¹⁴) and hold great potential to facilitate the achievement of many others.^{15,16}
- In **2016**, the UNGA endorsed the ICN2 outcome documents and declared 2016 to 2025 the United Nations Decade of Action on Nutrition.¹⁷ As such, nutrition is currently elevated to "high priority" on the UNGA political agenda. The Nutrition Decade's aim is to: accelerate implementation of the ICN2 commitments, achieve the 6 global nutrition targets adopted by the WHA in May 2012,¹⁸ achieve the diet-related NCD targets adopted by the WHA in May 2013, and contribute to the realization of the SDGs by 2030.
- In **2017**, the WHO Global Conference on NCDs¹⁹ further strengthened momentum for global NCD prevention. Convened with the goal of streamlining efforts to achieve SDG target 3.4 on NCDs, and to prepare for the 2018 High-Level UN Meeting on the Prevention and Control of NCDs, the conference gathered heads of state, ministries, UN agencies, global experts and non-state actors and focused on enhancing policy coherence to prevent and control NCDs.

6 http://www.who.int/dietphysicalactivity/strategy/eb11344/strategy_english_web.pdf.

7 http://apps.who.int/iris/bitstream/handle/10665/44009/9789241597418_eng.pdf?sequence=1.

8 http://www.who.int/nmh/events/un_ncd_summit2011/political_declaration_en.pdf.

9 http://www.who.int/nmh/events/ncd_action_plan/en/.

10 <http://www.who.int/nmh/ncd-tools/definition-targets/en/>.

11 <http://iris.wpro.who.int/handle/10665.1/12876>.

12 <http://www.fao.org/3/a-i4465e.pdf>.

13 <https://sustainabledevelopment.un.org/post2015/transformingourworld>.

14 Target 2.2: elimination of all forms of malnutrition by 2030; Target 3.4: reduce premature NCDs mortality by one third by 2030).

15 https://www.unscn.org/files/Publications/Briefs_on_Nutrition/Final_Nutrition%20and_the_SDGs.pdf.

16 <http://www.globalnutritionreport.org/the-report/>.

17 A/RES/70/1 - http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E.

18 http://www.who.int/nutrition/publications/globaltargets2025_policybrief_overview/en/.

19 WHO Global Conference on NCDs, 18-20 October 2017, Montevideo, Uruguay.

MALNUTRITION IS A RISK FACTOR FOR NCDs

Obesity is a well-recognized NCD risk factor due to its links to diet-related NCDs, including cardiovascular diseases, certain cancers and diabetes.²⁰ Worldwide, 1.9 billion adults are currently overweight or obese.²¹ The last four decades saw a tenfold rise in child and adolescent obesity, with 38 million children under five being overweight in 2017, constituting an increase of 8 million since 2000.²² This trend has the potential to negate much of the work that has been done to increase life expectancy around the world.

Less obvious but no less concerning is the impact of stunting on NCDs. Stunting, which is a direct cause of short height and sub-optimal cognitive and physical function is now also recognized as a risk factor for becoming overweight and developing NCDs later in life.²³ Globally, 151 million children are stunted. The vast majority of these children reside in the same low- and middle-income countries where rates of childhood overweight and obesity are increasing most rapidly.²⁴ These are also the countries where NCD prevalence is growing fastest.²⁵



20 <http://www.who.int/mediacentre/factsheets/fs311/en/>.

21 <http://www.who.int/mediacentre/factsheets/malnutrition/en/>.

22 United Nations Children's Fund, World Health Organization, World Bank Group (2018). Levels and trends in child malnutrition: Key findings of the 2018 Edition of the Joint Child Malnutrition Estimates.

23 http://www.who.int/nutrition/topics/globaltargets_stunting_policybrief.pdf.

24 http://www.who.int/nutgrowthdb/jme_brochure2016.pdf.

25 http://www.who.int/gho/ncd/mortality_morbidity/en/.

MALNUTRITION AND NCDs ARE BOTH LINKED TO POOR QUALITY DIETS

Poor quality diets are among the top 6 risk factors contributing to the global burden of disease.²⁶ Specifically, the NCD burden is associated with diets low in fruits and vegetables, high in sodium, low in nuts and seeds, low in whole grains, and low in seafood-derived omega-3 fatty acids.^{27,28} Indicative of the tight links between diet, malnutrition and NCDs, 4 of the 9 voluntary targets outlined in the WHO GAP for the Prevention and control of NCDs (mentioned above), relate to nutrition or diets as follows:

- A **25%** relative reduction in risk of premature mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases.
- A **30%** relative reduction in mean population intake of salt/sodium.
- Halt the rise in diabetes and obesity.
- A **10%** relative reduction in prevalence of insufficient physical inactivity.

While the last bullet does not relate explicitly to diets, it does have an impact on nutritional outcomes through its influence on energy balance. In the context of the nutrition transition, one cannot leave out physical activity. Indeed, the global increase in overweight and obesity is largely a consequence of shifting dietary patterns (characterized by increased consumption of foods high in fat, sugar and/or salt and low in fibres and micronutrients) together with a decrease in physical activity (often the result of urbanization and the increasingly sedentary nature of many forms of work and leisure).²⁹

Changes to global diet (and physical activity patterns) are influenced with multiple sectors. As such, a whole-of-UN and whole-of-government approach is imperative. The “Food Systems and Food Environment” concept, which explains people’s dietary choices and nutritional status through a broader contextual analysis based on physical, economic, and socio-cultural conditions, provides an important policy entry point for reversing current diet trends through a multi-sectoral approach.^{30,31}

26 <http://glopan.org/sites/default/files/documents/ForesightReportExecSummary.pdf>.

27 https://www.wcrf.org/sites/default/files/PPA_NCD_Alliance_Nutrition.pdf.

28 <https://glopan.org/news/role-diets-shaping-global-burden-disease>.

29 This trend is also referred to as the ‘nutrition transition’, coined by Dr Barry Popkin: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3257829/>. The link between the nutrition transition and rates of cancer are explored in World Cancer Research Fund International’s Second Expert Report: <http://www.wcrf.org/int/research-we-fund/continuous-update-project-cup/second-expert-report>.

30 <https://www.glopan.org/food-environments>.

31 <http://www.fao.org/3/a-i7846e.pdf>.

GOVERNMENT ACTION TO DATE

According to the WHO's Global NCD Progress Monitor³² and the 2016 Global Nutrition Policy Review,³³ governments are making some progress in their response to address dietary risk factors and increased prevalence of NCDs, but not enough to meet the global targets set.³⁴ Both sources find that while a majority of countries have policies in place to reduce obesity and diet-related NCDs, implementation of these policies is low. Moreover, when measures are passed through Parliament, they tend to be "passive" and focused mainly on information dissemination rather than "active" structural reform initiatives that aim to increase the availability of and access to diverse, safe, nutritious foods that contribute to healthy diets for all population groups.

That said, vanguard countries are pursuing actual reform through national policies and programs which stipulate investment in actions that directly promote healthy diets. Usually anchored by national Food Based Dietary Guidelines, these include nutrition labelling, taxes and other fiscal [dis]incentives, reformulation of processed foods, trans fat bans, efforts to improve the quality and portion size of meals in institutional food settings (e.g. schools and hospitals), and intensified nutrition counseling and media campaigns.³⁵

WHA targets

NCD targets



Source: UNSCN, 2017 (adapted).

³² <http://www.who.int/nmh/publications/ncd-progress-monitor-2017/en/>.

³³ <http://www.who.int/entity/nutrition/topics/global-nutrition-policy-review-2016.pdf?ua=1>.

³⁴ <http://www.who.int/mediacentre/news/releases/2017/ncds-progress-report/en/>.

³⁵ See World Cancer Research Fund International's NOURISHING framework and policy database for implemented government policies to reduce overweight, obesity and NCDs: www.wcrf.org/NOURISHING.

INTERVENTION, PROGRAMME AND POLICY ACTIONS

Addressing NCDs and diets in a consistent and coherent way creates cost effective opportunities to simultaneously tackle the multiple burdens of malnutrition and their related NCDs. In order to meet state obligations in human rights frameworks, policy makers should not focus solely on curative options, but rather should identify opportunities to start at the root of the problem: improving diet quality and reducing malnutrition. This strategy is also the most effective and efficient as reversal and treatment of overweight, obesity and NCDs is very expensive and has a low success rate. Similarly, the possibilities for reversal of stunting after 2 years of age are small. Food system-reform is critical to this approach, as food systems and the food environments they support are key drivers of diet quality.



Nutrition needs and nutrition related risks change throughout the life course. Therefore policies and programmes should follow a *life course approach*. This approach begins preferably before conception or in the first 1,000 days between conception and a child's second birthday, as during this period pivotal physical growth, lifestyle, eating habits, and development processes occur. The report of the Commission on Ending Childhood Obesity (ECHO) outlines a suite of interventions relevant to the life course approach, comprising recommendations for children in the following 6 areas: promoting the intake of healthy foods; promoting physical activity; providing preconception and pregnancy care; promoting appropriate infant and young child feeding (early initiation of breastfeeding, exclusive breastfeeding in the first 6 months, and continued with safe and adequate complementary foods up to 2 years or beyond); promoting activities which support health, nutrition and physical activity for school-aged children; and promotion of weight management during childhood.³⁶ The "Best buys and other recommended interventions for the prevention and control of non-communicable diseases"³⁷ are cost-effective interventions included in the GAP for the Prevention and Control of NCDs, and include strategies for improving diet quality and for increasing physical activity.

The implementation of a life course approach to health involves policy coherence and investment within and between health services and food systems; local, multi sectoral and multi stakeholder action; and measurement, monitoring and research. It also considers how investments in nutrition must extend to people beyond children under two, to break the cross-generational cycle of malnutrition and consider the changes, needs, and nutrition-related risks at later stages in life, such as adolescence and women of reproductive age.³⁸

³⁶ <http://www.who.int/end-childhood-obesity/final-report/en/>.

³⁷ <http://www.who.int/ncds/management/best-buys/en/>.

³⁸ UNSCN, 2017 By 2030, end all forms of malnutrition and leave no one behind.

For example, given the steep rise in overweight and obesity among school-aged children and the potential this population holds for establishing good lifestyle and eating habits, it makes sense to look at schools as a possibly entry point. Schools can be looked at as systems and can play an important role in combining several sectors in order to improve nutrition of the pupils and their environment.³⁹ Good quality nutrition education that is part of the school curriculum; effective school meals programs; and safe school environments that promote access to healthy foods and beverages support students and have a wider impact on families and communities.⁴⁰

In addition to a life course approach, government and UN efforts to reduce malnutrition and NCDs should also be informed of the need for *Double Duty Actions*.⁴¹ These are interventions, programmes and policies that have the potential to simultaneously address undernutrition, overweight, obesity and diet-related NCDs. For example, increasing access to safe drinking water to prevent both infectious disease (which exacerbates undernutrition via microbial infection and subsequent nutrient depletion) *and* obesity (by providing a healthy alternative to sugar-sweetened beverages).⁴²

Some of the most important components of the life course approach also qualify as double duty actions. Breastfeeding for example, has been shown to have multiple benefits for both children and their mothers, including protecting against the onset of overweight and NCDs. Longer periods of breastfeeding are associated with a reduction in the odds of overweight/obesity (26%) and of type II diabetes (35%) in children⁴³ and with lower rates of breast cancer, ovarian cancer, type II diabetes and post-partum depression in mothers.⁴⁴

In addition to the protection, promotion and support of breastfeeding, complementary feeding for babies and toddlers, maternal nutrition and antenatal care programmes, and school food and nutrition programmes are double duty actions which are also part of the life course approach, and are appropriate and needed in a wide variety of contexts.

Individual behaviour change is difficult to achieve in a non-supportive environment. Supportive policies and regulatory frameworks that lead to a food system-reform process and create healthy food environments are imperative. These include investments in production, supply chain logistics and procurement policies, restrictions on advertising and other forms of promotional marketing of unhealthy foods (in general, and specifically in schools), front-of-package labelling, and fiscal measures that favour healthy foods (e.g. taxation of sugar-sweetened beverages). Anchoring such measures in national Food Based Dietary Guidelines and embedding them in legislation helps to protect the right to food and to promote the highest attainable level of health.⁴⁵



39 UNSCN, 2017 Schools as a system to improve nutrition.

40 <https://www.unscn.org/uploads/web/news/document/School-Paper-EN-WEB-8oct.pdf>

41 <http://www.who.int/nutrition/publications/double-duty-actions-nutrition-policybrief/en/>.

42 Global Nutrition Report 2017: <http://www.globalnutritionreport.org/the-report/>.

43 Horta BL, Loret de Mola C, Victora CG. Long-term consequences of breastfeeding on cholesterol, obesity, systolic blood pressure and type 2 diabetes: a systematic review and meta-analysis. *Acta Paediatr.* 2015 Dec;104(467):30-7. doi: 10.1111/apa.13133.

44 Chowdhury R, Sinha B, Sankar MJ, Taneja S, Bhandari N, Rollins N, Bahl R, Martines J. Breastfeeding and maternal health outcomes: a systematic review and meta-analysis. *Acta Paediatr.* 2015 Dec;104(467):96-113. doi: 10.1111/apa.13102.

45 <http://www.fao.org/3/i8189en/i81899EN.PDF>.

LOOKING AHEAD

Today, nearly one in three people suffers from at least one form of malnutrition. By 2025, projections indicate the number will be one in two, unless current trends are halted or reversed. Moreover, diet-related NCDs are now associated with more premature deaths among adults worldwide than any other risk factor.

As such, UN human rights treaty bodies and special rapporteurs must be urged to focus on the links between NCDs and nutrition when reviewing State obligations to health, nutrition and food security, especially with respect to emphasizing the potential for synergistic double-duty actions, and the urgent need to reform food systems and the food environments they create.

The Third UN High-level Meeting on NCDs will be convened in 2018, back to back with the UNGA meeting in September. Ahead of this, the first report on the implementation of the Nutrition Decade is submitted, and the WHO report on progress made toward implementation of the NCDs action plan are submitted to the UNGA. The timing of these reports and the reviews by the UNGA of both nutrition and NCDs offer a perfect opportunity to develop comprehensive and coherent policies tackling both malnutrition and diet related NCD's in a coherent way. Doing so is a precondition to significant progress in these closely integrated areas.

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