

**WHO/PAHO REGIONAL EXPERT GROUP  
FOR CARDIOVASCULAR DISEASE PREVENTION  
THROUGH  
POPULATION-WIDE DIETARY SALT REDUCTION**

Review of Achievements  
2009-2011

Norm Campbell

# Cardiovascular disease, hypertension and salt consumption in the America's

- Cardiovascular disease is a leading cause of death and disability in the America's
- Stroke, the major adverse marker of increased blood pressure is particularly high in the Caribbean, Latin America and Brazil
- Where surveyed, hypertension is present in 24-35% of adults in Latin America and is attributed to 13% of premature deaths regionally
- High dietary salt is attributed to almost 1/3 rd of hypertension and where assessed is high in the PAHO region

## Dietary salt and health

- Hypertension (short term reversible effects, irreversibility, aging and in utero effects)
- Direct (non BP related) vascular and cardiac damage
- Kidney stones
- Gastric Cancer
- Obesity and related diseases (e.g. diabetes)
- Osteoporosis

## The Regional Expert Group

- Two year mandate Sept 2009- Oct 2011
- To develop recommendations and resources to aid policy development and actions
- Consistent with WHO's three pillars for successful dietary salt reduction:
  - product reformulation; consumer awareness and education campaigns; and environmental changes to make healthy choices the easiest and most affordable options for all people.



# Sub-groups

**Executive:** Norm Campbell, Francesco Cappuccio, Beatriz Champagne, Ricardo Uauy, Omar Dary, Rainford Wilks, Ana Beatriz Pinto de Almeida Vasconcellos, Patricia Jaime, Branka Legetic, Barbara Legowski

**Surveillance:** Francesco Cappuccio (lead), Adriana Blanco, Dan Chisholm, Ricardo Correa-Rotter, Mary L'Abbé, Branka Legetic, Barbara Legowski, Norm Campbell, Daniel Ferrante (Ministry of Health, Argentina), Eduardo Nilson (Ministry of Health, Brazil), Anselm Hennis (University of West Indies, Barbados), Rainford Wilks

**Advocacy:** Beatriz Champagne (lead), Hubert Linders, Branka Legetic, Norm Campbell, Trevor Hassel (Healthy Caribbean Coalition, Barbados)

**Liaison with Industry:** Ricardo Uauy (lead), Mary L'Abbé, Sonia Angell, Darwin Labarthe, Branka Legetic, Barbara Legowski, Norm Campbell, Eduardo Nilson (Ministry of Health, Brazil), Patricia Jaime (Ministry of Health, Brazil), Daniel Ferrante (Ministry of Health, Argentina), Simón Barquera, Tito Pizarro, Marcelo Tavella

**Salt Fortification:** Omar Dary (lead), Rubén Grajeda, Mary L'Abbé, Branka Legetic, Barbara Legowski, Norm Campbell, Marcelo Tavella, Ana Beatriz Vasconcellos

**Economic Analysis:** Norm Campbell (lead), Dan Chisholm, Daniel Ferrante (Ministry of Health, Argentina), Branka Legetic, Barbara Legowski, Kirsten Bibbins-Domingo (University of California, San Francisco) Darwin Labarthe

**Ad Hoc Scientific Review Sub-committee:** Norm Campbell (lead), Francesco Cappuccio, Ricardo Correa-Rotter, Bruce Neal (George Institute for Global Health, Australia)

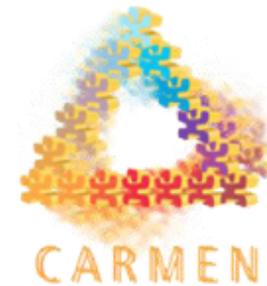
**Secretariat:** Branka Legetic, Barbara Legowski, Norm Campbell, Caitlin Molsbury, Katie Riuli,

# Achievements of the Expert Group



## Policy Statement:

### Preventing Cardiovascular Disease in the Americas by Reducing Dietary Salt Intake Population-Wide



The PAHO/WHO Regional Expert Group on Cardiovascular Disease Prevention through Dietary Salt Reduction has produced this policy statement. It has the rationale and recommendations for a population-based approach to reduce dietary salt intake among all people in the Americas, be they adults or children.

#### Policy Goal

A gradual and sustained drop in dietary salt intake to reach national targets or in their absence, the internationally recommended target of less than 5g/day/person by 2020.

#### Audience

Policy and decision makers in government, leaders in non-governmental organizations (representing consumers, health, scientific and health care professionals), civil society, the food industry (including food processors and distributors), among food importers and exporters, and in PAHO.

## Policy Statement

Goal: A gradual and sustained drop in dietary salt intake to reach national targets or in their absence the internationally recommended target of less than 5g/day/person by 2020.

### Recommendations:

To National governments	To non-governmental organizations	To the food industry
<ul style="list-style-type: none"> <li>✚ Seek a multi-sectoral endorsement of the Policy Statement</li> <li>✚ Develop sustainable, funded, scientifically based salt reduction programs that are integrated into existing food, nutrition, health, and education programs.</li> <li>✚ Initiate collaboration with domestic food industries</li> <li>✚ Regulate food industry to match the lowest salt content in the specific food category</li> <li>✚ Development of surveillance system that monitors population salt intake</li> <li>✚ Review national salt fortification policies and recommendations</li> </ul>	<ul style="list-style-type: none"> <li>✚ Endorse this policy statement</li> <li>✚ Educate memberships on the health risks of high dietary salt and how to reduce salt intake.</li> <li>✚ Promote and advocate media releases on dietary salt reduction</li> <li>✚ Broadly disseminate relevant literature.</li> <li>✚ Educate policy and decision makers on the health benefits of lowering blood pressure among normotensive and hypertensive people, regardless of age.</li> <li>✚ Promote coalition building, increase organizational capacity for advocacy and develop advocacy tools to promote civil society actions.</li> </ul>	<ul style="list-style-type: none"> <li>✚ Endorse this policy statement.</li> <li>✚ Make current best in class and best in world low salt products and practices. Provide salt substitutes readily available at affordable prices.</li> <li>✚ Commit to gradual and sustained reduction in the salt content of all existing salt-containing food products, restaurant and ready-made meals</li> <li>✚ Use standardized, clear and easy-to-understand food labels that include information on salt content.</li> <li>✚ Promote the health benefits of low salt diets to all peoples of the Americas.</li> </ul>

# *Strategies to monitor and evaluate population sodium consumption and sources of sodium in the diet*

Report of a joint technical meeting convened by WHO and the Government of Canada. Canada, October 2010



## Advocacy

- Draft communications plan
- Website ([www.paho.org/cncd\\_cvd/salt](http://www.paho.org/cncd_cvd/salt))
- Development of culturally adapted standardized fact sheets for decision makers, for health care professionals and for the public
- Development of a standardized educational slide set
- Development of core references on dietary salt relevant for the Americas
- World Hypertension Day; Salt Awareness week
- *The Healthy Caribbean Coalition has developed culturally tailored material*
- *Heart Federation of Jamaica promoted “Drop the Salt – Protect Your Health” as the theme for Salt Awareness Week in 2011*

## *Creating an enabling environment for population-based salt reduction strategies*

Report of a joint technical meeting held by WHO and the Food Standards Agency, United Kingdom, July 2010



# Food Industry Engagement

**World Economic Forum on Latin America**  
Rio de Janeiro, Brazil 27-29 April 2011



## **Dietary Sodium/Salt Reduction in the Americas 2011 Statement of Rio de Janeiro**

We, representatives of public health authorities, the commercial food industry and civil society, participants at the Pan American Health Organization and World Economic Forum private session on Creating Healthier Environments and Lifestyles in the city of Rio de Janeiro, Brazil on 27 April 2011

## **AND**

- Taking into account that the internationally recommended level of dietary salt intake is less than 5 g salt (2,000 mg sodium)/day/person and that the Pan American Expert Group for Dietary Salt Reduction is advocating 2020 as the target date for countries in the Americas to reach the recommended intake or national targets where they exist

**Express the following:**

# Country-specific targets and timelines

Argentina

Brazil

Canada

Chile

Mexico

USA

# Synchronizing salt iodization and salt reduction programs

- Development of a protocol and statement on assessment of dietary iodine intake (visa vi

**Improving Public Health in the Americas  
by Optimizing Sodium and Iodine Intakes – A Meeting Summary**

WHO/PAHO Regional Expert Group  
for Cardiovascular Disease Prevention  
through Population-wide Dietary Salt Reduction

- Grant proposal to pilot programs to Synchronizing salt iodization and salt reduction programs

# Economic studies on the cost effectiveness and cost savings from population level dietary salt reduction

- **Reviews health economic models that could assess the impact of reducing dietary salt on health**
- **Extended CHD model and the WHO Choice model selected.**
- **Two grants submitted** (A Memorandum of Understanding between University of California in San Francisco and PAHO (Andrew Moran, Kirsten Bibbins-Domingo))
- **Preliminary analysis of the regional impact of reducing dietary salt**

A 5% reduction in dietary salt per year in 10 years was estimated to prevent 400,000 premature CVD events and 20,000 deaths in Latin countries

## *Ad Hoc Scientific Review Sub-committee*

In response to requests from countries in the PAHO region (June 2011) to critically appraise new evidence that was being heavily promoted in the lay press a rapid review ad hoc scientific review sub committee was developed, reviewed new evidence and rapidly reported and published its finding.

Campbell N, Correa-Rotter R, Neal B, Cappuccio F. New evidence relating to the health impact of reducing salt intake Statement from an 'ad hoc' Scientific Review Subcommittee of the PAHO/WHO Regional Expert Group on Cardiovascular Disease Prevention through Dietary Salt Reduction. Nutrition, Metabolism & Cardiovascular Diseases

# Countries in PAHO region that have Sodium Reduction Activities

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## Reducing Salt Intake in the Americas: Pan American Health Organization Actions

- United States
- Uruguay
- Ecuador and Paraguay have plans in development

# Product development

## ***Policy Statement:***

Regional Expert Group

## ***Protocol for Population Level Sodium Determination in 24-hour Urine Samples:***

Francesco Cappuccio, Simón Barquera, Ricardo Correa Rotter, Omar Dary, Rainford Wilks, Daniel Ferrante (Ministry of Health, Argentina), Branka Legetic, Barbara Legowski, Norm Campbell, Roxana Buscaglione (Ministry of Health, Chile), Anselm Hennis (University of West Indies, Barbados) with the support of the National Institute of Public Health and the Salvador Zubiran National Institute of Medical Sciences and Nutrition in Mexico

## ***Review of Methods to Determine the Main Sources of Salt in the Diet:***

Mary L'Abbé, Adriana Blanco Metzler, Francesco Cappuccio, Omar Dary, Daniel Ferrante, Christina Howitt (University of West Indies, Barbados), Charmaine Kuran (Food Directorate, Health Canada), Branka Legetic, Barbara Legowski, Norm Campbell, Rafael Moreira Claro (University of São Paulo, Brazil), Renata Levy (University of São Paulo, Brazil), Ana Beatriz Vasconcellos, Eduardo Nilson, Rosangela Pereira (University of Rio de Janeiro, Brazil), Rosely Sichieri (University of Rio de Janeiro, Brazil) with the support of the Ministry of Health, Brazil

## ***Improving Public Health by Optimizing Sodium and Iodine Intake:***

Omar Dary, Rubén Grajeda, Mary L'Abbé, Lucie Bohac (Iodine Network, Ottawa, Canada), Kimberly Harding (Micronutrient Initiative, Ottawa, Canada), Malia Boggs (USAID, Washington, DC), Eduardo Pretell (Universidad Peruana Cayetano Heredia), Francesco Cappuccio, Branka Legetic, Barbara Legowski, Norm Campbell, Lynnette Neufeld (Micronutrient Initiative, Ottawa, Canada), Darwin Labarthe, Kevin Sullivan (CDC and Emory University, Atlanta, Georgia), Christine Swanson (National Institutes of Health, Bethesda, Maryland), Kathleen Caldwell (CDC, Atlanta, Georgia), Mary Cogswell (CDC, Atlanta, Georgia), Catherine (Cay) Loria (National Heart, Lung, and Blood Institute, Bethesda, Maryland), Jessica Tilahun (USAID, Washington, DC), Michael Zimmermann (Swiss Federal Institute of Technology, Zürich), Arun Chockalingam (National Heart, Lung, and Blood Institute, Bethesda, Maryland), Godfrey Xuereb, James Hospedales (PAHO, Washington DC)

## ***PAHO/WEF 2011 Statement of Rio de Janeiro:***

Fabio Acerbi (Kraft Foods, Brazil), Marisol Carvallo (Ministry of Health, Chile), Marco Antonio Castro (Ministry of Health, Costa Rica), Eliana Coria (Ministry of Health, Argentina), Daniel Ferrante (Ministry of Health, Argentina), Marisol Figueroa (Chile Alimentos, AG, Chile), Cecilia Gamboa (Ministry of Health, Brazil), Enrique Gill (PAHO, Brazil), Donna Hrinak (PepsiCo Inc., USA), Patricia Jaime, Edmundo Klotz (Associação Brasileira das Indústrias da Alimentação (ABIA), Brazil), Branka Legetic, Barbara Legowski, Norm Campbell, Otaliba Libano Morais (Ministry of Health, Brazil), Hubert Linders, Juliana Marra (Unilever, Netherlands), Eduardo Nilson (Ministry of Health, Brazil), Amanda Poldi (Associação Brasileira das Indústrias da Alimentação (ABIA), Brazil), Marcos Pupin (Nestlé Brasil Ltda, Brazil), Denise Resende (National Health Surveillance Agency (Anvisa), Brazil), Celia Suzuki (Nestlé Brasil Ltda, Brazil)

## ***Final Report of the WHO/PAHO Regional Expert Group for Cardiovascular Disease Prevention through Population-Wide Dietary Salt Reduction***

Regional Expert Group

## ***Improving Public Health in the Americas by Optimizing Sodium and Iodine Intakes – A Meeting Summary***

Omar Dary, Lucie M. Bohac, Kimberly Harding, Malia Boggs, Norm Campbell, Michael B. Zimmermann, Franco Cappuccio, Mary L'Abbe, Barbara Legowski, Eduardo Pretell, Arun Chockalingam, James Hospedales, Lynnette Neufeld, Godfrey Xuereb, Darwin Labarthe, Kevin Sullivan, Branka Legetic, Christine Swanson, Ruben Grajeda, Kathleen L. Caldwell, Mary E. Cogswell, Catherine Loria, Jessica Tilahun,

## Abbreviated Key Messages from Final Report

- **Salt intake exceeding biologically adequate levels has a causal and direct relationship with greater-than-optimum levels of blood pressure.**
- Countries should
  - launch national initiatives to reduce the overconsumption of salt adopting at least the internationally recommended target of less than 2000 mg sodium or 5 g salt from all sources per person per day by 2020.
  - use the most reliable and valid methods feasible to determine a baseline of population level salt intake and of the main sources of salt in the national diet
  - take advantage of health economic analysis to demonstrate the disease burden of high salt diets and the benefits to population health and economic development of reducing the overconsumption of salt.

# Abbreviated Key Messages from Final Report

- include broad public awareness and education campaigns
- wherever relevant set targets and timelines for reducing salt content of processed foods.
- establish systems to objectively and transparently monitor food industry progress against the targets and timelines
- as dietary salt is reduced routinely monitor population level iodine intake and appropriately adjust iodine levels in salt

# Appreciation

- To all members of the expert group and other technical experts of the subgroups
- Branka Legetic
- Barbara Legowski
- James Hospedales

# Cardiovascular disease in Latin America

Age adjusted mortality (per 100,000, 2003-2005)	Cerebrovascular disease	Ischeamic heart disease
<b>Region</b>		
Américas	42.3	81.0
North America	30.7	93.9
Latin America and the Caribbean	54.3	65.5
<b>Sub-Regional</b>		
América Latina	54.1	65.2
México	34.5	66.2
Istmo Centroamericano	39.6	59.1
Caribe Latino	69.1	82.1
Área Andina		73.1
Brasil	70.9	67.4
Cono Sur	48.6	44.6
Caribe No-Latino	86.0	108.7

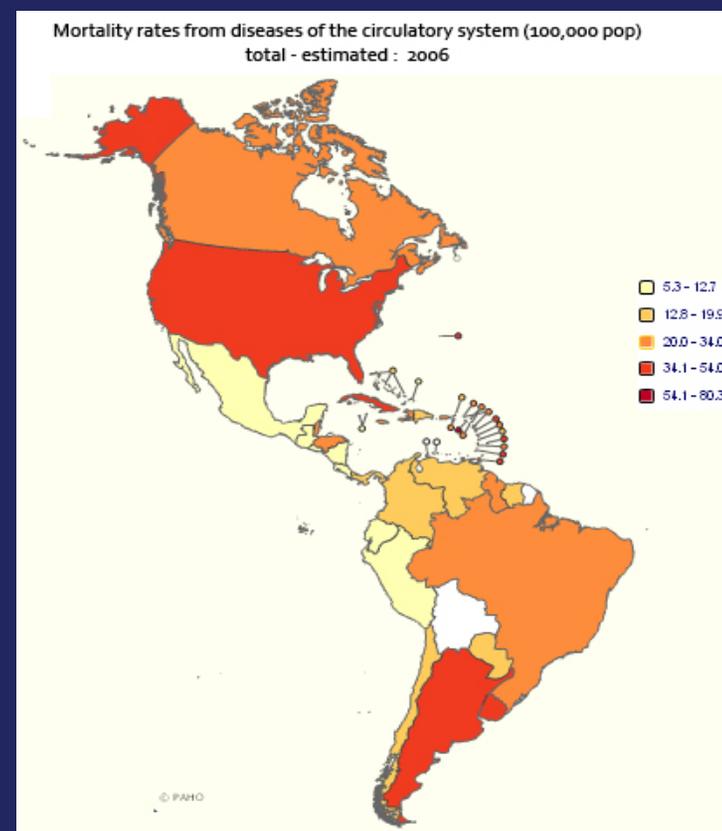


Figura 2: Tasas de mortalidad por enfermedades del sistema circulatorio en el 2006 (por 100.000 hab)

13% of deaths and 5% of disability attributed to increased blood pressure in Latin America and the Caribbean

# Hypertension in Latin America



Ramiro A. Sanchez

# Salt intake in the Americas

Country	Year(s)	Sample Size	NaCl g/day
Argentina	'03	1526 inhabitants of Rauch aged 15-75	Men 9.03 Women 6.97
Barbados	'91-'94	813	6.78 +/- 3.15
Brazil	'99-'04	Men 764	12.59 +/- 6.82
		Women 899	10.94 +/- 6.70
Canada	'90-'99	18214	7.98 +/- 13.80
Jamaica	'94-'95	1257	8.45 +/- 6.62
Panama		50	12.35 +/- 9.15
St. Lucia	'91-'94	1089	8.58 +/- 3.68
USA	'96-'98	Men 1103	10.75 +/- 3.67
		Women 1092	8.37 +/- 2.84
Venezuela		High altitude 77	5.32
		Low altitude 33	3.76

# Terms of Reference

To serve the region and sub-regions as follows:

- Estimate the impact on hypertension and cardiovascular disease prevalence of a successful program to reduce salt consumption in the Americas
- Initiate regional contacts with industry
- Identify advocates in the region
- Connect main players in the region
  - Prepare a Policy Statement on salt reduction to be signed by key players in the region
- Develop common resources
  - Sets of common messages to raise awareness among consumers and healthcare professionals
  - Guidance for surveillance and monitoring
- Provide guidance and support directly to governments (eg national task forces, national awareness raising campaigns, national target setting, etc)
  - Support establishment of national task forces
  - Support national efforts to build awareness in governments and the general population in countries regarding salt reduction
  - Identify necessary technical expertise for development of country targets and timelines setting