

Prevention: the Gap between What We Know and What We Do



Cancer Care
at a Crossroads
Conference

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Te Papa, Wellington, New Zealand

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Cancer Care at a Crossroads

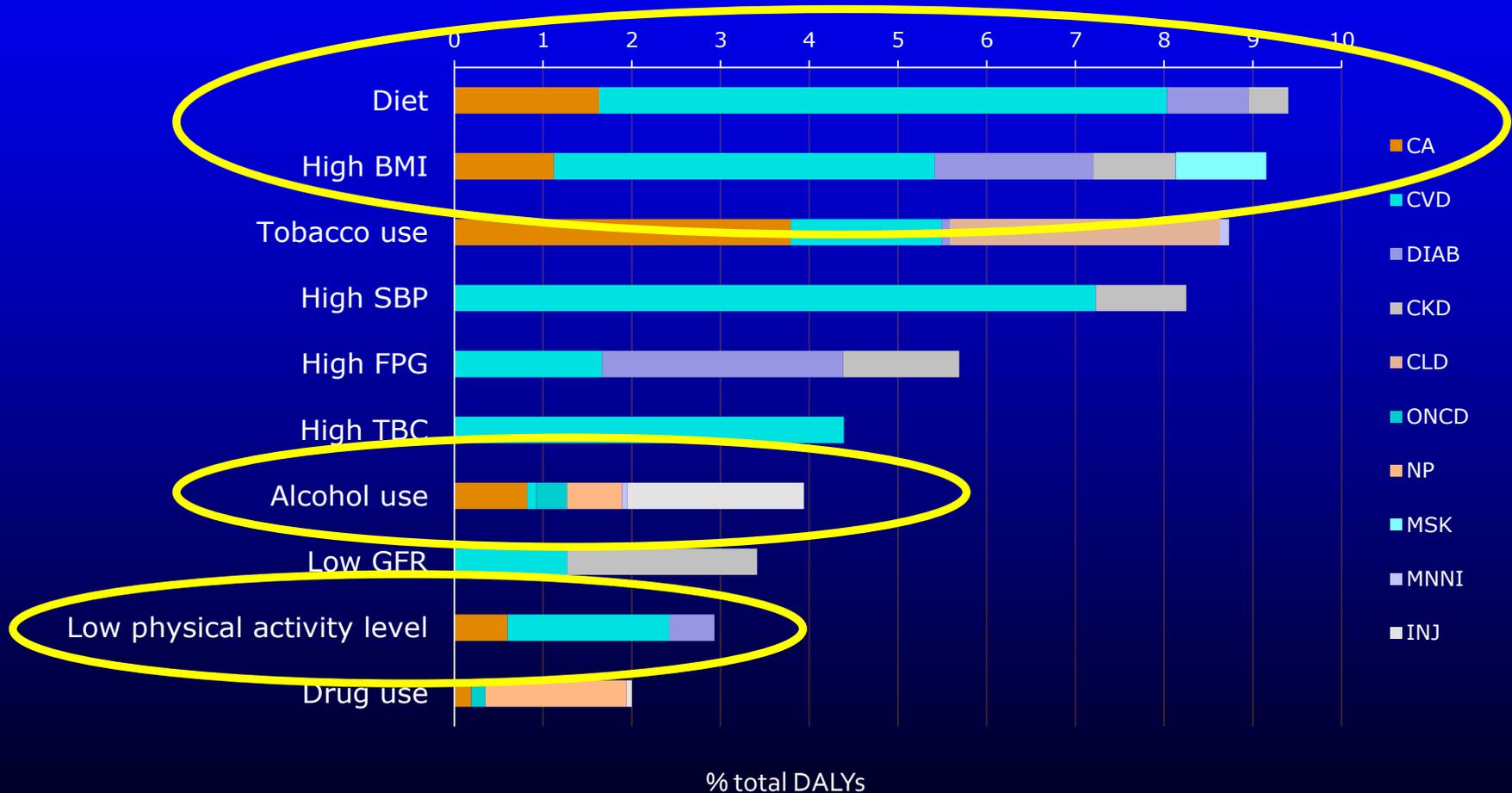
Te Papa, Wellington, Thursday, 31st January, 2019

Loss of Healthy Years in New Zealand

What Causes Loss of Healthy Years in New Zealand?

Neurologic, psychiatric, cardiovascular, digestive, and musculoskeletal diseases and cancer account for almost 2/3 of all health loss in New Zealand

What Causes Loss of Healthy Years (NZ 2013)?



Diet and Human Health

- **The majority of human cancers and other chronic diseases are influenced by:**
 - **food and drink**
 - **exercise patterns**
 - **body weight**
 - **smoking**
 - **work and workplaces**

Diet and Human Health

- **Some of these habits and exposures are, in turn, influenced by:**
 - **culture**
 - **family**
 - **our times**
- **They are also shaped strongly by what foods and drinks are produced, advertised, and sold**

Diet and Human Health

- **Some people make conscious choices about these matters**
- **Very often, though, we do not examine our habits and just take them for granted**

Diet and Human Health

- Perhaps we imagine that the way we eat, drink, and live now is the way we always have
- But is that true?

Rare in Nature

- **Sugar**
- **Salt**
- **Fat**
- **Meat**
- **Alcohol**
- **Tobacco**
- **Poppies**
- **Coca**
- **Cannabis**
- **Coffee/Tea**

We have a taste for them all – and, because they are rare in nature, there were no deleterious consequences to consumption, even sporadic overconsumption

Hence, we have not evolved natural curbs on their overconsumption

Rare in Nature

- **Our response to their rarity – once we had established that we did not just have to gather and hunt – was to cultivate them to keep ourselves in calories and comfort**
- **Our commitment to this approach has led us – especially recently – to more and more intensity in the way we raise our food (and drugs)**

Rare in Nature

Focus on 3:

- **Sugar**
- **Meat**
- **Alcohol**

And refer to one other

- **Tobacco**

Rare in Nature

Throughout human history, we raised and consumed modest amounts of these, *e.g.*:

- **Meat consumption** in traditional agricultural societies was rarely higher than **5–10 kg a year**; in most subsistence peasant societies of the Old World, meat was eaten no more frequently than once a week and relatively larger amounts were consumed, as roasts and stews, only during festive occasions.

Smil, V: Pop Devel Rev 2002;28:599

- Per capita **sugar consumption** in the UK around 1700 was **less than 2kg/year**

Mintz, S: *Sweetness and Power* 1986

Rare in Nature

- **Meat consumption** in New Zealand (also Australia and US) is now around **120 kg/year** (a 12- to 24-fold increase) [India around 3 kg]
- Per capita **sugar consumption** in NZ 2008/9 was around **40kg/year** (similarly, a 20-fold increase)

Rare in Nature

- **Indeed, our demand and our capacity increasingly stretch the boundaries of what is possible**
- **Deleterious consequences – to our planet and our health – abound**

Sugar

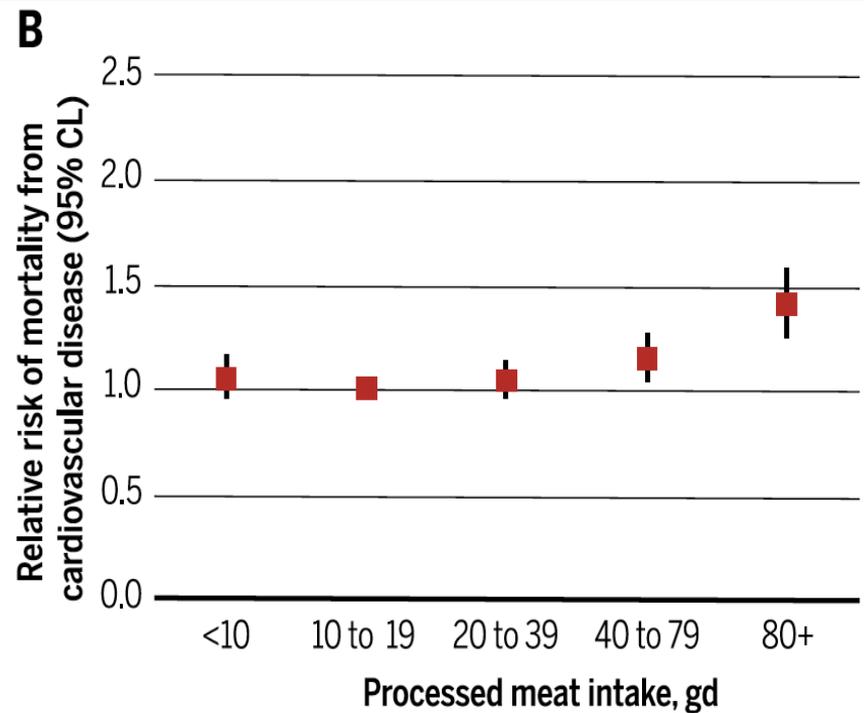
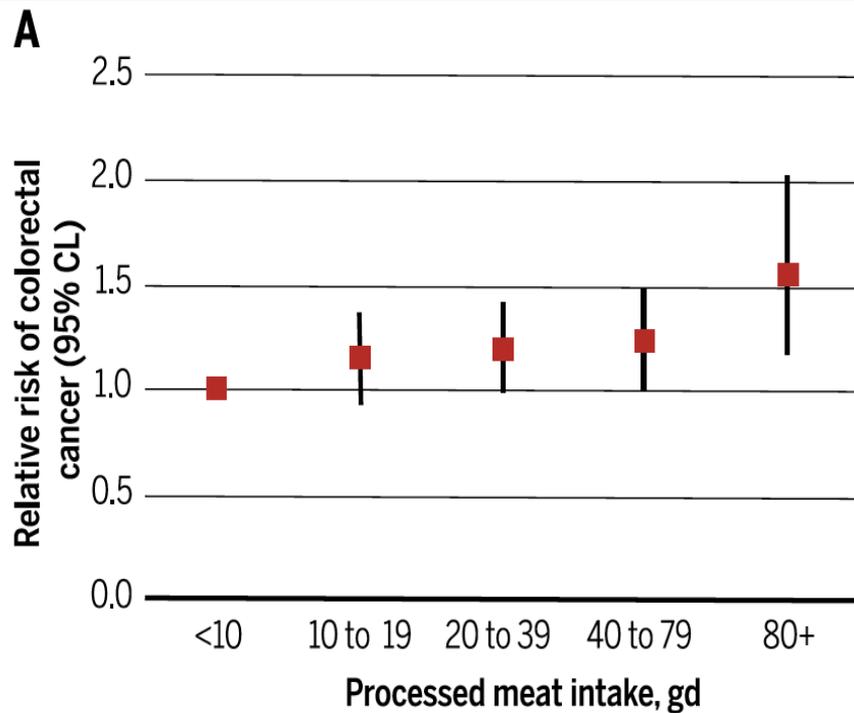
Sugar and Disease

Higher consumption of sugars and sugar-containing foods and beverages is associated with an increased risk of:

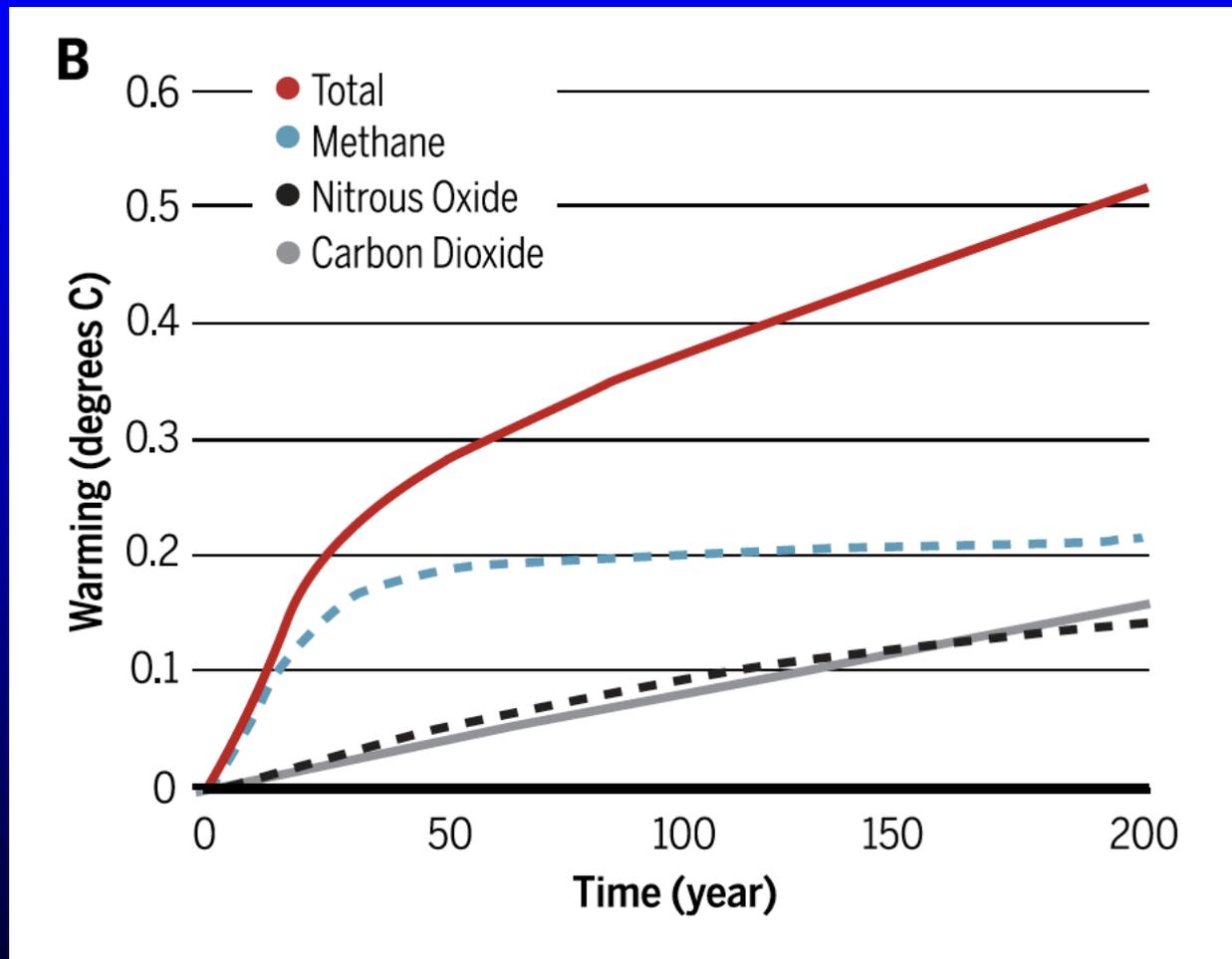
- **dental caries**
- **type 2 diabetes mellitus**
- **higher energy intake**
- **weight gain**
- **increases in body mass index**

Meat

Processed Meat and RR of Bowel Cancer & Death from Cardiovascular Disease



Livestock and Warming by Greenhouse Gases



Alcohol

Alcohol and Disease Burden

There is a causal impact of the average amount of alcohol consumed on:

- Tuberculosis
- Mouth, tongue, and throat cancer
- Oesophageal cancer
- Colon and rectal cancer
- Liver cancer
- Female breast cancer
- Diabetes
- Alcohol-use disorders

Alcohol and Disease Burden

As well as:

- Depression
- Epilepsy
- Heart disease
- Stroke
- Heart rhythm disorders
- Pneumonia
- Cirrhosis of the liver
- Preterm birth complications
- Fetal alcohol syndrome

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**EVEN THAT TURNS OUT
NOT TO BE TRUE!**

Alcohol and Disease Burden

- **Globally, alcohol was 7th leading risk factor for deaths and loss of healthy years in 2016:**
 - 2.2% of female deaths
 - 6.8% of male deaths
- **For those 15–49 years, alcohol use was the leading risk factor:**
 - 3.8% of female deaths
 - 12.2% of male deaths
- **For those 15–49 years, the 3 leading causes of attributable deaths:**
 - tuberculosis (1.4% of total deaths)
 - road injuries (1.2%)
 - self-harm (1.1%)

Alcohol and Disease Burden

- For those aged ≥ 50 years, cancers accounted for a large proportion of total alcohol-attributable deaths in 2016:
 - 27.1% of total alcohol-attributable female deaths
 - 18.9% of male deaths
- The level of alcohol consumption that minimised harm across health outcomes was **zero standard drinks per week**

Alcohol and Disease Burden

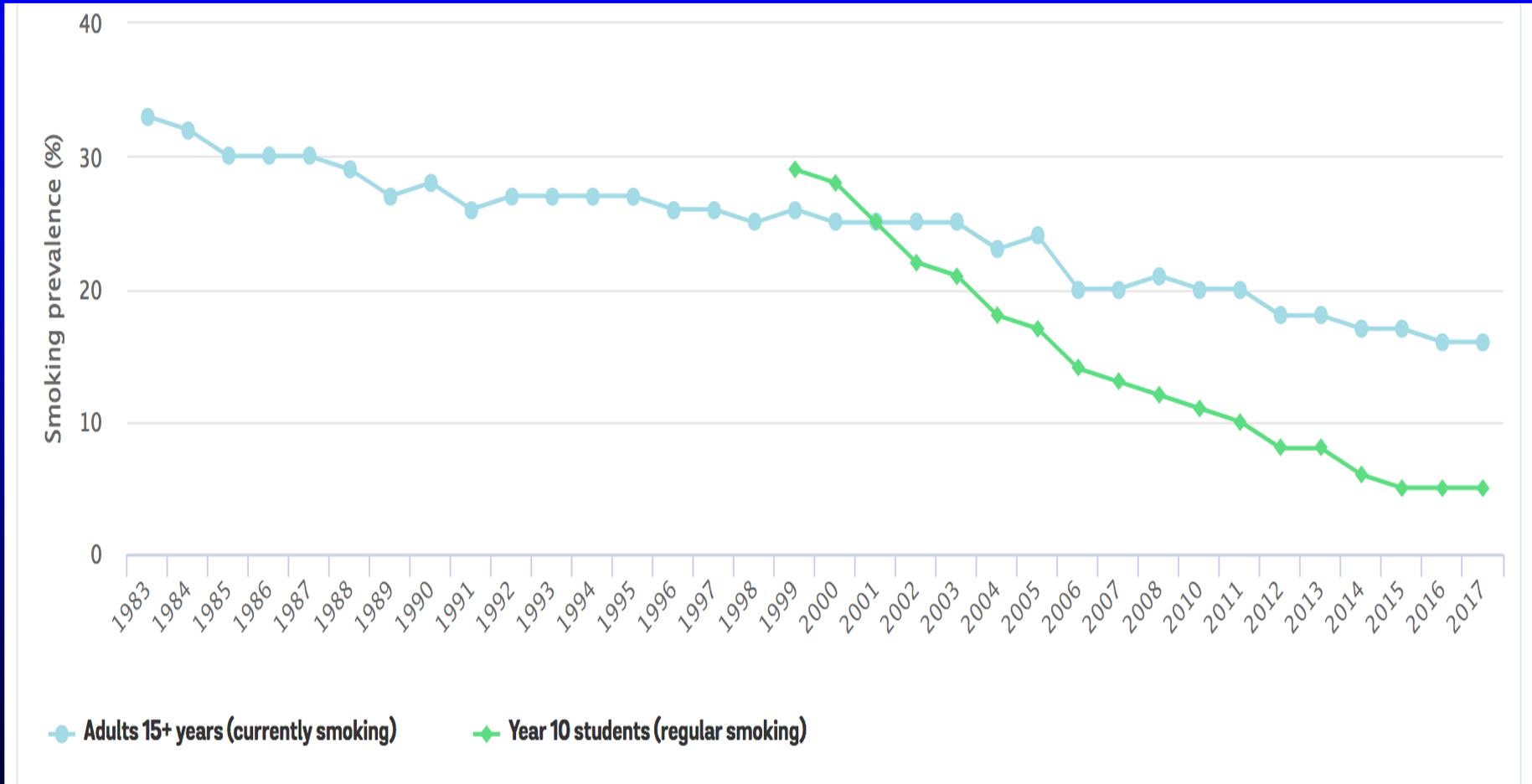
Conclusion from these Lancet authors:

- Alcohol use is a leading risk factor for global disease burden and causes substantial health loss
- Risk of all-cause mortality, and of cancers specifically, rises with increasing levels of consumption
- Level of consumption that minimises health loss is **zero**

So what should we do about New Zealand's alcohol-control policies?

Tobacco

Smoking Prevalence NZ 1983-2017



Māori Smoking Prevalence

Māori have higher smoking rates than non-Māori and higher rates of tobacco-related illness and tobacco-caused death than non-Māori:

- **Prevalence of smoking among Māori adults: 35%**
- **Prevalence of smoking among Māori men: 32%**
- **Prevalence of smoking among Māori women: 38%**

- **Māori have youngest age of starting to smoke of all New Zealanders: 14 years-old on average**

How Have We Controlled Tobacco Thus Far?

- **De-normalising smoking including restrictions in film and other media (have you noticed that, recently, this is being increasingly transgressed?)**
- **Hence vigilance!**
- **Reducing availability via restrictions on time and place of sales and age of purchasers**
- **Increasing price, reducing affordability via taxation**
- **Changing marketing via controls on advertising and sponsorship, including product-placement**

This Is Also How We Will Control Other Major Human Health Hazards

- **De-normalising consumption including restrictions on alcohol in film and other media**
- **Reducing availability via restrictions on time and place of sales and age of purchasers**
- **Increasing price, reducing affordability via taxation – or a floor price – or both**
- **Changing marketing via controls on advertising and sponsorship, including product-placement**

Diet and Human Health

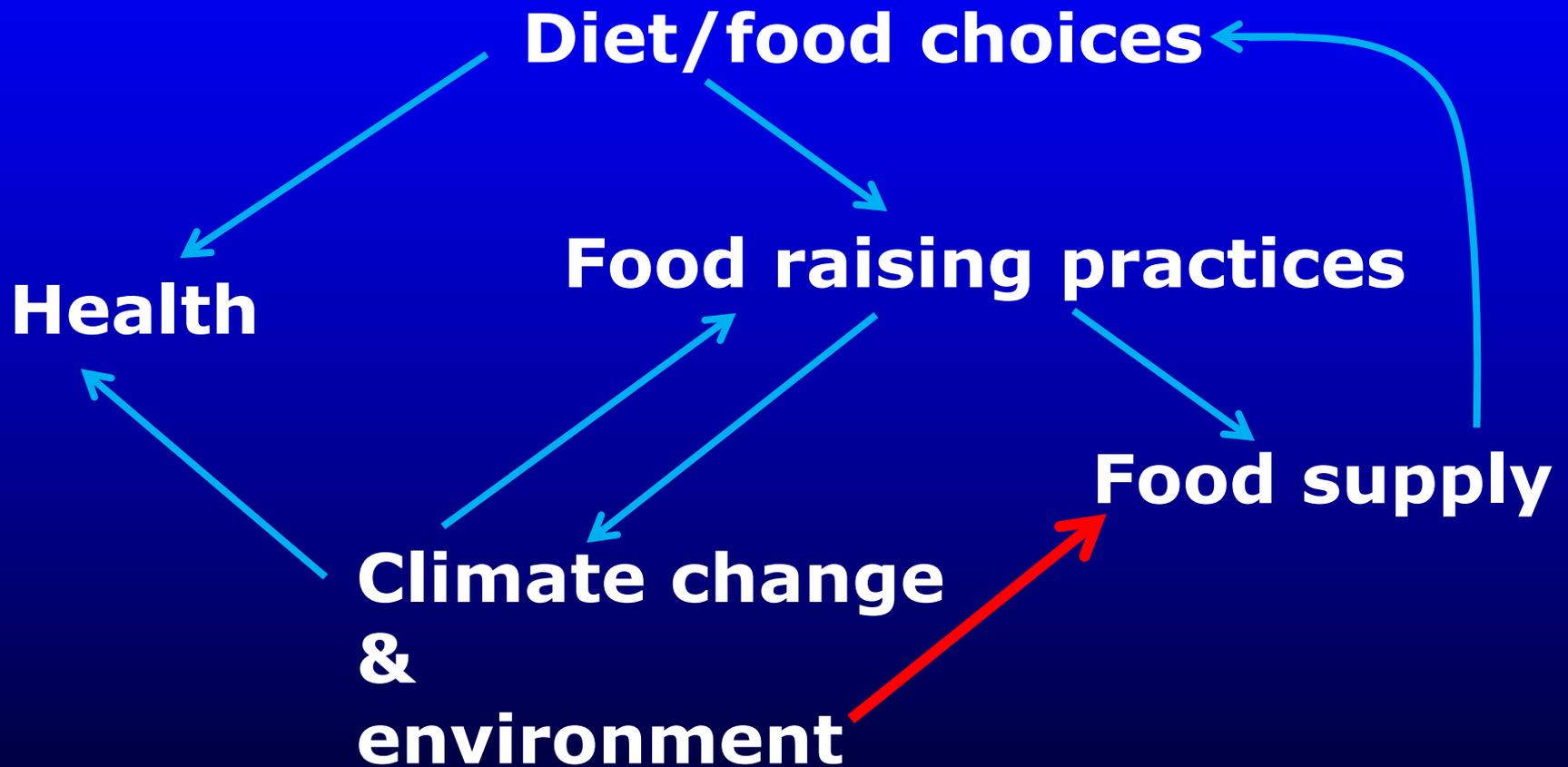
In short, in the light of recent historical changes that we so often fail to recognize, we must ask:

- Can we make better choices now?**
- If yes, can we begin with these approaches?**

Diet and Planetary Health

- **Let me leave you with a wider discussion point**

A knot of intertwined relationships



What is climate change doing to food raising and the food supply?

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It is starting to make our food supply more uncertain – one more reason to think seriously about how we should respond to climate change

Trends in food-production shock frequency in crop, livestock, fisheries, and aquaculture sectors from 1961–2013

