Death by Food
The need for public policy on food additives

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Disclosure

Dr. Campbell

– Received travel support to present Canadian Hypertension Prevention and Control Programs in Yaroslavl and Moscow from Novartis (Russia) 2012.
– No other commercial interests within the last 2 years.
Hypertension; Death by Food

1) To learn the health impact of increased blood pressure.

2) To learn that current care gaps in prevention and control of hypertension require public health approaches as well as clinical.

3) To learn what you can do as a physician to integrate public health advocacy into your day to day life.
Expanded Chronic Care Model: Integrating Population Health Promotion

The Chronicles Adipose Canuck, a case study

- Adipose Canuck is a 56 yr old Canadian who is concerned about their health (but considers themselves healthy),
  - Claims to eat a healthy diet and tries but finds it challenging to be physically active.
  - Over weight (BMI 28.5, waist circumference (132 cm)).
  - Recently diagnosed with hypertension (152/94 mmHg) when they presented with ‘atypical chest pain’. Chest pain believed to be related to work stress.
  - Two children age 21 and 24.
  - Self and spouse have full time careers
Reflective questions about the Chronicles Adipose Canuck

• Do you eat a healthy diet?
  • If no, is it because you don’t want to eat healthy or what is it that makes it hard to eat healthy?
• Is it likely Adipose Canuck eats a healthy diet?
• List 10 likely adverse nutrition issues for Adipose Canuck that it is very likely Adipose Canuck is unaware of?
• Why might Adipose Canuck think they eat healthy but don’t?
• Given Adipose Canuck’s profile are you surprised about the hypertension diagnosis?
Reflective questions about the Chronicles Adipose Canuck

- Apart from hypertension what is the likelihood Adipose Canuck has other CVS risks?
- What are the health risks that the typical Canadian diet poses?
- Can Adipose Canuck be ‘cured’ by diet?
- Should internists do anything about unhealthy eating?
- What could internists do about healthy eating?
Global Leading Risks for Death

Figure 2: Burden of disease attributable to 20 leading risk factors in 2010, expressed as a percentage of global disability-adjusted life-years. For men (A), women (B), and both sexes (C).
Global Leading Risk factors for Death

Systolic blood pressure greater than 115 mmHg

The Burden of Hypertension
Blood Pressure and Risk of Stroke Mortality

Lancet 2002;360: 1903-13
The Burden of Hypertension
Global cost estimates of increased blood pressure

• Direct health care costs approximately 10% of overall health costs.
• Indirect costs are estimated to be 4.5 to 15% of GDP in high income countries.
• Direct costs of hypertension in USA similar to stroke, acute myocardial infarction and other ischemic heart disease combined.

Heidenreich PA et al Circulation 2011;123:933-944
Gaziano TA et al, J Hyperten 2009;27:1472;-77
## Attributable Risk of Lifestyle to Hypertension

<table>
<thead>
<tr>
<th>Risk factor</th>
<th>Approximate attributable risk for hypertension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased salt in diet</td>
<td>32%</td>
</tr>
<tr>
<td>Decreased potassium in diet</td>
<td>17%</td>
</tr>
<tr>
<td>Overweight</td>
<td>32%</td>
</tr>
<tr>
<td>Sedentary lifestyle</td>
<td>17%</td>
</tr>
<tr>
<td>Excess alcohol</td>
<td>3%</td>
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</tbody>
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BP is well known to rise with age in modern industrialized societies. If people move from an area that does not have hypertension to an area that does, they develop hypertension.

Societies that eat unprocessed foods, are physically active and lean do not develop hypertension.

Meneton et al, 2005
• Reducing population DBP by 2 mmHg reduces CVD more than treating all people with DBP >95 mmHg with an antihypertensive drug.

• Reducing population SBP by 5 mmHg reduces death rates from stroke by 14%, CHD by 9% and total mortality by 7%.
The Chronicles Adipose Canuck

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The Chronicles Adipose Canuck

- Statistics Canada Surveys find very few Canadians have healthy diets.
- National surveys confirm most Canadians understand that Canadians eat unhealthy diets.
- However most Canadians claim they personally eat healthy diets.
  - The same is true for sodium intake – most know Canadians eat too much salt but 3 in 4 indicate they do not eat too much salt (surveys indicate nearly all are eating above recommendations).
- The vast majority of Canadians indicate they are trying to improve their diets.
- If you regularly eat processed foods it is very, very, very unlikely you have a healthy diet.
The Chronicles of Adipose Canuck

- Do you eat a healthy diet?
- Is it likely Adipose Canuck eats a health diet?
- **List 10 likely adverse nutrition issues for Adipose Canuck that it is very likely A Canuck is unaware of?**
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Canadian diets

1) Lack of fresh fruit.
2) Lack of vegetables.
3) Calorie excess.
4) Excess sodium.
5) Excess free sugars.
6) Excess saturated fats.
7) Excess trans fatty acids.
8) Lack of fibre.
9) Lack of potassium.
10) Lack of calcium.
11) Lack of vitamin D.
Global Leading Risks for Death

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The Chronicles Adipose Canuck

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Food awareness and labeling

• Very extensive decades long very extensive social marketing campaigns have normalized unhealthy eating patterns and foods.

• Surveys indicate widespread inability to accurately interpret the NFPs even in people who indicate they can read the label correctly.

• It is currently unclear if the NFP information is accurate or not.
Food awareness and labeling

• Front of package ‘health claims’ based on single nutrients can/do mislead consumers about whether the food is healthy or not.
  – Reduced in ‘_______’ claims may still be very high in ‘_______’ and contain other ingredients in vast excesses or deficiencies.

• There are over 30 front of package labels many relating to health but most could mislead a consumer whether the food is healthy or not.
Food awareness and labeling

- Restaurant food (fast or slow, cheap or expensive) is largely unhealthy and is rarely labeled.

- No current label clearly indicates relevant excesses and deficiencies and indicates the health issue. (e.g. This product is high in sodium. Diets high in sodium can cause hypertension and are associated with gastric cancer and other health risks.)

- If you eat a ‘balanced’ diet of fresh (or frozen) unprocessed fruit and vegetables with fresh (or frozen) low fat meat or fish then you likely eat a healthy diet.
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Life time risk of Hypertension in Normotensive Women and Men aged 55-65 years

JAMA 2002: Framingham data.
• 33% of Canadians aged 50-60 have been diagnosed with hypertension.
• Most overweight people with high normal blood pressure (130-139/85-89 mmHg) will develop hypertension within 4 years and almost 1/2 within 2 years.
• Annual follow-up of patients with high normal blood pressure is recommended.
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• Over 90% of adult Canadians with hypertension have other CVD risk factors.
• 70% of adult Canadians have CVD risk factors.
• In contrast to marked improvements in hypertension management, there has not been parallel improvements in the overall risk CVD management (esp. dyslipidemia and diabetes) of adult Canadians with or without hypertension.
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**What are the health risks that the typical Canadian diet poses?**

- Can Adipose Canuck be ‘cured’ by diet?
- Should internists do anything about unhealthy eating?
- What could internists do about healthy eating?
Health risks of current diets

- 40% of deaths due to NCD attributed to diet (89% of deaths in Canada are NCD).
- Up to 1/4 of Cancers attributed to diet.
- Obesity epidemic- completely explained by increases in caloric intake.
- Hypertension 80% explained by unhealthy diets.
- Attributable risk of diet to heart disease, stroke, heart failure, kidney disease, diabetes and dyslipidemia not currently published.
Health risks of current diets

• Based solely on societal trends in caloric consumption and obesity, the next generation is predicted to live a shorter life.
  – Life long exposure to more effective and intensive social marketing.
  – Life long exposure to unhealthy eating.
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• Multiple RCTs indicate dietary change can lower BP in those with normal or high blood pressure and can prevent or control hypertension (but are rarely adhered to).
• DASH trial was highly effective- provided food.
• TOPH and other trials were based on extensive nutritional advice and support and were effective but less so than DASH and adherence diminished with time.
• Brief clinician advice is effective for other interventions but the vast majority fail to change.
• Interdisciplinary health care team approaches are more effective than single providers.
• The relative lack of efficacy of clinical approaches indicate a need for policy-environmental interventions.
• We need to stop blaming all Canadians for making poor choices in an environment that makes it very difficult to make a healthy choice.

• Philosophy: Is an effective dietary intervention a treatment or cure?
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Straw pole

The CanMEDS Framework Advocacy is one of 7 core competencies
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What could internists do about healthy eating?

• 1) Advocacy as an individual
  – Be a role model.
  – Teach the importance of healthy and unhealthy eating to colleagues and patients.
  – Join efforts to support dietary change.
  – Advocate to politicians; help create the political will.
  – 3 bills before parliament- ‘physical activity day’, sodium regulations, restrictions on marketing to children== support them
What could internists do about healthy eating?

• Advocacy as organizations
  – Policies.
    • E.g. healthy food procurement.
  – Publications.
  – Presentations.
  – Politicians.
Is the public supportive?

• The majority of Canadians want government to introduce polices and or regulations to make food healthier (e.g. Health Canada commissioned survey found 82% want warning labels on high sodium foods, 67% wanted it to be mandatory and 70% view it as extremely or very important; 68% want a regulatory approach to how much sodium can be added to foods by food processors- in contrast 38% voted for the current government).
So why isn’t something being done

‘Lunacy is doing the same thing over and over and looking for a different result’ Albert Einstein.

Current governmental policy interventions remains focussed
- at the level of the individual and the responsibility on individual behavior change
- on industry volunteerism
have been shown over and over and over again to fail

Governments claim health is a top priority and that they are taking appropriate actions but largely are doing the same ineffectual interventions over and over and over again.
So why isn’t something being done

The bulk of external advice on the health policy relating to foods received by Health Canada comes directly from the food industry and individuals with financial ties to the food industry.

The interventions shown to work or highly likely to work are not being implemented or under serious consideration in Canada - all require substantive Federal and or Provincial government oversight and or regulation.
Some policy interventions

• Setting targets and timelines for sodium, saturated and trans fatty acids, and free sugars content of all processed foods with close government monitoring and oversight.

• Implementing healthy food procurement policies.

• Implementing clear transparent conflict of interest guidelines to ensure public health food policies reflects public health interests and are free of commercial bias.

• Banning advertising (of unhealthy foods) to children.
Some policy interventions

• Mandated clear easy to understand food package labeling with health implications.

• Taxing foods that have added sodium, saturated and trans fatty acids, and free sugars to recuperate health and other societal costs.

• Reducing the cost and increasing the availability of healthy food.

• Defining ‘unhealthy’ foods.

• Monitoring and evaluation of the health of our food environment.
“Nothing is impossible if you have the strength, determination, and perseverance to make someone else do the hard part!”
Healthy food policies

• Top priority for Hypertension Prevention and Control
  – HSFC CIHR Chair in Hypertension Prevention and Control.
  – Hypertension Advisory Committee (Canadian Cardiovascular Society, Canadian Council of Cardiovascular Nurses, Canadian Institute for Health Research-Institute of Circulatory and Respiratory Health (ex officio), Canadian Medical Association, Canadian Pharmacists Association, Canadian Society of Internal Medicine, Canadian Society of Nephrology, Canadian Stroke Network, College of Family Physicians of Canada, Heart and Stroke Foundation of Canada, Hypertension Canada, Public Health Physicians of Canada).
Misleading the public and politicians

• "Our research finds that most Canadians have little faith that regulating the sodium content of food will lead to healthy outcomes. Food is one area where a majority of Canadians can agree: they want government out of their kitchens and not spending their tax dollars on costly regulations."

• - David Coletto, CEO Abacus Data and pollster
In the debate about sodium, fat, and calories in food, there are many opinions. Which of the following two statements comes closest to your view about the role of the federal government in regulating food in Canada?

Choose between

- Every time the government tries to regulate people’s choices it ends up costing taxpayers a lot of money and it only makes things worse. People are able to make food choices for themselves.
- Government regulations and guidelines protect people like me and make it easier for me to make better choices about the food I eat.

The regulation in question relates to warning labels on food. There has never been a regulation suggested that affects food choice.

60: 40 vote split
• I’m tired of the government telling me what to do and how to live my life. I can make my own choices.

• Government regulations and guidelines protect people like me and make it easier for me to make better choices about the food I eat.

54: 46 split
None of the questions relate to kitchens
None of the proposed regulations relate to choice or even to sodium content except with regard to warning labels
Some resources


The Canadian heart health strategy and action plan. Can J Cardiol 2009; 25(8):451-452


