Original Article

THE EMERGENCE OF SALT REDUCTION AS A NATIONAL HEALTH PRIORITY IN ALBANIA

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ABSTRACT

Background. Albania is confronting a significant public health problem based on its historical diet: excessive salt consumption. As a leading cause of hypertension and cardiovascular disease, excessive salt intake has spurred a national movement in the direction of prevention-based health initiatives. This article explores Albania's emerging position in the fight against salt, looking at the process of transformation from traditional dietary patterns to the development of an organized public health response.

Current Position & Strategies. Historically characterized by a high-salt cuisine, Albania is now at a policy development and sensitization critical point. No studies have been made so far regarding salt consumption, except for placing labels for salt content visibly, and some vague publicity for salt reduction, no WHO guidelines have been implemented. Current statistics, including a study we made in Tirana that validated levels of consumption well beyond recommendations (11,8g salt/day), have accelerated the national debate and left action a necessity.

Conclusion & Future Direction. The future requires a multi-faceted approach. Albania's strategy now must coalesce into a strong, mandatory national program. Future priorities include establishing stronger regulatory management of the food industry, implementing clear and transparent front-of-pack labeling, and launching sustained, mass-media public education campaigns. The goal is to implement a cultural shift in eating habits, with salt reduction as a pillar of national cardiovascular disease prevention for a healthier future.

Keywords. Salt reduction, WHO guidelines, Eating habits

EMERGJENCA E REDUKTIMIT TË KRIPËS SI NJË PRIORITET NACIONAL PËR SHËNDETIN PUBLIK NË SHQIPËRI.

ABSTRAKT

Hyrje. Shqipëria po përballet me një problem të rëndësishëm të shëndetit publik bazuar në dietën e saj historike: konsumin e tepërt të kripës. Si një shkak kryesor i hipertensionit dhe sëmundjeve kardiovaskulare, marrja e tepërt e kripës ka nxitur një lëvizje në drejtim të iniciativave shëndetësore të bazuara në parandalim. Ky artikull shqyrton pozicionin në zhvillim të Shqipërisë në luftën kundër kripës, duke parë procesin e transformimit nga modelet tradicionale të të ngrënit në formimin e një përgjigjeje të organizuar të shëndetit publik.

Pozicioni & Strategjitë Aktuale. Historikisht e karakterizuar nga një kuzhinë me shumë kripë, Shqipëria tani është në një pikë kritike të zhvillimit të politikave dhe sensibilizimit. Deri më tani nuk janë bërë studime në lidhje me konsumin e kripës, dhe përveç vendosjes së etiketave për përmbajtjen e kripës në mënyrë të dukshme, dhe një publiciteti të dobët mediatik, nuk janë zbatuar udhëzime të OBSH-së në lidhje me këtë alarm global. Statistikat aktuale, përfshirë një studim që ne bëmë në Tiranë ku vërtetoi nivelet e konsumit përtej rekomandimeve (11,8g kripë/ditë), kanë përshpejtuar debatin kombëtar dhe e kanë lënë veprimin një domosdoshmëri.

Përfundimi & Drejtimi i Ardhshëm. E ardhmja kërkon një qasje shumëplanëshe. Strategjia e Shqipërisë tani duhet të shkojë drejt në një program të fortë dhe të detyrueshëm kombëtar. Prioritetet e ardhshme janë vendosja e një menaxhimi më të fortë rregullator në industrisë ushqimore, zbatimi i etiketimit të qartë në pjesën e përparme të paketimit dhe promovimi i fushatave të qëndrueshme edukuese publike. Qëllimi është të zbatohet një ndryshim kulturor në zakonet e të ngrënit, me reduktimin e kripës si një shtyllë e rëndësishme në parandalimin kombëtar të sëmundjeve kardiovaskulare për një të ardhme më të shëndetshme.

Fjalë kyç. Reduktimi i kripës, udhëzimet e OBSH-së, zakonet e të ngrënit

INTRODUCTION

Hypertension is a global alert

HBP (high blood pressure) is the leading risk of death in the world [1]. Unfortunately, worldwide, blood pressure levels are predicted to increase further, particularly in developing countries. In 2018, chronic diseases took the lives of 43 million people globally, accounting for 75% of the total deaths that year, and this is projected to rise to 53 million in 2030 [2].

Among these chronic disease-related fatalities, cardiovascular (CV) diseases were responsible for 44% of them [2]. High dietary salt intake is a significant contributor to elevated blood pressure [3]. Evidence from diverse sources spanning animal, epidemiology, and human intervention studies demonstrates the association between salt intake and HBP [4]. Daily sodium intake varied considerably across population groups, according to the Intersalt study [6], from a low of 4 g salt/d (sodium: 1.56 g/d, 68 mmol/d) among the Alaskan Inuit to 27 g

salt/d (sodium: 10.6 g/d, 460 mmol/d) in the Akita prefecture in northeastern Japan. It has been estimated that salt intakes in Belgium, Denmark, and the Netherlands were between 8 and 9 g/d, and in Finland, Italy, and Portugal, were between 9 and 12 g/d [6]. These results resonate with local trends observed in neighboring Balkan countries, such as Montenegro (11.5 g/day) [7], Slovenia (10.9 g/day) [8], and Greece (9.54 g/day) (9), which suggest a similar dietary pattern of reliance on salt-preserved traditional foods, processed meat, and widespread use of discretionary salt.

Recent intervention studies have found decreases in cardiovascular events following reductions in dietary sodium [10]. Salt intake is high in most countries and, therefore, strategies to lower salt intake could be an effective means to reduce the increasing burden of HBP and the associated cardiovascular disease. Effective collaborative partnerships between governments, the food industry, scientific organizations, and healthcare organizations are essential to achieve the WHO (World Health Organization)-recommended population-wide decrease in salt consumption to less than 5 g/day [11]. In the milieu of increasing cardiovascular disease worldwide, particularly in resource-constrained low- and middle-income countries, salt reduction is one of the most cost-effective strategies to combat the epidemic of HBP, associated cardiovascular disease, and improve population health [11]. Almost all European countries have conducted population studies to estimate the daily salt consumption.
In various studies, 24 h urinary sodium was significantly associated with BP as well as the increase in BP with age [6, 12]. National programs that reduce dietary salt consumption, including labelling changes and reformulation of products, are very cost-effective [11]. Lowering salt intake by 5.8 g was associated with a 3.1 mmHg decrease in SBP (systolic BP) [13].
Most recently, a global analysis indicated that 8.5 million deaths could be avoided over 10 years (2006–2015) by salt-reducing initiatives alone, and the estimated cost/person of implementing this was reported to be between $0.04–$0.32. [14]
There is strong evidence from trials that following a lower sodium diet reduces both average systolic (-3.3mmHg) and diastolic blood pressure (-2.2mmHg), compared with a higher sodium diet. Every 1000mg reduction in sodium is associated with a 2.8mmHg lowering of systolic and 1.7mmHg lowering of diastolic blood pressure [15]. The effect of sodium reduction on blood pressure is more pronounced in individuals with high blood pressure [15]. DASH (interventional Investigation) was a feeding study with randomization to DASH or control diets with high, medium, and low sodium intake (roughly 3300, 2400, and 1500 mg/day on average) for 30 days. It found a graded reduction in blood pressure with lower sodium versions of both diets (6.7 mmHg among those on the control diet and 3.0 mmHg among those on the DASH diet), with a stronger effect among those with hypertension at baseline, but also in normotensive persons [13]. Furthermore, it was also found that populations with low average daily salt intakes had low BP and very little or no increase in BP with age.

Alarming statistics in Albania

In Albania, in 2021, non-communicable diseases accounted for 66% of all deaths. Among females, stroke and ischemic heart disease were the top leading causes of death with 291 and 256 per 100000 population, respectively [5]. Hypertension is one of the main risk factors for cardiovascular diseases, accounting for almost two-thirds of all strokes and half of all ischemic heart diseases. The overall mortality rate from CVD (SIZ, Stroke, Hypertensive Heart Disease) in 2021 was estimated at 497 deaths per 100,000 inhabitants. The demographic transition experienced over the last three decades has inevitably led to a significant change in the epidemiological profile of the Albanian population, characterized by a noticeable shift towards non-communicable diseases, particularly cardiovascular diseases, cancer, chronic respiratory diseases, and diabetes. The main risk factors in the Albanian population consist of hypertension (the main risk factor, accounting for about 34% of overall mortality), food-related risks (second, accounting for about 23.4% of overall mortality), smoking (accounting for about 20% of overall mortality), followed by alcohol (4.92%) [5]

A Deep-Rooted Taste

Albanian cuisine enjoys a reputation for strong and pronounced tastes. Salt has long been a basic seasoning; sprinkled generously while cooking, it was also often added automatically at the table. This "culture of salt" is deeply rooted in the country's culinary as well as social traditions. Recently, though, a more critical public health focus has been the deliberate reduction of dietary sodium. There has been a growing body of evidence that directly relates excessive salt intake to adverse cardiovascular events, increasingly informing both clinical guidance and public discourse.

The following analysis attempts to outline Albania's path toward dealing with this major health issue. It looks into the current public health policies, determines the persistent cultural and pragmatic barriers to behavior modification, and considers possible ways to change this food habit. In addition, it will provide some of the main findings of a recently conducted Tirana survey that quantified both current consumption patterns and established a baseline for continued intervention.

The Invisible Threat: What Does Excess Salt Do?

Sodium, a primary component of dietary salt (NaCl), is an essential electrolyte involved in critical physiological processes, including fluid balance, neuromuscular function, and cellular homeostasis. The estimated minimum physiological requirement for adults is approximately 550 mg of sodium (24 mmol) per day [16, 17].

However, chronic consumption of sodium more than physiological needs disrupts systemic regulation. The primary mechanism involves osmotic fluid retention to dilute elevated serum

sodium concentrations. This increases intravascular volume, leading to elevated cardiac preload and a consequent rise in systemic blood pressure.

Sustained hypertension is a major modifiable risk factor for numerous serious pathologies, including:

- Acute coronary syndromes and myocardial infarction
- Cerebrovascular accidents (stroke)
- Chronic kidney disease and progressive renal impairment
- Reduced bone mineral density and osteoporosis
- Increased risk of gastric carcinoma

In alignment with cardiovascular risk reduction, the World Health Organization (WHO) recommends a maximum daily intake of less than 5 grams of salt (equivalent to approximately 2000 mg of sodium) [15]. Despite this, global surveillance data indicate that the average population consumption frequently exceeds this recommendation by more than twofold—a pattern of excess also observed in Albania.

Policies and Initiatives: A Shift Towards Change

Until recently, salt reduction was rather a subjective issue than systemic in Albania. However, the recent few years have witnessed a visible difference.

So far, in our country, no studies have been conducted in the population to accurately determine salt consumption by measuring urinary sodium excretion in 24-hour urine. It has also been achieved, in cooperation with the Ministry of Health, to place labels for salt content visibly. Negotiations have been made with large food industry producers to reduce the amount of salt, but there have been no results. No significant campaigns have been conducted in the population on the importance of reducing salt in the diet.

Despite all this, challenges are still the norm. A widespread informal economy and home food production make monitoring and regulation difficult. Furthermore, changing consumption patterns is a lengthy process.

The Tirana Study: A Snapshot of the Current Reality

To get a clearer view of how widespread the problem is in an urban Albanian context, we conducted an observational study in the country's capital city, Tirana. The study involved estimating as closely as possible the average salt intake of the urban adult population with the best means available: 24-hour urine collection. The technique has been described as the "gold standard" since it measures the quantity of sodium the body is passing out and provides a very reliable estimate of intake.

Methodology: A total of 150 adults between the ages of 18 and 75 from the Tirana region were randomly selected. Participants were instructed to pass all urine during a period of 24 hours in special containers. The volume and sodium content (Na) of the sample were measured. Salt excretion was subsequently calculated from a standard formula (g NaCl = mmol $Na^+ \times 0.05844$).

RESULTS: An Alarming Readout

The findings of our research show a worrisome, but not surprising, snapshot of our eating habits.

1. Excessive Average Consumption: The mean 24-hour sodium excretion was found to be 202.54 mmol/day with an SD of 93.56. If this is converted to actual salt consumption, then residents of Tirana are consuming an average of 11.8 grams of salt per day (SD 5.48). This is more than double the WHO recommendation (5g/day) and implies that the cardiovascular system of the population is undergoing a very high degree of overload.

2. Gender Difference: The study found a statistically significant difference between the genders. Urinary sodium excretion among men was 223.85 mmol/day (SD 106.51) and for women was 190.80 mmol/day (SD 83.96). This would amount to a salt intake of 13.08 grams/day in men and 11.09 grams/day in women. The difference was statistically significant at P-value 0.045. This can be due to social factors, diet, or even body size and metabolic variation.

3. Age and Salt Consumption: To our surprise, our research failed to find any statistically significant correlation between salt consumption and age. Consumption increased slightly with age; however, this trend was not statistically significant. This suggests that the habit of excessive salt consumption exists in all age groups, as opposed to specifically the older age groups.

4. Body Mass Index (BMI) and Salt: Perhaps the most striking finding from the study was the positive correlation between Body Mass Index (BMI) and salt intake. Analysis showed a weak positive, but highly statistically significant association ($r=0.183$, $p=0.001$). This suggests that as BMI increases (i.e., heading in the direction of overweight or obese categories), so does the level of salt intake. This association is troubling because it illustrates a common pattern of bad eating: a high-calorie, unhealthy-fat, processed-food diet (which tends to be high in salt as well as fat), leading to weight gain and increased cardiovascular risk.

Implications and The Future

Our findings in Tirana are not figures; they reflect a health reality that must be immediately addressed. An average of 11.8 grams of salt per day exposes close to the entire adult population to a high risk for the development of hypertension and its complications.

What needs to be done?

1. Continuous Education: The awareness campaigns must be intensified and targeted, particularly towards the risk groups (men, overweight individuals).

2. Industry Collaboration: Work with bakeries and producers of common food products (e.g., white bread, white cheese, sausage industry) to gradually reduce salt content so the public can acclimatize to altered flavor.

3. Family Doctors' Role: Family physicians are on the ground and can play a crucial role in advising and screening patients on salt intake.

4. Making Easy Choices: On an individual level, each of us can start by removing the saltshaker from the table, reducing the amount of salt used in cooking by a third, replacing it with herbs and spices, and reading food labels carefully to choose lower-sodium alternatives.

CONCLUSION: A Long Journey Towards a Better Taste

Reduction of sodium intake in Albania requires a continuous and multi-faceted public health approach. Ultimately, success will depend on a gradual cultural shift away from associating traditional flavor with high salt content and toward appreciation of the natural tastes of food, accented by healthier seasoning choices.

Data from the Tirana study provides a critical and reliable evidence base that confirms the need for intervention. The findings are unequivocal and concerning; yet this presents a clear mandate for action rather than any cause for pessimism. It is a direct call to action for policymakers, the food industry, and the public.

The reduction of dietary salt is not a sacrifice of flavor or tradition but is rather an investment towards long-term health. It's a modification that preserves the enjoyment of food while significantly mitigating the risk of chronic disease, enhancing both life expectancy and quality of life.

While science provides the evidence, the responsibility for implementation rests with everyone. The time to act to take strategic steps in protecting health at a population level is now.

Conflicts of interest: The authors declare that they have no conflicts of interest.

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