INITIATIVE ON
Fruit and Vegetables for Sustainable Healthy Diets

CGIAR

FRESH Country
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Nutrition and Diet Profile | Benin

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Key Findings

- In Benin, undernutrition and micronutrient deficiencies are prevalent, and the prevalence of overweight and obesity is increasing.
- Diets in Benin have declined in quality over time, particularly among children. For example, low dietary diversity and inadequate fruit and vegetable consumption are prevalent.
- Food-based dietary guidelines exist; however, awareness of the guidelines is unknown.
- Most nutrition policies in Benin lack guidance on promoting fruit and vegetable intake.
- Stronger evidence related to how to improve diet quality and combat malnutrition in Benin is needed to develop relevant interventions and policies.

Background

About FRESH

Poor diets are a primary preventable risk factor for mortality and morbidity related to non-communicable disease (NCDs) [1]. The benefits of diets rich in fruit and vegetables (F&V) in the prevention of NCDs are well-documented [2,3]. The CGIAR Research Initiative on Fruit and Vegetables for Sustainable Healthy Diets (FRESH) uses end-to-end approaches to sustainably increase F&V intake, improve diet quality and associated nutrition and health outcomes, while also improving livelihoods, empowering women and youth, and mitigating negative environmental impacts.

The Beninese context

In Benin, malnutrition, metabolic risk factors, and suboptimal diets are the primary risk factors contributing to death and disability [4]. The aim of this brief is to describe the diet and nutrition landscape of Benin, including relevant policies, strategies, and programs.

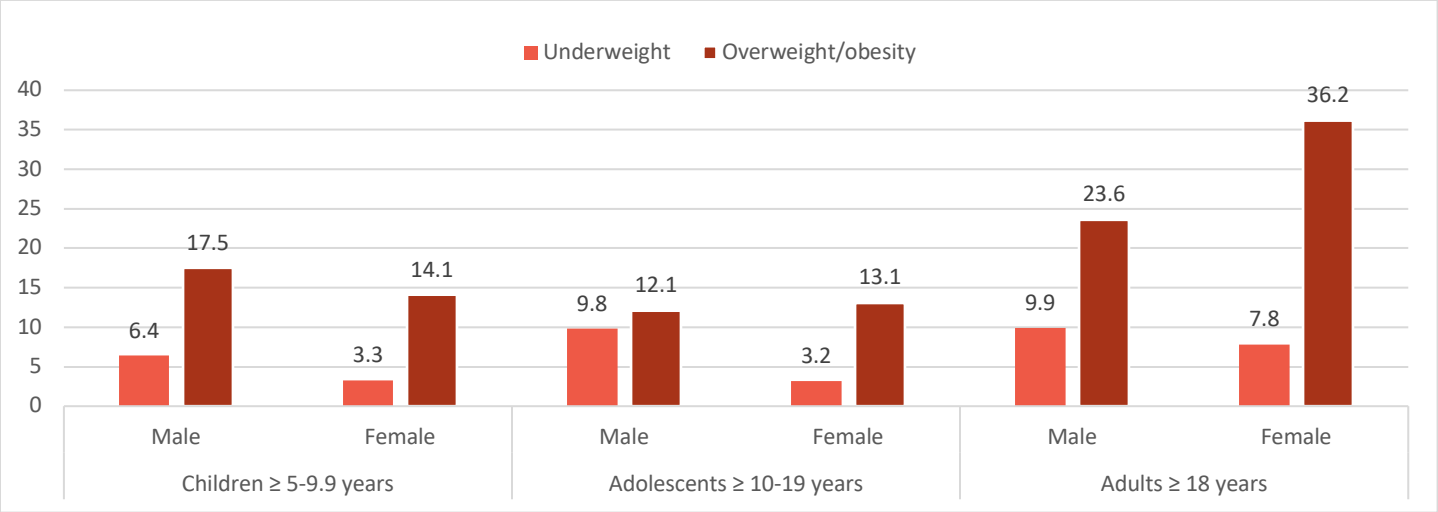
Nutritional status

Benin is facing a double burden of malnutrition, with the coexistence of undernutrition, micronutrient deficiencies, and overnutrition.

Among children under 5 years age, the prevalence of wasting reduced by half between 2001 and 2014 from 9.0 to 4.5%, although Benin has not made progress since then **(Figure 1)**.

Figure 1: Trends in malnutrition among children under 5 [5]

Figure 2: Prevalence of malnutrition by population group [6]

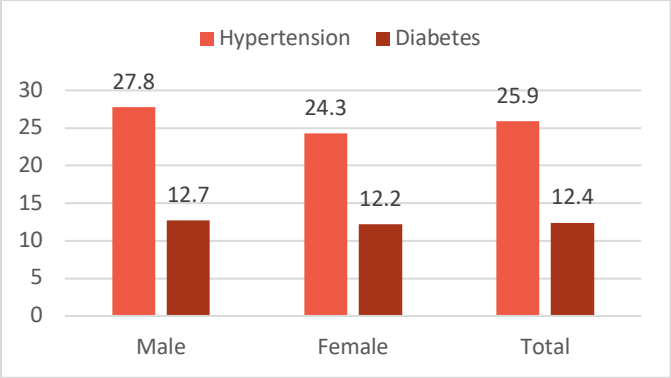


However, the prevalence of wasting in Benin is lower than the average for the West Africa region (7.0%), and Africa as a whole (6.0%). The prevalence of stunting remains high (32.2%), despite some improvement since 2008 (37.4%). Overweight prevalence remains low (1.9%). Overall, these trends reveal insufficient progress to achieve the Global Nutrition Targets for 2030.

In Benin, undernutrition and overnutrition co-exist, displaying different patterns across age groups **(Figure 2)**. Overnutrition is more widespread in adults, with one-third (30.1%) of adults being overweight or obese – a rate comparable to the rest of Africa (31.3%). Although less affected, children and adolescents present a worrying situation: over 14.0% of children and 12.0% of adolescents are considered overweight or obese. Overnutrition is more prevalent in females compared to males across all age groups, except in childhood, when boys are more likely to be overweight or obese than girls. The prevalence of undernutrition is higher in males than in females, with more pronounced differences in younger age groups.

NCDs, including those related to unhealthy diets, account for 39.0% of all deaths in Benin. Cardiovascular diseases and diabetes alone account for 18.0% of all NCD-related deaths [8]. Hypertension prevalence is high, with just over one-quarter of adults affected. The prevalence of diabetes has more than quadrupled in seven years from 2.9% in 2008 to 12.4% in 2015 [7]. While hypertension is slightly higher among men compared to women, the prevalence of diabetes is similar in both women and men **(Figure 3)**.

Figure 3: Hypertension and diabetes prevalence in adults [7]



Anemia & micronutrient deficiencies

In Benin, as in many African countries, micronutrient deficiencies are poorly documented. The prevalence of anemia, which is not a specific marker of micronutrient deficiencies, is documented at the national level among children under 5 years of age and women of reproductive age. Results from the most recent Demographic and Health Survey (DHS 2017-2018) revealed that anemia affects approximately seven out of ten (71.5%) children aged 6-59 months, and six out of ten (57.5%) women (15-49 years) [9].

Anemia in children is higher in rural areas (74.8%) than urban areas (66.1%), and among children of mothers with no education (74.2%) compared to children of mothers with secondary or higher education (57.8%). The prevalence of anemia in children varies with age, from 87.1% among children aged 6-8 months to 59.9% among those aged 48-59 months. The peak prevalence is

found in children aged 9-11 months (88.9%), corresponding to the complementary feeding period when nutrient needs increase and more foods are introduced. Among women, anemia is higher in pregnant women (68.4%) than breastfeeding (56.5%) or non-breastfeeding, non-pregnant (56.4%) women [9].

Nationally representative data on the micronutrient status of Benin's population are not available. The few existing studies have been conducted among small, non-representative samples in rural areas. For example, a study of 767 non-pregnant women of reproductive age and children under 5 years of age in rural northern Benin found that the prevalence of iron and vitamin A deficiencies in children was 23.6% and 33.6% respectively, whereas the prevalence in women was 18.3% and 17.7%, respectively [10]. Another study among children under 10 years of age in rural northwestern Benin reported a 45.7% prevalence of low plasma zinc levels [11].

Dietary patterns

Diets in children 6-23 months of age are generally suboptimal **(Figures 4 & 5)**. The diets of young children have worsened over time, with the latest data showing that just over one-fifth of children consume a minimally diverse diet, and one-third consume the recommended number of meals per day. This situation corroborates a number of available local evidences, that have beside, identified the main patterns that drive this status of sub-optimal diet for children; including the mothers' limited or non-existent access to media, unemployed mothers, mothers who have not made prenatal visits, regional variations, consumption of unfortified porridges, puree-based family diets, low fruit and egg consumption, mothers' lack of time and low availability or accessibility of ingredients to prepare fortified flour as relevant limiting factors[14,15,16,17].

Considering the low consumption of F&V by children 6-23 months of age, a similar trend is observed with respect to consumption of vitamin A-rich F&V (Figure 5). Less than one-third of breastfed children consume vitamin A-rich F&V and other F&V. For non-breastfed children, around 40% consume vitamin A-rich F&V and other F&V **(Figure 5)**.

Similarly, adolescent and adult consumption of F&V is low. Data from the most recent WHO STEPS survey conducted in 2015 indicated that 73.3% of adults consumed insufficient amounts of F&V (i.e., between 1 and 4 portions per day), while one in five adults did not eat F&V at all [7]. Among adolescents 13-17 years of age, nationally representative data from the 2016 Global School-Based Student Health Survey (GSHS) showed that 10.0% of students did not eat fruit in the 30 days preceding the survey, and 8% did not eat vegetables [18].

Limited literature suggests that the main drivers of low F&V intake in adolescents include the availability and accessibility of F&V, lack of nutrition education, competition from unhealthy foods, and food safety concerns [19].

Figure 4: Trends in infant and young child feeding practices in children 6-23 months [9,12,13]

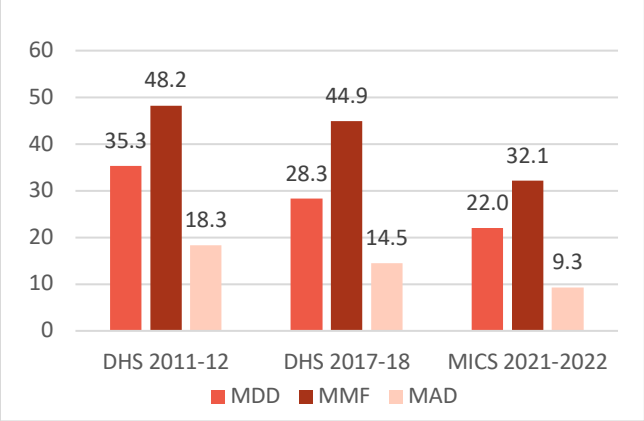
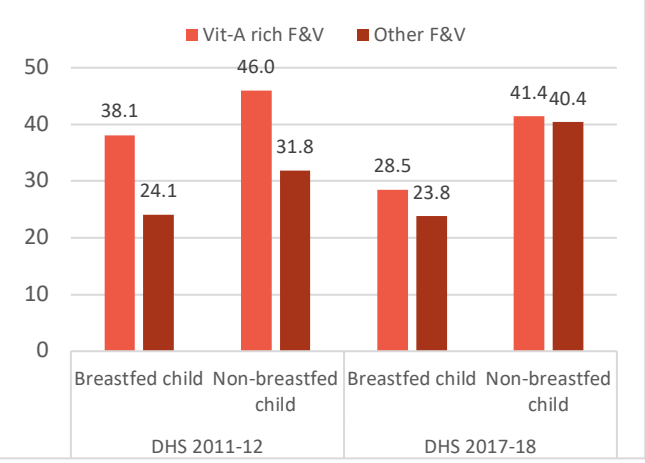
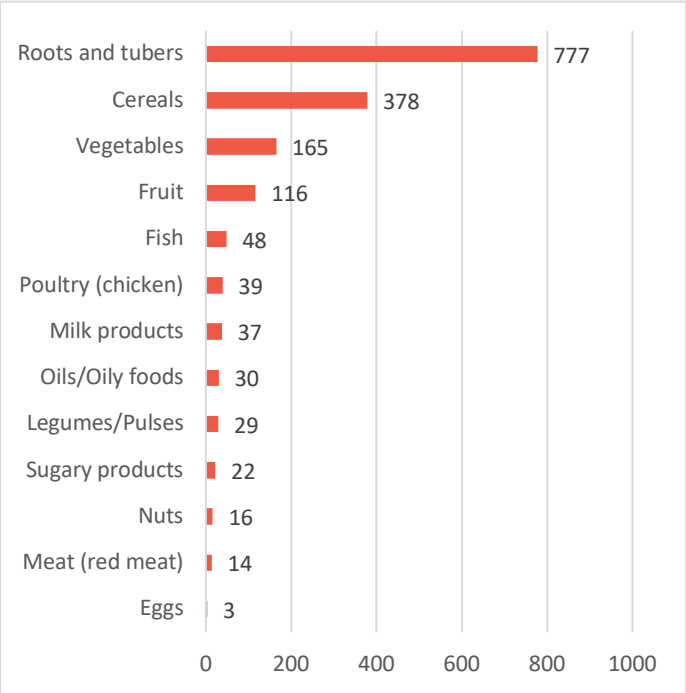


Figure 5: Fruit and vegetable consumption in children 6-23 months [9,12,13]



MDD = Minimum Dietary Diversity; MMF = Minimum Meal Frequency; MAD = Minimum Acceptable Diet; DHS = Demographic and Health Survey; MICS = Multiple Indicators Cluster Survey
Vit-A rich F&V = Vitamin A rich fruits and vegetables; Other F&V = Other fruits and vegetables

Figure 6: Average per capita food supply (g/person/d) [20]



Food supply data indicate a limited availability of F&V **(Figure 6)**. More than half of the average food supply comes from two food groups: roots/tubers and cereals. Although F&V are the third and fourth most available food groups, food supply does not meet the WHO recommended amount of 400 grams per person per day.

In Benin, the residual consequences of the Covid-19 pandemic, climatic shocks, the war in Ukraine, and the security crisis in the Sahel have resulted in higher raw materials, freight, and fuel costs, with negative consequences for overall food security that may also contribute to decline infant and young child feeding practices. The prevalence of food insecurity doubled from 9.6% in 2017 to 25.5% in 2022, with nearly 82.6% of households unable to afford a healthy diet in 2021 [21,22,23].

Micronutrient intake

Nationally representative data on micronutrient intake are particularly lacking. The latest DHS (2017-2018) data provide some indication for young children: 58.0% of children aged 6-23 months consumed vitamin A-rich F&V in the last 24 hours and 52% consumed foods rich in iron.

Among children aged 6-59 months, 24.0% received iron supplements in the seven days prior the survey, and 52.0% received vitamin A supplements in the last 6 months. For women, 47.0% of those who gave birth in the last five years reported they had taken iron supplements for more than 90 days [9].

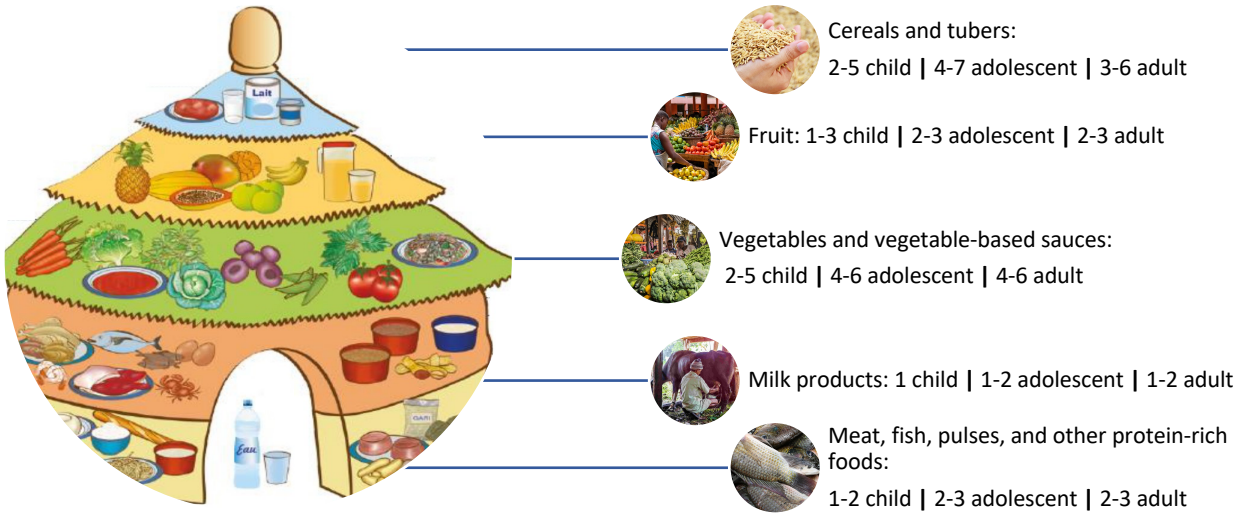
National guidelines, policies, strategies, & programs

Benin faces multiple nutritional challenges across the population. Published in 2015, the Food Based Dietary Guidelines (FBDGs) for Benin provide specific dietary recommendations for different population groups to prevent nutritional deficiencies and diet-related NCDs **(Figure 7)**. The guidelines also provide daily menus designed for adults with low-to-moderate levels of physical activity [24]. However, whether people are aware of these guidelines or whether they are able to implement them is unclear. Currently, there is no evidence related to consumer understanding of the guidelines, acceptability of the messages, or feasibility to adopt recommendations.

Current policies, such as the Health Sector Policy for Nutrition (PSSN), aim to enhance nutritional status and food accessibility by promoting diet diversification and household F&V production. Micronutrient fortification and nutrition education are included in policies like the Programme National d'Iodation du Sel (ProNISel), and the National Plan for Agricultural Investment and Food and Nutrition Security (PNIASAN). Regarding diet quality, the Politique Nationale d'Alimentation et de Nutrition. (PNAN) and the National Quality Policy (NQP) aim to reduce barriers to nutritious foods and empower consumers to make healthier choices.

At the sub-national level, the communal development plan of Cotonou includes an indirect action related to food security, nutrition, gender, and access to health services. However, with the exception of three initiatives – the Stratégie Nationale de l'Agriculture Sensible à la Nutrition (SNASN) et Plan d'Actions, the Politique Nationale de l'Alimentation Scolaire (PNAS), and the PNAN – most policies lack a focus on F&V or healthy diets for NCD prevention [25,26].

Figure 7: Daily portions according to the Benin Food Based Dietary Guidelines for children, adolescents, and adults [24]



Adapted from Benin's food-based dietary guidelines, courtesy of FAO

Conclusions & recommendations

- Benin is facing a double burden of malnutrition where undernutrition, micronutrient deficiencies, and overnutrition co-exist.
- Diets are monotonous, dominated by tubers and cereals, and, for at least some population groups (e.g. children), have worsened over time. Dietary diversity and F&V intake are low across all population groups.
- Athough FBDGs are available, it is unclear whether people are aware of the guidelines and able to implement them. Besides the need to increase public awareness of the FBDGs, assessing their effectiveness in improving diets is also needed.
- The lack of country representative data on micronutrient deficiencies, food consumption, and dietary intake is a key challenge for the country to address. Improved data can help in surveillance as well as in the design of contextually relevant diet and nutrition related interventions and policies.
- Efforts are needed to operationalize exisiting policies and strategies to improve F&V intake and diet quality, and support helathy diets for all.

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About FRESH

The CGIAR Research Initiative on Fruit and Vegetables for Sustainable Healthy Diets (FRESH) aims to use an end-to-end approach to increase fruit and vegetable intake and in turn improve diet quality, nutrition and health outcomes while also improving livelihoods, empowering women and youth and mitigating negative environmental impacts.

PRIMARY IMPACT AREA:

Nutrition, health & food security