REGULATIONS RELATING TO THE REDUCTION OF SODIUM IN CERTAIN FOODSTUFFS AND RELATED MATTERS

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Comments prepared and submitted by: Dr E Schultz

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PREAMBLE

The proposed legislation to reduce the sodium content in food is predicated on the known deleterious effect on cardiovascular health of the current high intake of sodium among all South Africans irrespective of age as is also the case globally. In Europe more than 75% of the sodium mostly in the form of table salt (sodium chloride) in the diet derives from commercially processed and market-ready food, the intake of which is usually not amenable to customer choice as opposed to the salt added in home cooking (5%) and while eating (6%). About 10-15% of sodium is present naturally in food. A similar situation probably pertains in South Africa. Salt is added by the food industry for preservation, appearance, and for technological reasons. A lower concentration of salt with or without replacement with other chemicals or the use of different food preparation methods has been equally effective and to date safe. Because taste perception has been observed to adjust within a relatively short time to a lower salt intake, taste is not a barrier to dietary sodium reduction.

The increasing personal, social, and financial burden to the individual and to society of the morbidity and mortality due to a high non-discretionary sodium intake emphasises the urgent need for state intervention. As packaged food and ready meals provide more than 75% of sodium intake the food and catering industry should be prevailed upon to reduce the amount of salt added to their products in order to achieve an intake compatible with health. South Africa is coming very late to the table. Many deaths and much disability and distress could have been avoided if the country had acted sooner.¹ The resolution adopted in 2003 at the Annual General Meeting of the Southern African Hypertension Society to lobby the government to legislate on salt, sugars and fats was not followed through by the Hypertension Society and became unfortunately just another missed opportunity.²

Dietary sodium has already been successfully reduced in many countries. Key elements in the salt-reduction programmes in Europe included a step-wise process, a focus on major food categories, raising public awareness, product reformulation, programme monitoring, evaluation, and review, and voluntary and/or legislated cooperation from the food industry. South Africa can learn from their experience.

A high intake of simple carbohydrates (mono and di-saccharides) such as sucrose/sugar and fructose are like a high intake of sodium implicated in the current pandemic of cardiovascular diseases as well as in other non-communicable diseases.³ Like sodium, sugars are added in excessive and often addictive amounts to commercially prepared food and beverages and for the same reasons. Food with a high saturated fatty acid content, containing trans fatty acids, available often only in out-size ready-to-consume portions, and containing no or little fibre correctly defined to include all edible carbohydrates but excluding sugars⁴ are similarly implicated. Their concentration just as in the case of sodium can be and has been adjusted without detriment to microbial safely, consumer preferences, and technological considerations. It makes sense to address all these food additives as used in industrial food and ready meal production jointly because the same reformulation, marketing, and catering processes are involved. Integrated combined action accords with scientific evidence on effect interaction and symbiotically reduces the non-communicable disease risk profile. It would also rationalise public awareness programmes making them comprehensive and it would prevent the disastrous counter-productive replacement of sodium with another unhealthy additive as happened when saturated fat was replaced with sugars.

DISCUSSION

The discussion is intended to serve as background to the sections in the draft legislation and to posit the problem within the total South African legislature so that where they cross-cut other government departments the proposals could nevertheless receive attention in legislative instruments as for example within the departments of Education and Welfare.

The regulations should be directed not only at sodium reduction but rather at the achievement of a low sodium intake. While the discussion will refer only to action on sodium some of the comments apply also to sugars, fats and fibre.

The following issues are considered:

- 1. advisory and review body
- 2. priority products
- 3. targets
- 4. definitions
- 5. time frames
- 6. labelling
- 7. control
- 8. institutional catering
- 9. public awareness
- 10. incentives and subsidies
- 11. guidelines
- 12. commencement

1. ADVISORY AND REVIEW BODY

In view of the rapidly expanding and changing knowledge base on nutrition and disease and in the presence of intense often misinformed public opinion and biased self-serving market-related interest, it is essential for the successful implementation and operation of any legislative intervention on nutrition to establish within the National Department of Health an authoritative, permanent, evidence-based, transparent, and accountable advisory and review body on nutrition with mandated public participation that is independent of the food industry (which includes also agri-business, so-called health foods, and nutraceuticals) and which does not get any funding either directly or indirectly⁵ from the food industry. It should be a statutory body under the Foodstuffs, Cosmetics and Disinfectants Act 54 of 1972.

Its brief should be to advise the Department of Health on the development (where they do not exist) and periodic reviews of:

- a strategic framework on food and health which includes in respect of dietary sodium targets, priority foods, and time frames
- legislative definitions
- permissible labels and displays
- reference values and standards
- health and nutrition claims
- reformulation and modelling of packaged and ready meals

- guidelines on analytic and laboratory methodology
- procedures for monitoring and evaluating compliance, complaints, and outcomes
- accreditation criteria for certificates and awards for compliance
- offences and penalties
- public education and awareness programmes
- public participation and consultative instruments

2. TARGETS

Maximum levels of daily sodium intake should not exceed the Reference Nutrient Intake (RNI) values for different age groups. The RNI for sodium is 1.6 g or 70 mmol sodium equivalent to 4 g sodium chloride/salt for adults. The values for children are lower and age-dependent. A salt intake target of 6 g/day equivalent to about 2.3 g sodium irrespective of age as recommended is therefore too high. The permissible amount of added salt in packaged food with a large children customer base should be set at a lower level than in other products. Food products on the market to which salt has not always been added like butter and rice cakes should be the only permitted products.

In order for these targets to be reached the levels in the draft regulations should be adjusted.

3. PRIORITY PRODUCTS

South Africa has like other countries prioritised selected food products for sodium reduction. The list in the draft regulations comprises bread, breakfast cereals, all fat and butter spreads, factory butter, ready to eat savoury snacks, all flavoured potato crisps, processed meat, raw processed meat sausages, dry soup and gravy powders, "dry powder flavour mixes intended for and sold with instant noodles", and stock. The list of priority products recommended by the European Union is preferred. It comprises the following categories: breads, breakfast cereals, cheeses, meat, fish, and potato products, soups and sauces, crisps and savoury snacks, condiments and spices, and ready meals including restaurant and catering meals. They are broad enough to include all the items in the local draft list except fat spreads and butter and include highly salted items not in the local list. Because the categories are inclusive there are no loop holes to be exploited by the food industry.

The list in the draft regulations should be reviewed and should include in addition to the listed European Union categories a category comprising biscuits, crackers, crisp breads, and

similar confectioneries. Those items which may be subsumed in the draft regulations' definition of ready-to-eat savoury snacks should be moved into this additional separate category. Categories to which children are highly exposed should be identified.

It is wrong as in the draft regulations to allow the total sodium content of bread with salty additions to be higher than bread without these additions. There are also some anomalies among the items listed in table 1 including the rather odd item that reads "Dry soup and gravy powders, dry powder flavour mixes intended for, and sold with instant noodles, per dry weight". They probably derive from definitions used in earlier regulations.

4. **DEFINITIONS**

All the food items as well as terms used in the document whose meaning are specific to the document must be defined in the regulations. The definitions must be listed alphabetically according to their subject and not according to their descriptor or adjective, for example, **meat – processed** and not **processed meat**, where "meat" is the subject and "processed" is the descriptor or adjective.

The definitions must be explicit and should not refer to definitions in previous regulations which in some cases have been superseded by or incorporated into subsequent composite regulations making it very difficult and even impossible to find the definitions as they might apply in the current draft regulations. Some definitions appear to have been copied without thinking from previous legislation – see examples in the footnote below.^{*} They do not make sense. I will not comment specifically on them.

The definition for **ready-to-eat savoury snacks** should be inclusively reworded and unambiguous, for example: **snack – ready-to-eat savoury** - means a small portion of processed salted, spicy, and/or flavoured food eaten between meals consisting of cereals, legumes, nuts, fruit, vegetables, meat, fish, fat, and any combination thereof.

butter fat should not be defined separately from other fat spreads vanaspati and mixed vanaspati should not be excluded from the definition of fat spreads only factory butter and not farm butter are defined; only a definition of butter is needed, if at all potato crisps should not be excluded from the definition of savoury snacks rye bread with > 50 % rye should not be excluded from the definition of bread

5. TIME FRAMES

Many reformulation methodologies and models have already been developed, tested, and implemented by processed food producers especially those with global outreach that now dominate the local market.⁶ As taste preference adapts rapidly to reduced sodium intakes reductions of 20-25% over even less than 3 months are possible without serious taste problems. The mandated time frames for changes in salt content of commercially processed and distributed food can therefore be relatively short. The commencement dates need not to be delayed as in the draft regulations for 4 years from now until 2016 with final targets to be reached only in 2018. Certainly time should not be granted to the food industry to perfect technologies to develop sodium-free salty-tasting substitutes, apparently still in progress other reformulations having already been established. The food industry intends these substitutes to perpetuate a preference for a salty taste and reinforce a market-sustaining addiction. This could, as in the case with non-nutritive sweeteners which counter-intuitively promote the consumption of sweet food, encourage the increased use of discretionary salt in cooking and while eating thereby undermining the objective of the legislation.

If stepwise reductions as voluntary interim measures with binding commitments within the context of compulsory longer term targets are envisaged, the time frames in the draft regulations could possibly apply. They will however only really be effective if all the manufacturers within one food category agree on a strategy and carry it out simultaneously. Effectiveness will obviously be enhanced if producers and distributors of all food products to which salt is added participate as the population preference for salt could then be lowered.

6. LABELLING

Labels and displays play an important role in public awareness and empowerment. The following in the correct format should be added to the sections in the draft regulations:

- a message on the importance of a low salt intake as well as a warning on the implications of a high salt intake especially for children, the elderly, and those suffering from selected conditions should be printed in prescribed size and format on all labels, displays, and advertisements on all food products that contain added salt
- ii. the sodium content should not be placed with other nutrients in the nutrition information table on food labels but should appear separately in bold print and should

also reflect the sodium content as a percentage of the sodium RNI for both children and adults

- iii. a logo denoting no added salt or a low sodium content should be registered and its use should be mandatory on all labels and other displays where applicable
- iv. warnings and cautions on products with a high sodium content should be mandatory on all labels and in all displays and advertisements
- v. the contact details of the authorities and organisations that:
 - can advise and assist in menu and recipe reformulations
 - will attend to complaints and suspected offences
 - will receive and respond to comments and other input from the public should be mandatory on all labels and other displays.

7. CONTROL

This refers to the following for which provision should be made in the regulations:

- i. inspections of measurements, labels, displays, and advertisements
- ii. record keeping as per section 3 (3) of the draft regulations
- iii. monitoring and evaluation of food industry compliance
- iv. monitoring of population effect
- v. receipt and response to representations and complaints
- vi. enforcement mechanisms including prescribed penalties
- vii. pro-rata, volume-based tax on products with a sodium content higher than the level determined by the regulations

8. INSTITUTIONAL CATERING, FEEDING PROGRAMMES AND EMERGENCY SITUATIONS

The state should ensure that the provisions of the regulations are observed when food is:

- served, sold, handed-out, or otherwise provided to staff and in-mates, clients, beneficiaries, or others in or by institutions that are registered with, administered by, or form part of any state department or division including the SADF, prisons, schools, universities, colleges, other centres of training, hospitals, old-age homes, rehabilitation centres, welfare, and non-governmental organisations
- ii. served and sold in canteens and vending machines to staff in all state departments

- iii. donated to any institution as listed above (i) by commercial, industrial, nongovernmental organisations, and similar bodies and by individuals in any capacity
- iv. donated, sold cheaply, or otherwise provided to needy people and in emergencies

9. PUBLIC AWARENESS

Provision should be made in the regulations for the promotion, support, and facilitation of public participation in, acceptance of, and compliance with the objective of the regulations to achieve and maintain a low daily sodium intake. A determined and sincere attempt must be made to get public buy-in long before the regulations are formalised and published. The public's support in ensuring food industry's compliance with the regulations through their concerted action including boycotts is critical. Below are some suggestions on what can/should be done.

- i. The National Department of Health should
 - organise public consultations whenever changes to the regulations and reports are being drafted and on their completion, before formal publication
 - publish the results of measurements of sodium content of commercial products so that the sodium content in different products can be compared by consumers
 - operate communication centres, give practical advice on low salt menus and recipes, and promote, sponsor, and otherwise support media and other campaigns that inform people on the harmful effects of a high sodium intake and that encourage them to demand low salt products
 - organise and sponsor competitions such as school essays and innovative webbased displays with prizes and public "fun" events
 - operate a mailing list open to all interested parties as the European Food Standards Agency (EFSA) among others does
 - mandate that low and no salt versions of processed and prepared food be prominently placed at all sales outlets
 - mandate that low and no salt versions of processed and prepared food be available as the default option
- all state departments of education and places of training in health and related disciplines should incorporate in their teaching and training programmes appropriate level modules on sodium and health

 all departments of health at all government levels should from time-to-time organise, support, or sponsor public meetings at which achievements and achievers of salt reduction and low sodium targets will be made public, applauded, and duly awarded

Existing legislation on food labelling and claims should be used competitively and proactively to support and advocate reduced or low sodium content – see also labelling above

10. INCENTIVES AND SUBSIDIES

- i. Food manufacturers and distributors should be permitted to display certificates and awards for commitment to and achievement of recommended sodium targets
- ii. SMEs, craft and niche food producers and caterers could be subsidised to produce and market low salt products or reformulate existing products as the case may be

11. GUIDELINES

Guidelines applicable to the regulations should be regularly up-dated and published in the Government Gazette. They should be readily accessible for comment and use and contain binding directives with prescribed penalties for their dereliction or infringement. The following are examples of matters that could be regulated in the guidelines:

- i. sampling, analytic, and laboratory methods for estimating and verifying sodium content in food and consumption
- the sodium level below which the use of the logo denoting "low sodium" will be permitted, as well as the appearance and format of the logo denoting no added sodium and low sodium content
- iii. relative and total sodium levels for which a health or a nutrition claim can be made on any display or audio message to denote respectively a reduced or low sodium content, as well as the wording and format of the claim
- iv. total sodium levels for which a mandatory warning or caution should be displayed with special reference to the risks to children and people suffering from conditions associated with a high sodium intake
- v. list of products that are not permitted to contain added salt
- vi. list of compounds and their maximum permissible concentration that can be used as salt substitutes and the format of their mandatory display

12. EXEMPTIONS AND EXTENSIONS

Provision could but probably should not be made for ad hoc exemptions of donations of selected food products to institutions and in emergency situations.

13. COMMENCEMENT

The commencement dates depend on the list of food products to be regulated and whether or not there will be regulated interim sodium targets. The guidelines should be published simultaneously with promulgation and should come into force with immediate effect while actions to promote public awareness should commence even before promulgation.

Nothing in the foregoing should however prevent any action in the spirit of the draft regulations from being undertaken before or on promulgation.

14. REFERENCES

¹ Bertram MY et al. Reducing the sodium content of high-salt foods: Effect on cardiovascular disease in South Africa. S Afr Med J 2012;102(9):743-745

² www.effieschultz.com/files/pdf/2004 SAHS diet action.pdf

³ Caprio S. Editorial: Calories from Soft Drinks – do they matter? and Clinical Decisions -Regulation of Sugar-Sweetened Beverages. Both are at <u>www.NEJM.org</u> 21 Sept 2012

Definition of fibre and discussion in <u>www.effieschultz.com/files/pdf/2011 dietary fibre.pdf</u> and <u>www.effieschultz.com/files/pdf/2011 fibre slides.pdf</u>

⁵ The article by Bertram et al in reference 2 was indirectly funded by the food industry

⁶ Igumbor EU et al. "Big Food," the Consumer Food Environment, Health, and the Policy Response in South Africa. PLoS Med. 2012 July; 9(7): e1001253