

ABSTRACT

The Epidemiology of Dietary Risk Factors for Cardiovascular Diseases in the Caribbean Island of Barbados

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Background: Cardiovascular disease (CVD) is the main cause of death, representing a third of global mortality. Annually 28% of deaths in Barbados are attributed to CVD. Diet is the main modifiable risk factor in CVD. The Barbados National Salt Study (BNSS) was a cross-sectional, population based, survey set in Barbados (n=364; aged 25–64 years) in 2012–2013. This study was nested within the Health of the Nation (HotN) prevalence survey (n=1234) of diabetes mellitus, hypertension and associated risk factors. The aim of my work was to describe the epidemiology of key dietary risk factors for CVD and to investigate their distribution by age, sex and educational level in adult Barbadians. The contribution made by ultra-processed foods to energy was used as an indicator of diet quality.

Methods: Each participant completed a single, timed 24-hour urine collection, two 24-hour dietary recalls and a questionnaire on knowledge towards salt use. Urinary sodium and potassium levels were compared against international reference levels, the knowledge towards salt use investigated, nutrient intakes and ultra-processed food consumption described.

Results: The mean sodium intake (2656 mg/day) exceeded the World Health Organization (2000 mg/d) and the American Heart Association (1500mg/d) recommendations. The mean sodium-to-potassium ratio was high and associated with younger age and lower educational level. Most individuals were aware that a high salt diet was unhealthy and linked with hypertension. One-in-three individuals purchased foods away from home 2–6 times per week. Sugar sweetened beverages and ultra-processed foods contributed 10% and 41%, respectively, to overall energy intake. Dietary fibre intakes were inadequate across both sexes and all ages. Intakes of iron, calcium, folate and zinc were inadequate in women.

Conclusion: These baseline data on food and nutrient intake provide the fundament upon which culturally appropriate public health nutrition policy targeting non-communicable diseases can be revised and developed in Barbados.

Keywords: cardiovascular disease; nutrient intake; salt; sodium; potassium; ultra-processed foods