

Research brief

Sodium and salt intake survey in Burkina Faso





A team of investigators in the field

KEY FINDINGS AND POLICY IMPLICATIONS

- ◆ The majority of the study participants had sodium intakes exceeding WHO recommendations.
- ◆ Broth is widely consumed, with lower intake observed among individuals with known health conditions and among wealthier populations.
- ◆ The primary source of sodium is household salt, accounting for two-thirds of total intake, while broth contributes approximately 15%.
- ◆ Over 90% of surveyed adults had potassium intakes below WHO recommendations.
- ◆ Visceral obesity increases the risk of hypertension, highlighting the importance of accurate, affordable, and non-invasive diagnostics, with the waist circumference being a preferred measurement over the body mass index.
- ◆ Iodine deficiency among women is rare; however, in some regions, the population may be at risk of excessive iodine intake.
- ◆ Adults who do not have access to safe drinking water have a prevalence of kidney damage three times higher than those who have access to it.
- ◆ Strategies to reduce sodium intake are recommended to help prevent rising hypertension rates and to lower the risk of cardiovascular disease, gastric cancer, osteoporosis, obesity, and kidney disease within the population.

BACKGROUND AND OBJECTIVES

High sodium intake is a major risk factor for non-communicable diseases (NCDs) such as cardiovascular diseases, which cause millions of deaths worldwide each year. In many countries, sodium intake exceeds the WHO recommendation (< 2 g/day). Processed foods and condiments, which significantly contribute to sodium intake, are consumed in low- and middle-income countries increasingly.

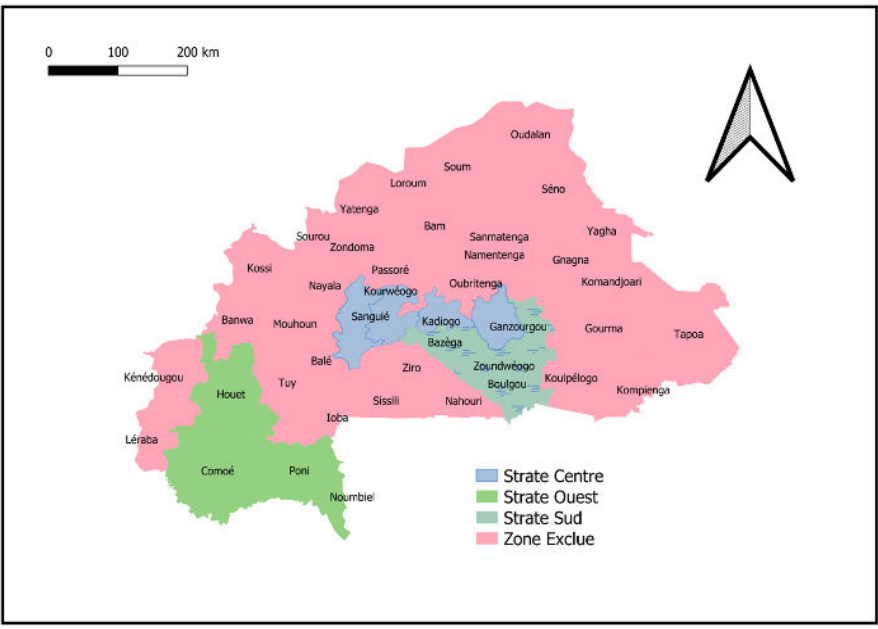
This study assessed: (1) salt and sodium intake through urinary excretion measurements, (2) the contribution of broth to this intake, (3) the relative impact of excessive salt consumption and obesity on hypertension, (4) potassium intake and iodine status among non-pregnant women, and (5) the prevalence of kidney injury.



Table salt

METHOD

This survey, carried out in 2023, was a cross-sectional survey with three strata. The enumeration zones (ZD) of the 2019 census served as the sampling frame. Three strata (South, Centre and West) (instead of five) were included due to the security situation in Burkina Faso, with 45 ZDs randomly selected (15 per stratum) from all rural and urban areas. The three-stage sampling procedure included the random selection of households (12 per ZD) and the random recruitment of one non-pregnant woman and one man aged between 15 and 59 from each household.



The different strata of the survey

Urinary biomarkers (sodium, creatinine) were used to assess total sodium intake, and a combination of three dietary intake approaches (24-hour recall targeting salt-rich foods, food frequency questionnaire for consumption of composite meals away from home, and household food purchase method/adult male equivalent for small consumption foods) to assess the relative contribution of different foods to total sodium intake. Measurements of visceral obesity, hypertension and urinary albumin were used to estimate the prevalence of kidney damage. Spot urine samples and, in addition, a 24-hour urine sample from a subsample were collected to validate spot urinary sodium excretion in an African population. In addition, urinary potassium was measured to assess the potential positive effect on hypertension.

RESULTS

Sodium and potassium intake, hypertension, and obesity

- ◆ Approximately two-thirds of non-pregnant women and men in Burkina Faso had sodium intakes above the WHO recommendation, with a high average intake (women: 3.3 g/day; men: 2.8 g/day) compared to other countries in the region.
- ◆ Household salt was the primary source of sodium, accounting for two-thirds of total intake, while broth contributed approximately 15%.
- ◆ The average monosodium glutamate (MSG) content of broth was estimated at 10%.
- ◆ Around 90% of respondents had potassium intakes below the WHO recommendation.
- ◆ The sodium-to-potassium (Na: K) ratio was high, which is unfavorable in terms of the potential prevention of hypertension.
- ◆ The prevalence of hypertension was approximately 21% among men and 18% among women, which is lower than in other countries in the region.
- ◆ Visceral obesity was high in women (45%) and is a risk factor for hypertension.

Iodine status

- ◆ The iodine content of non-pregnant women was adequate.

Kidney disease

- ◆ The prevalence of kidney disease is 17%, which is higher than in other countries in the region.

RECOMMENDATIONS

- ◆ Implement national salt reduction strategies alongside initiatives to increase consumption of foods high in potassium, to reduce the risk of hypertension.
- ◆ Encourage interventions to prevent and reduce obesity, especially visceral fat, to reduce hypertension and potential kidney damage.
- ◆ Conduct further research on the association between access to safe drinking water and kidney damage.
- ◆ Implement a national iodine survey to identify areas of excess intake and adjust iodization standards as needed.
- ◆ Recognize the widespread consumption of broth and its contribution to overall 15% salt intake in the development of sodium reduction policy.

PARTNERS AND FUNDING

The study is the result of a collaboration between Helen Keller Intl, Burkina Faso's National Working Group (NWG) and Groundwork, with financial support from the Gates Foundation. It is part of the project “Accelerating the reduction of micronutrient deficiencies through enriched broth in West Africa” implemented by Helen Keller Intl in Burkina Faso, Nigeria and Senegal.

MORE INFORMATION

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