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Saturday, June 10, 2017

8:15 - 8:30 Trends in CVD

**plummeting coronary mortality
and rising obesity:** is a high fat low
carbohydrate (HFLC) diet the answer?

Rod Jackson
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June 2017

key message 1

- **there are 2 types of people, those who dichotomize (e.g. HFLC advocates) and those who don't**
- *HFLC advocates: all fats are good & all carbohydrates are bad:*
- *Evidence: there are good fats & bad fats and good carbohydrates & bad carbohydrates*

key message 2

- **information is knowing that a tomato is a fruit, knowledge is knowing not to put it in a fruit salad**
- *HFLC advocates have misinterpreted the long-term dietary fat-heart disease trials & cohort studies, which not surprisingly show inconsistent results. These studies all have major flaws (mainly poor compliance, misclassification of diet, confounding) and so are not 'gold standard evidence.'*

key messages 3

- **don't throw the baby out with the bath water**
- *HFLC advocates have either missed or deliberately ignored the 80-90% decline in coronary mortality in many western countries since the late 1960s, Instead they focus only on the dia-besity epidemic.*

key message 4

- **don't throw the baby out with the bath water**
- *A higher fat-lower carbohydrate diet is probably the most effective way to lose weight, but increasing saturated fat will increase the risk of coronary disease, so why not recommend a higher unsaturated fat – lower carbohydrate diet???*

key message 5

- **experts are sometimes wrong, but are usually right – that's why they are called experts**
- *Most HFLC advocates are not experts (most are explicitly anti-expert) and they get unwarranted media attention because they are controversial – 'the experts are wrong!'. Many have commercialised this controversy in books and blogs.*

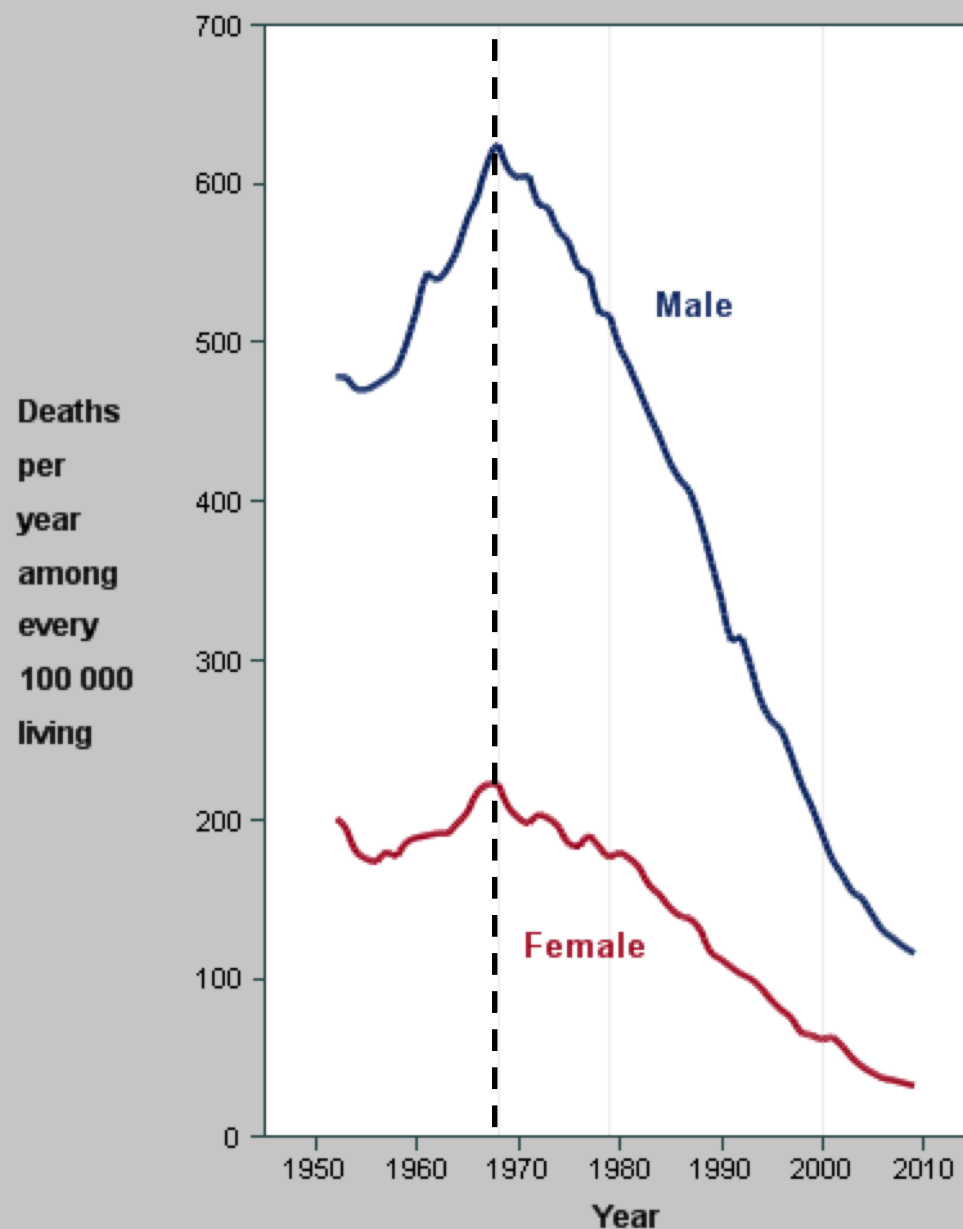
key message 6

- **a HFLC diet based on animal and dairy fat will exacerbate global warming:**
- *on a per serving basis, there are fewer embodied emissions in 20 servings of vegetables than in a single serving of beef. This information is from a 2014 publication in Nature, which also concluded that switching to a vegetarian diet, for instance, can more than halve (55%) an individual's food-related emissions.*
- <http://www.pblinitiative.com/blog-case-environmental-misinformation-new-zealand>

key message 3

- **don't throw the baby out with the bath water**
- *HFLC advocates have either missed or deliberately ignored the 80-90% decline in coronary mortality in many western countries since the late 1960s. Instead they focus only on the dia-besity epidemic.*

Mortality trends for coronary heart disease: age 35-69 years, New Zealand (Aotearoa)



Male deaths from this cause at age 35-69 years in 2009:

- 845 (20% of deaths at this age)
- 116 out of every 100 000 males at this age, a rate which was:
 - 39% less than in 2000 (rate: 190)
 - 79% less than in 1975 (rate: 562)
 - 75% less than in 1955 (rate: 470)

Female deaths from this cause at ages 35-69 years in 2009:

- 230 (8% of deaths at this age)
- 33 out of every 100 000 females at this age, a rate which was:
 - 47% less than in 2000 (rate: 61)
 - 82% less than in 1975 (rate: 184)
 - 81% less than in 1955 (rate: 175)

Created: 17 May 2013, 4:34 pm
Males & females, ages 35-69 years
Coronary heart disease
New Zealand



THE BIG FAT SURPRISE

Why Butter, Meat & Cheese
Belong in a Healthy Diet

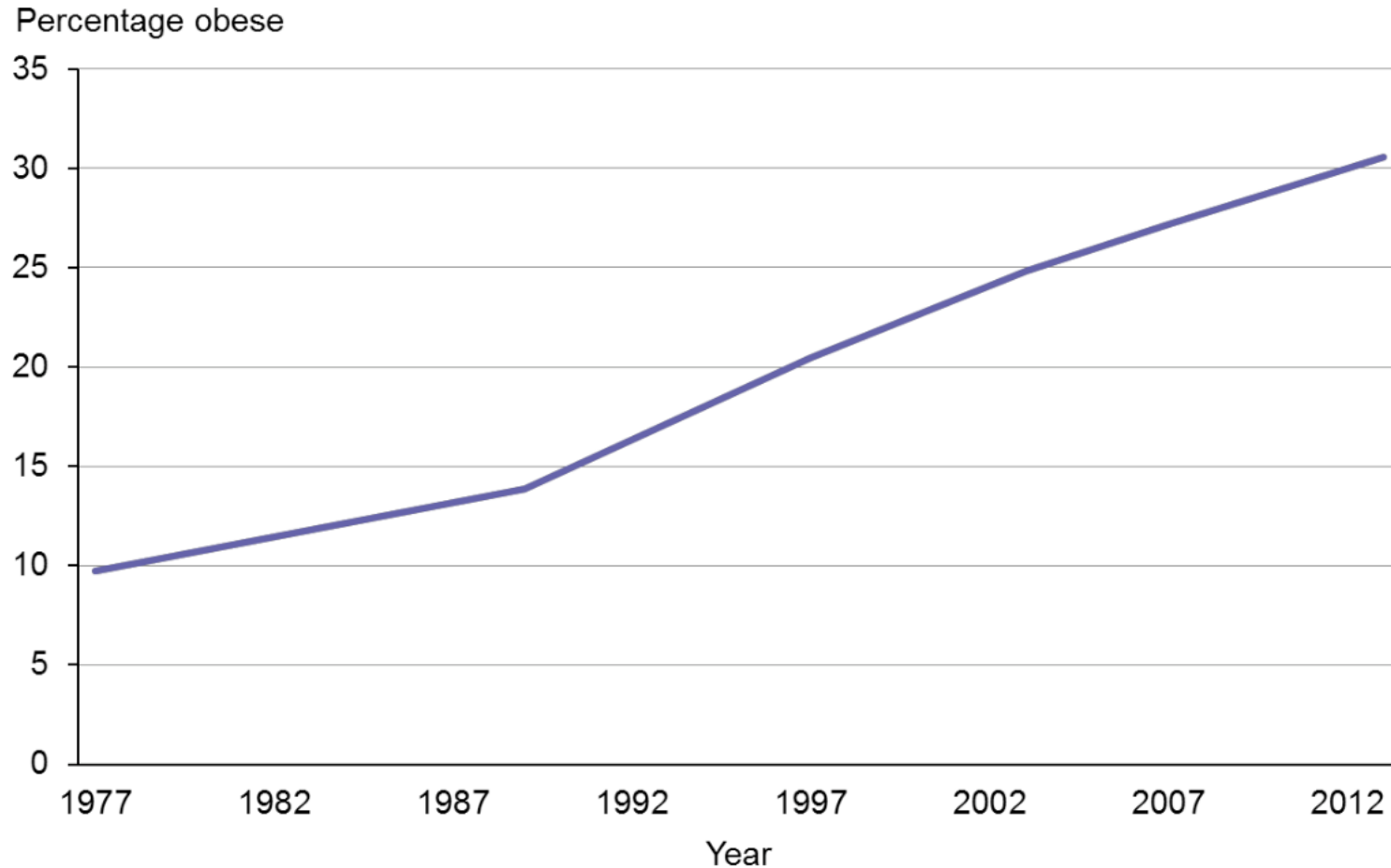
NINA TEICHOLZ



CHALLENGING THE CONVENTIONAL WISDOM
ON DIET, WEIGHT CONTROL, AND DISEASE

GARY TAUBES

Adult obesity in NZ: 1977-2012/3



* Note: The 1977 obesity rate refers to adults aged 15–64 years.

**Mortality trends for coronary heart
age 35-69 years, New Zealand (A**

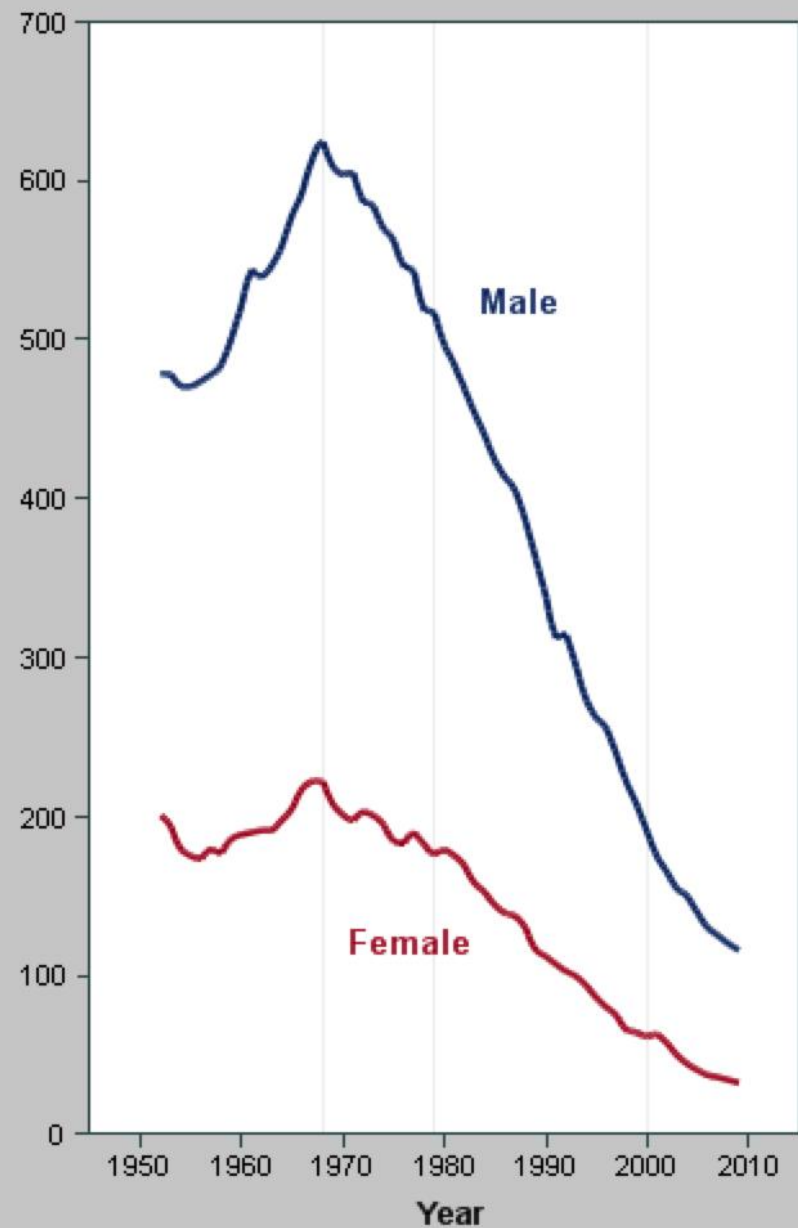
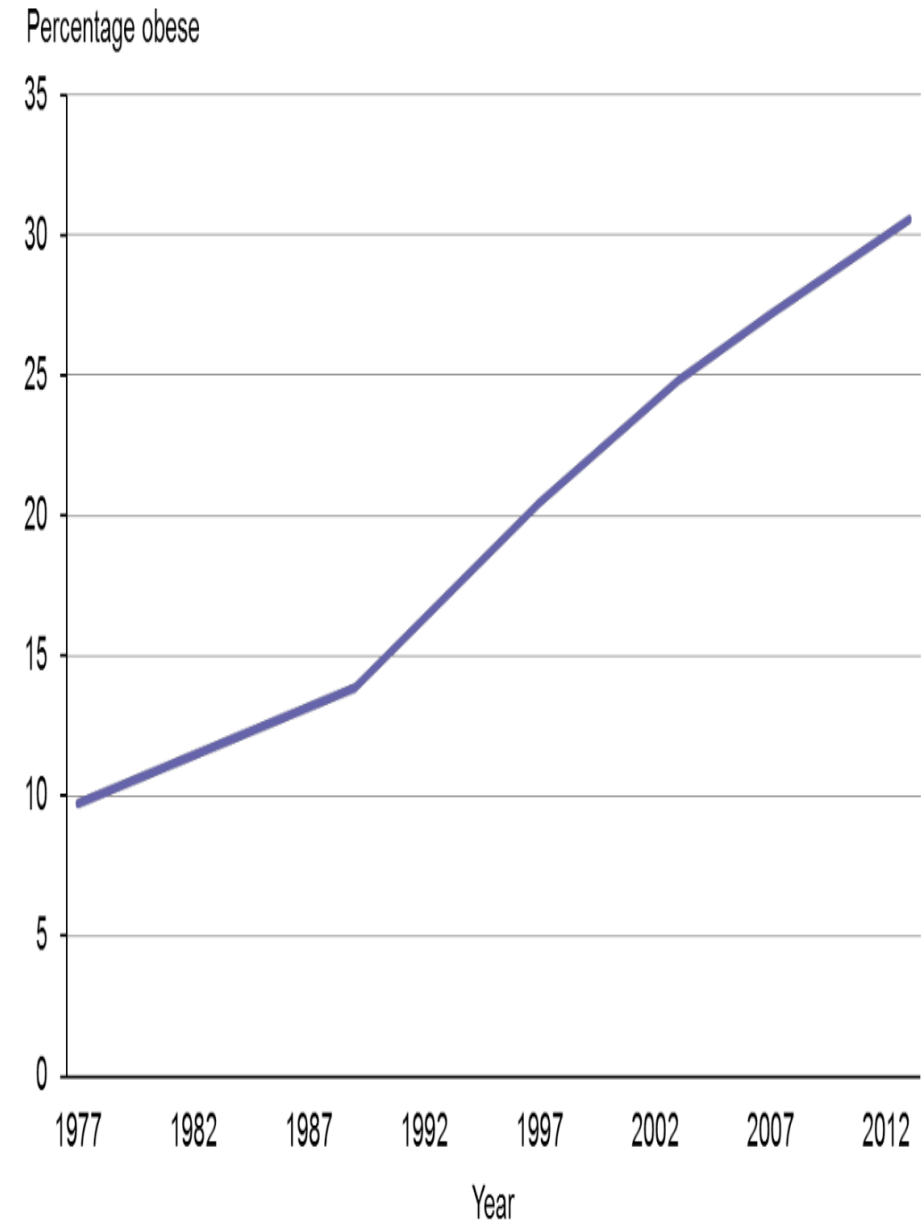
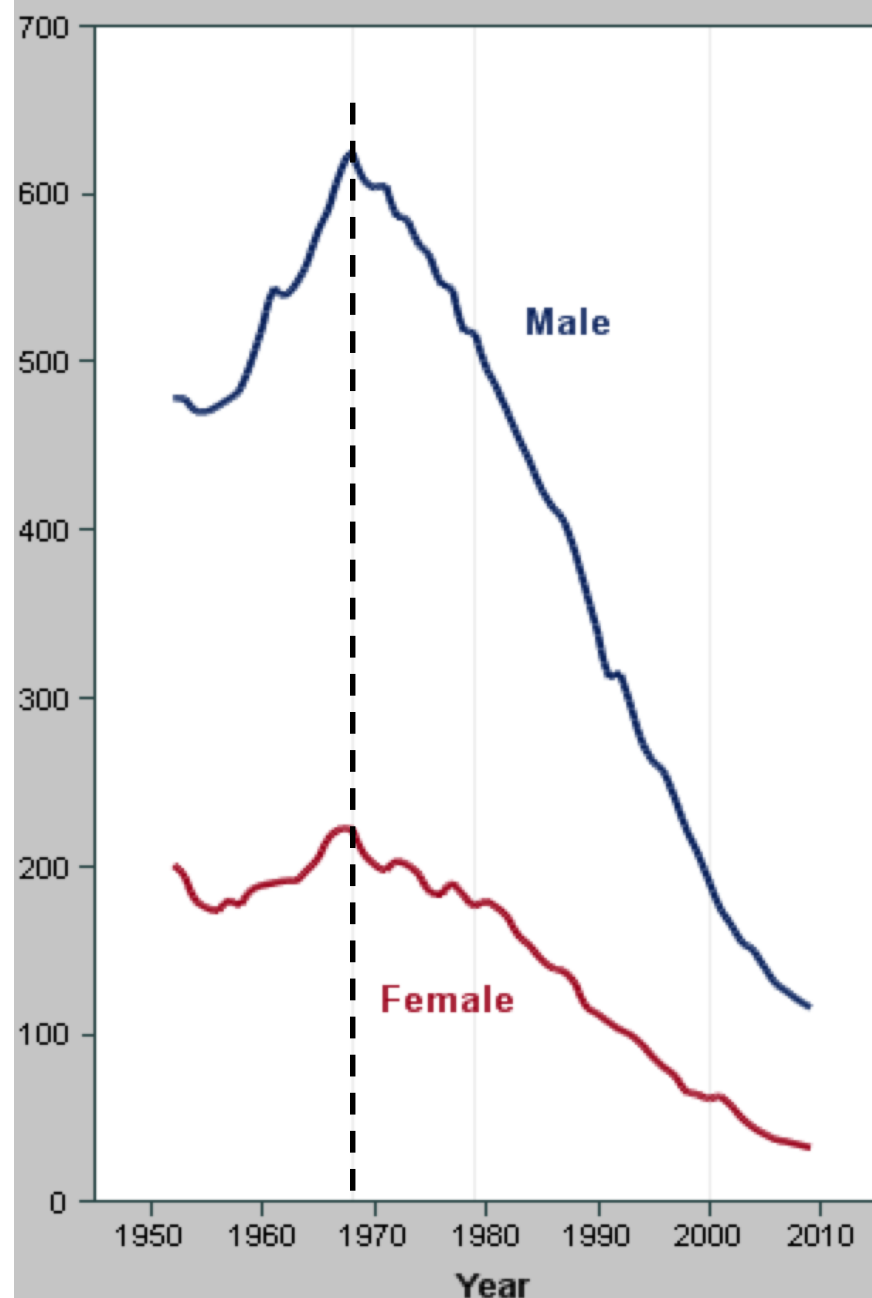


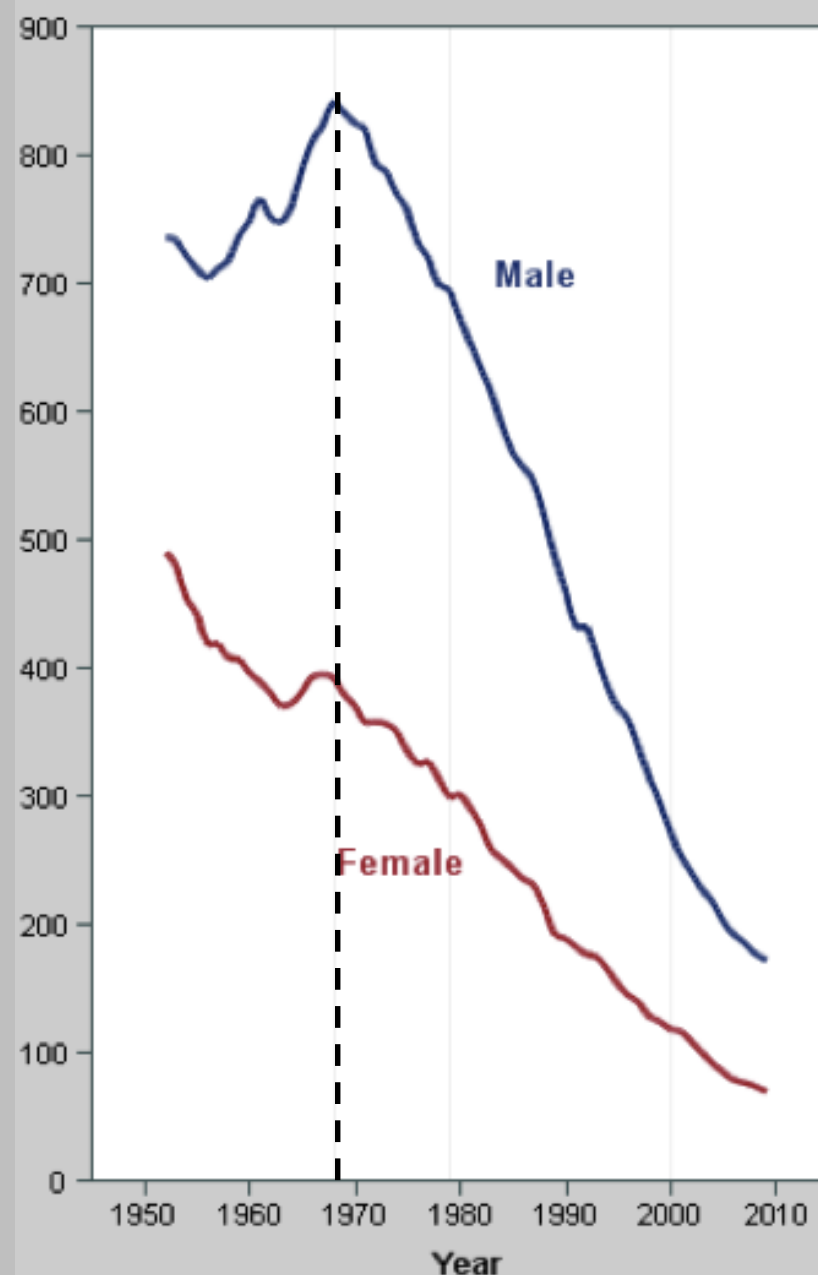
Figure 9: Adult obesity rate, 1977*-2012/13



**Mortality trends for coronary heart disease:
age 35-69 years, New Zealand (Aotearoa)**



**Mortality trends for all vascular disease:
age 35-69 years, New Zealand (Aotearoa)**



**in this cause at
in 2009:**

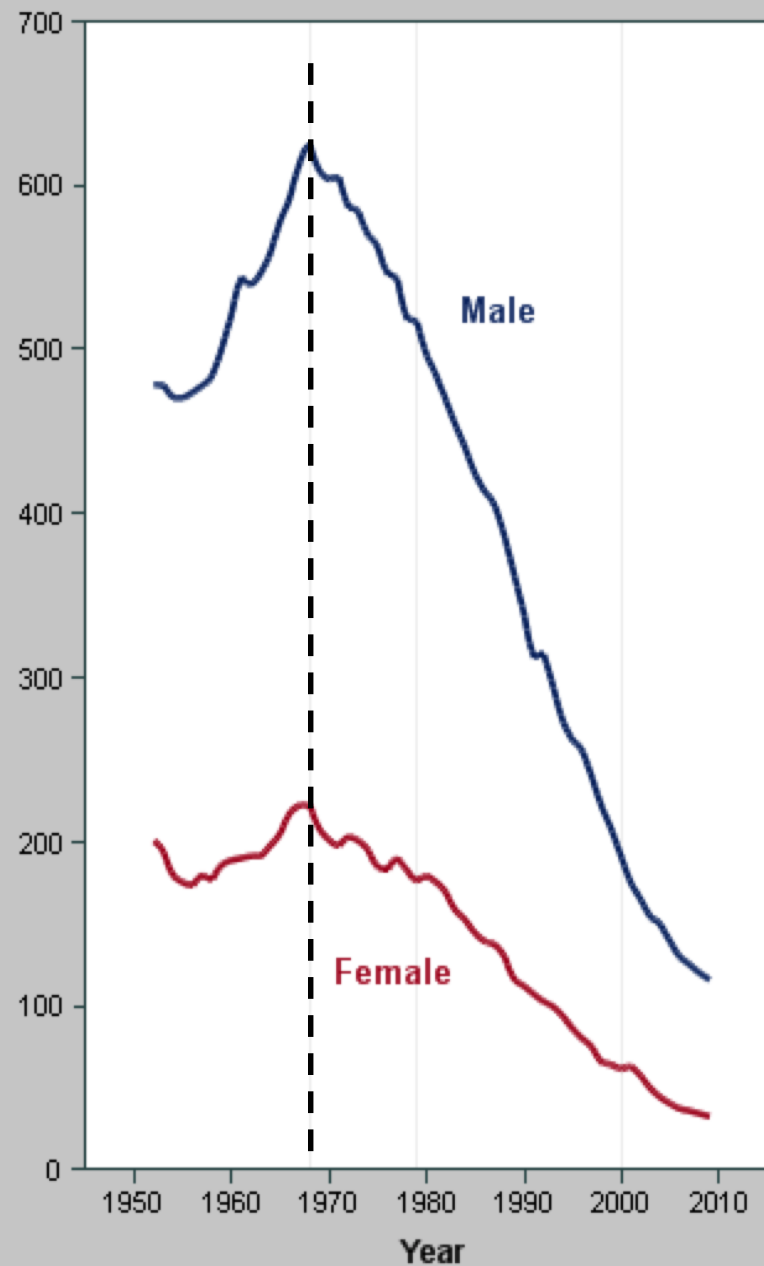
deaths at this age)
per 100 000 males at
which was:
in 2000 (rate: 271)
in 1975 (rate: 755)
in 1955 (rate: 711)

**from this cause at
s in 2009:**

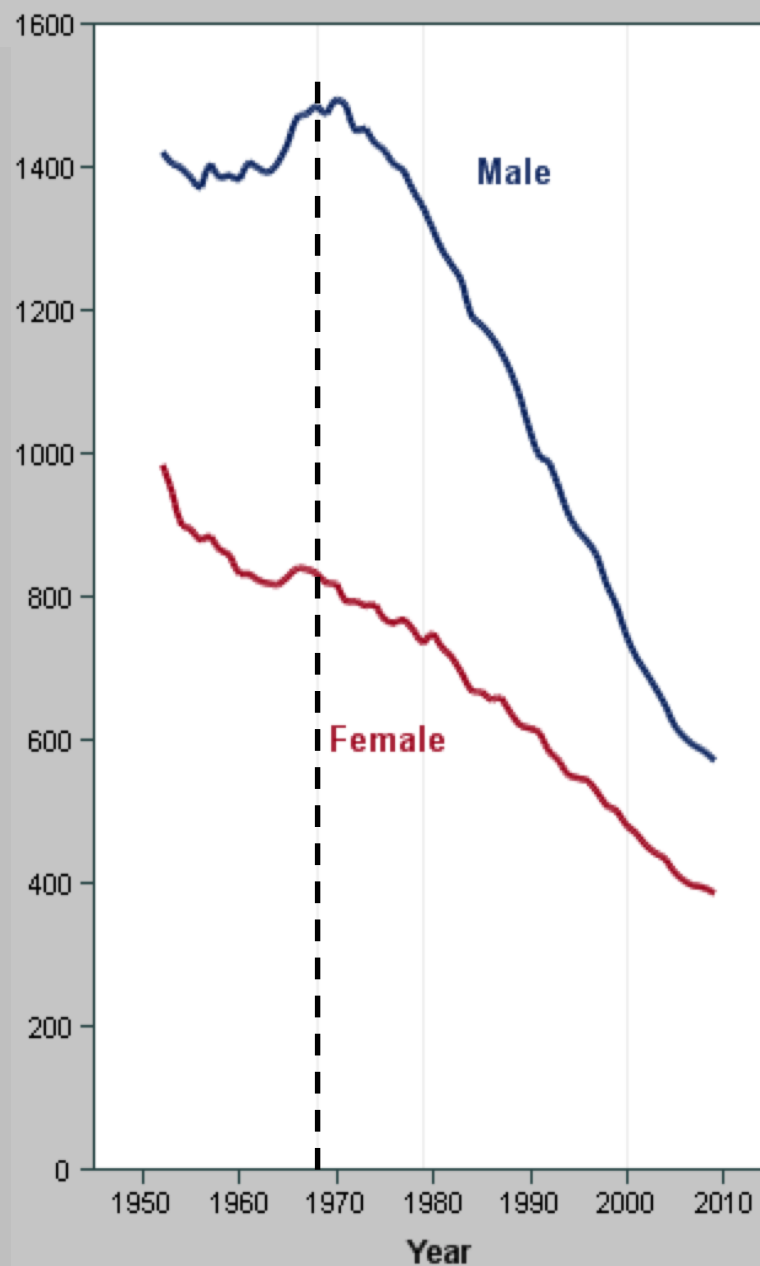
deaths at this age)
per 100 000 females at
which was:
in 2000 (rate: 119)
in 1975 (rate: 335)
in 1955 (rate: 441)

3, 4:34pm
s 35-69 years

**Mortality trends for coronary heart disease:
age 35-69 years, New Zealand (Aotearoa)**



**Mortality trends for all causes of death:
age 35-69 years, New Zealand (Aotearoa)**



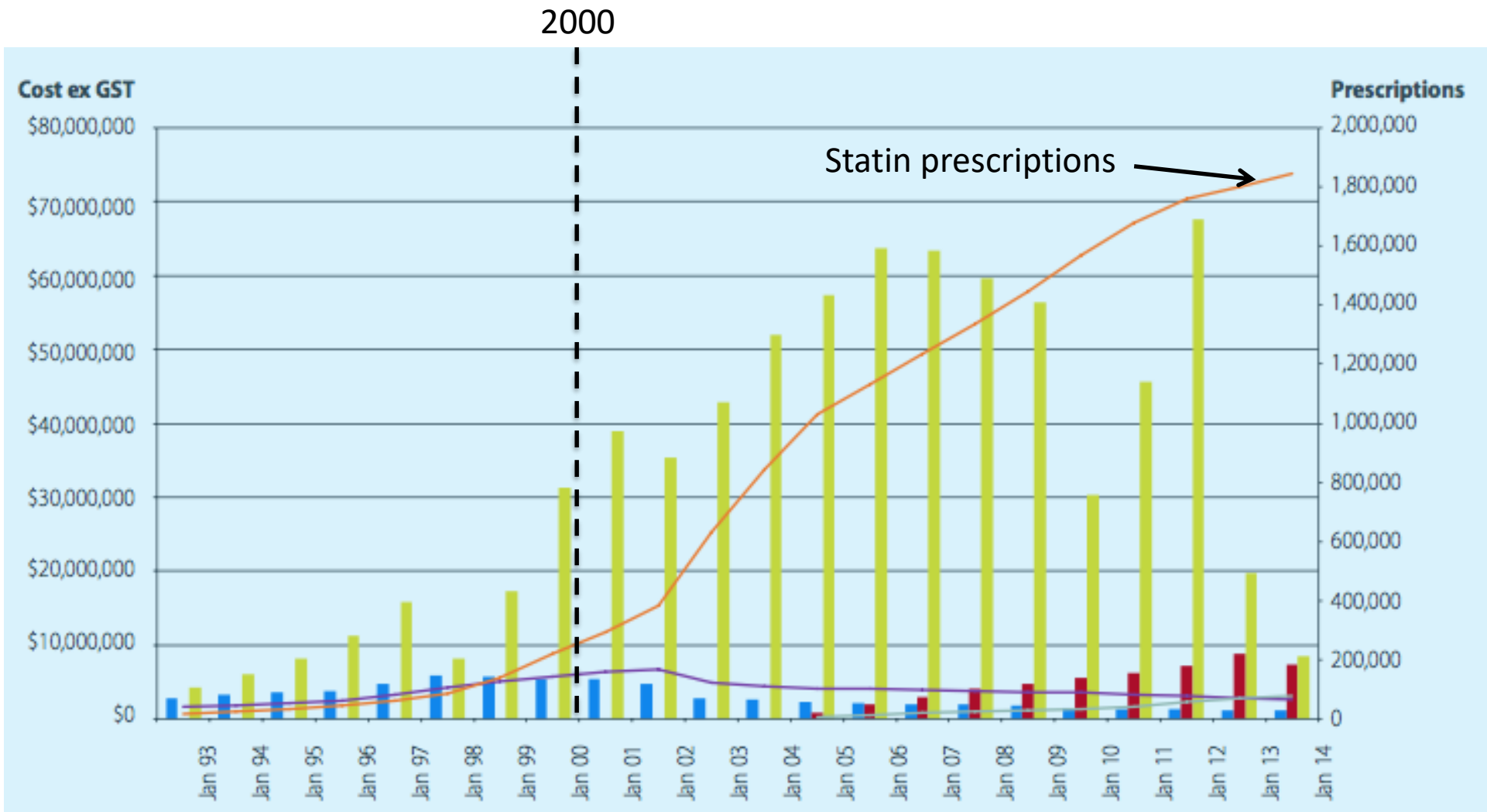
Contribution of trends in survival and coronary-event rates to changes in coronary heart disease mortality: 10-year results from 37 WHO MONICA Project populations *Lancet* 1999; 353: 1547-57

*Hugh Tunstall-Pedoe, Kari Kuulasmaa, Markku Mähönen, Hanna Tolonen, Esa Ruokokoski, Philippe Amouyel, for the WHO MONICA (monitoring trends and determinants in cardiovascular disease) Project**

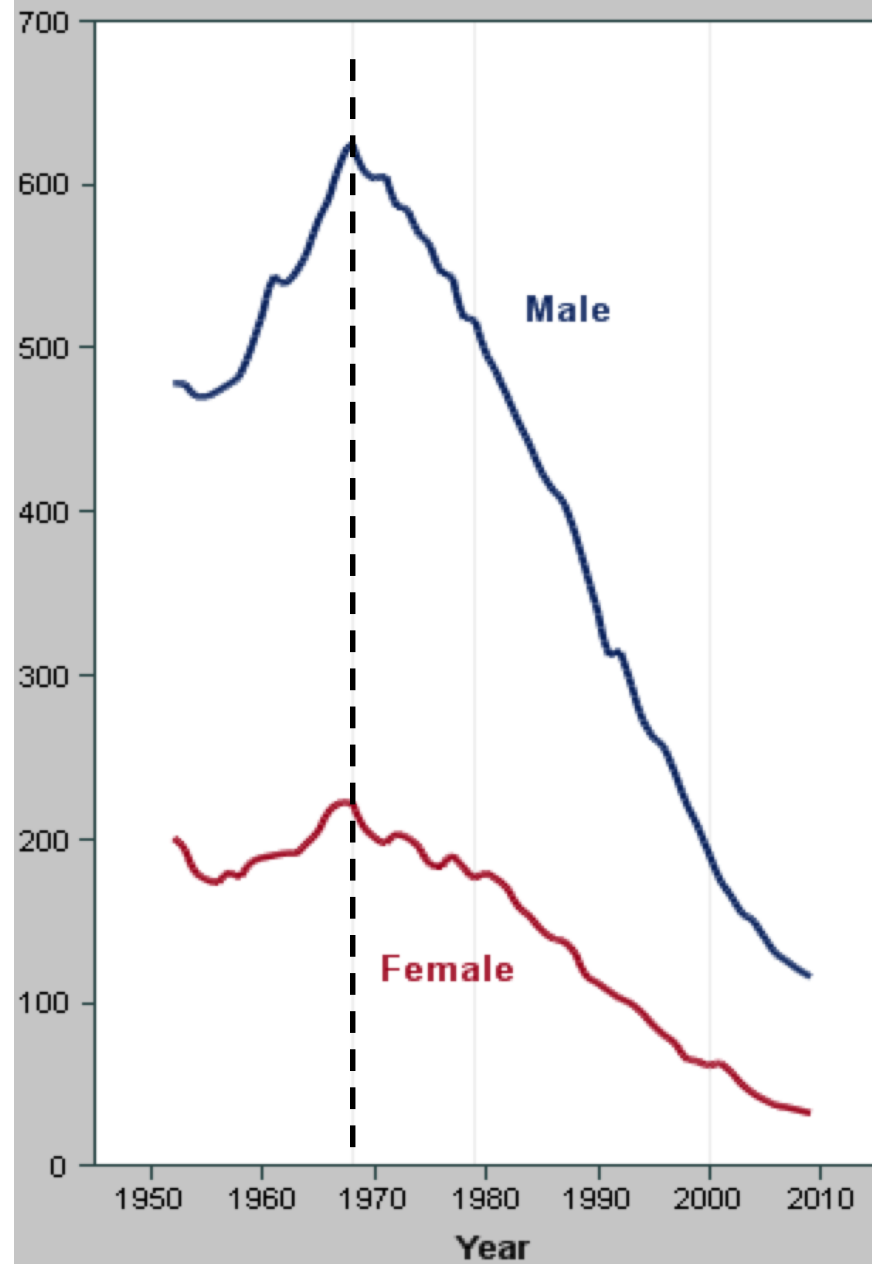
from 1980-5 through 1991-5, in populations in which mortality declined, coronary-event rates contributed two thirds and case fatality one third.

Over the decade studied, the major determinant of decline in CHD mortality was whatever was driving changing coronary-event rates.

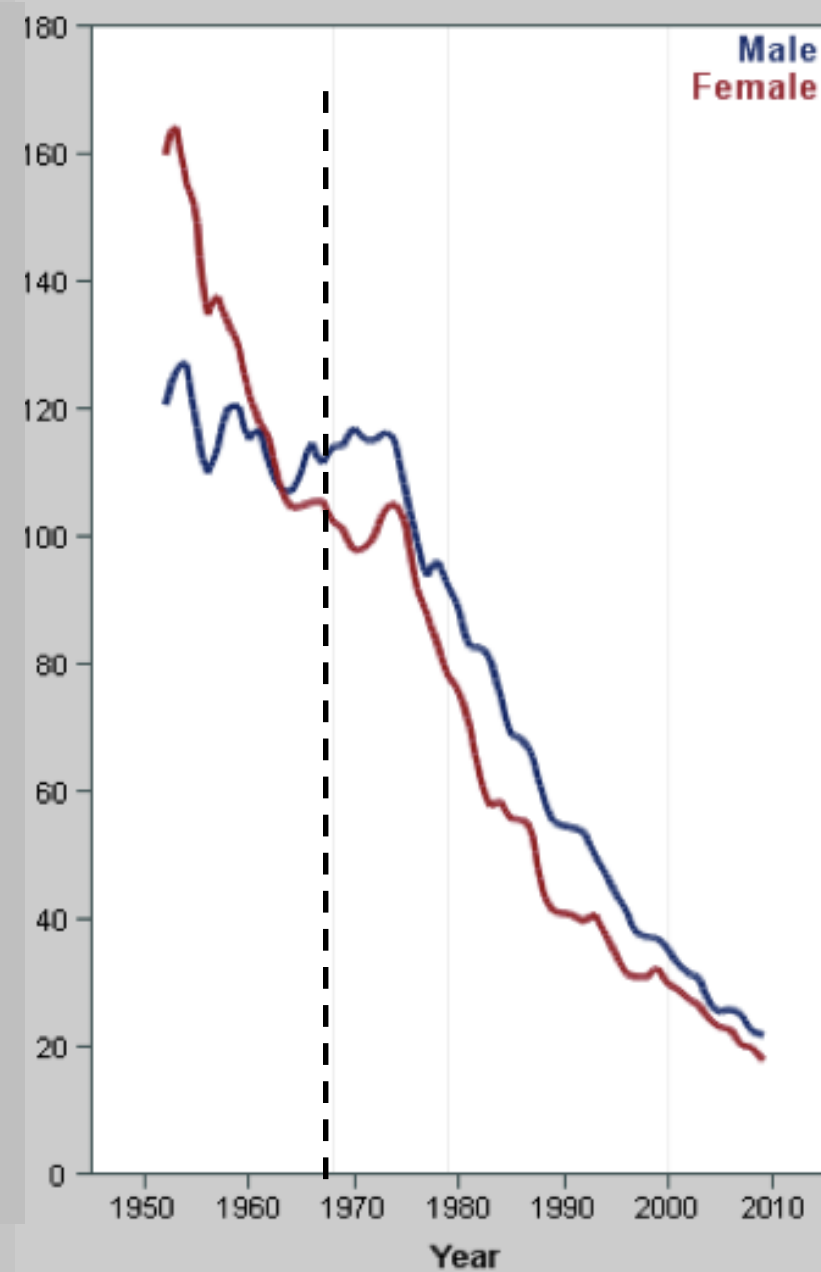
drug management of lipids: NZ 1993-2014



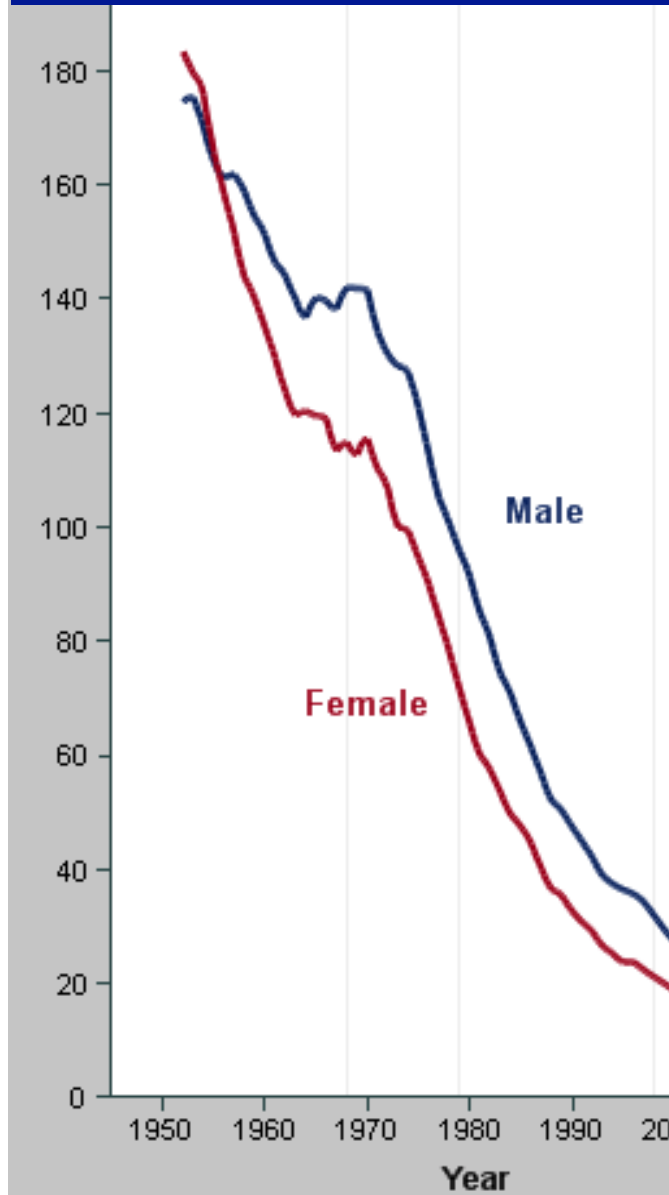
**Mortality trends for coronary heart disease:
age 35-69 years, New Zealand (Aotearoa)**



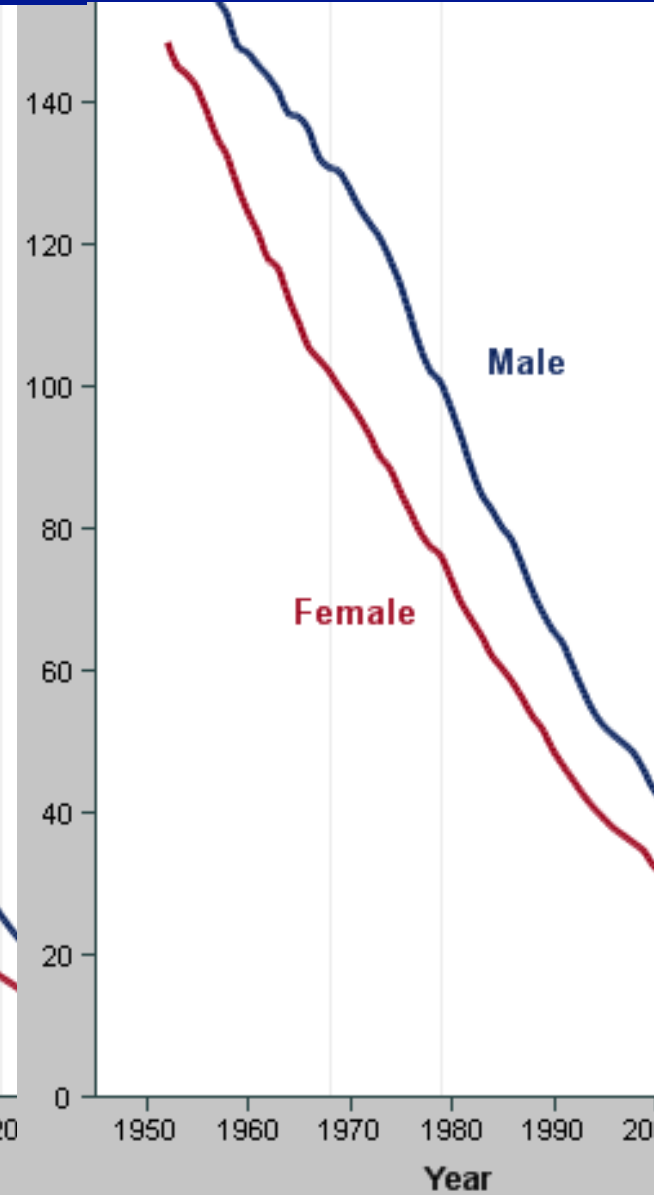
**Mortality trends for stroke:
age 35-69 years, New Zealand (Aotearoa)**



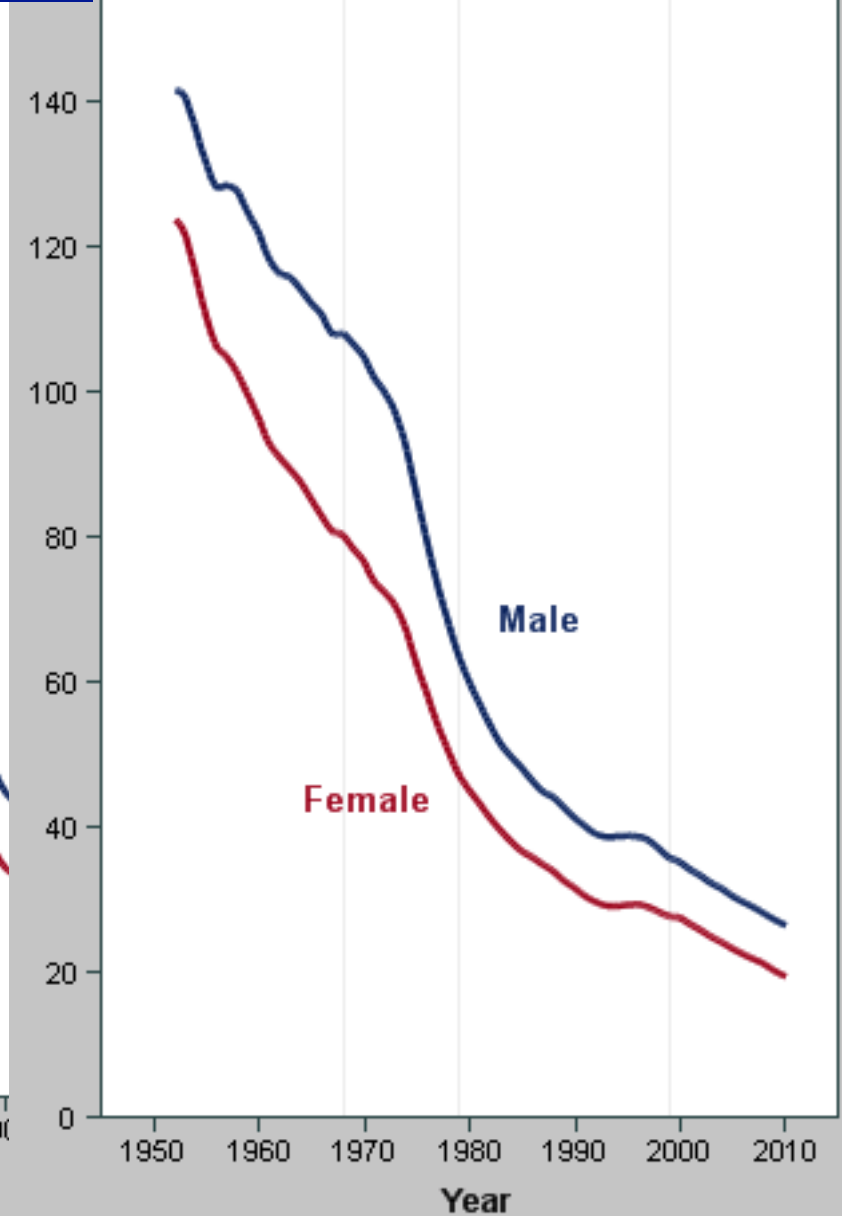
**Stroke mortality: 35-69 yrs
Australia**



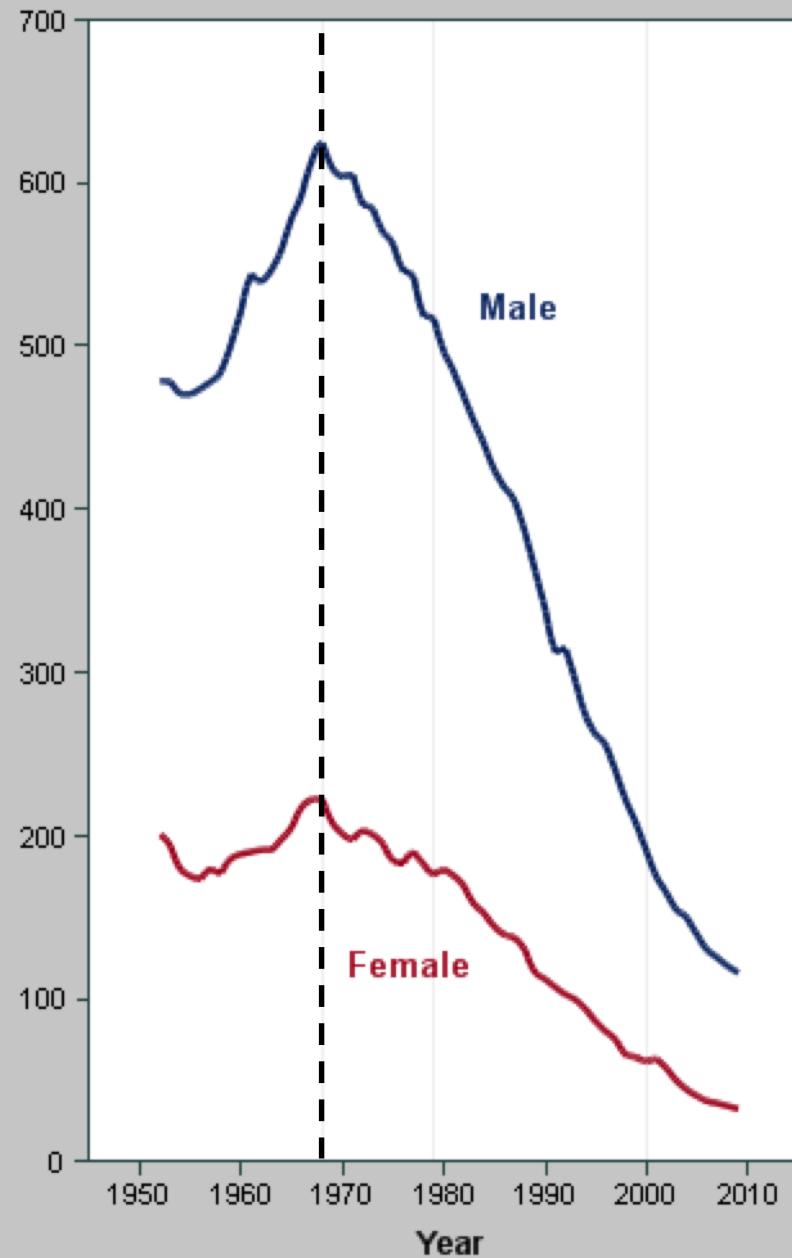
**Stroke mortality: 35-69 yrs
UK**



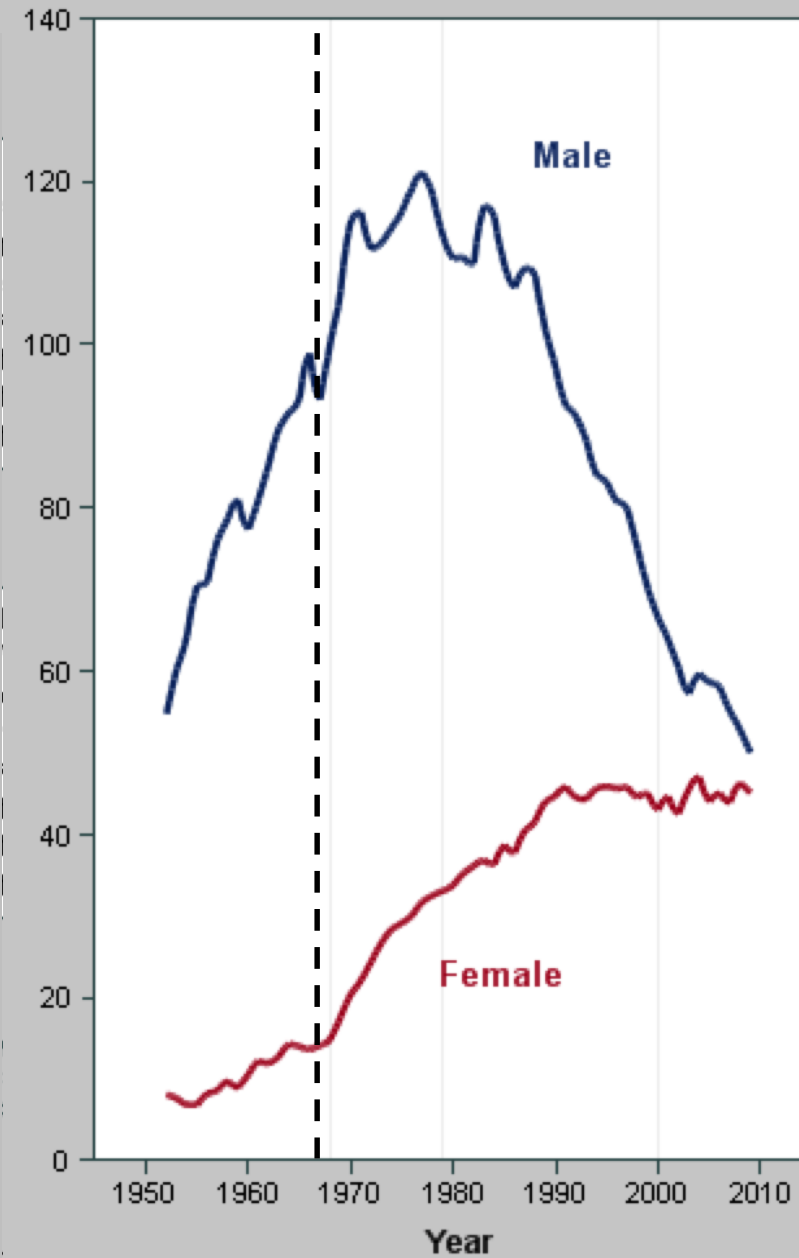
**Stroke mortality: 35-69 yrs
US**



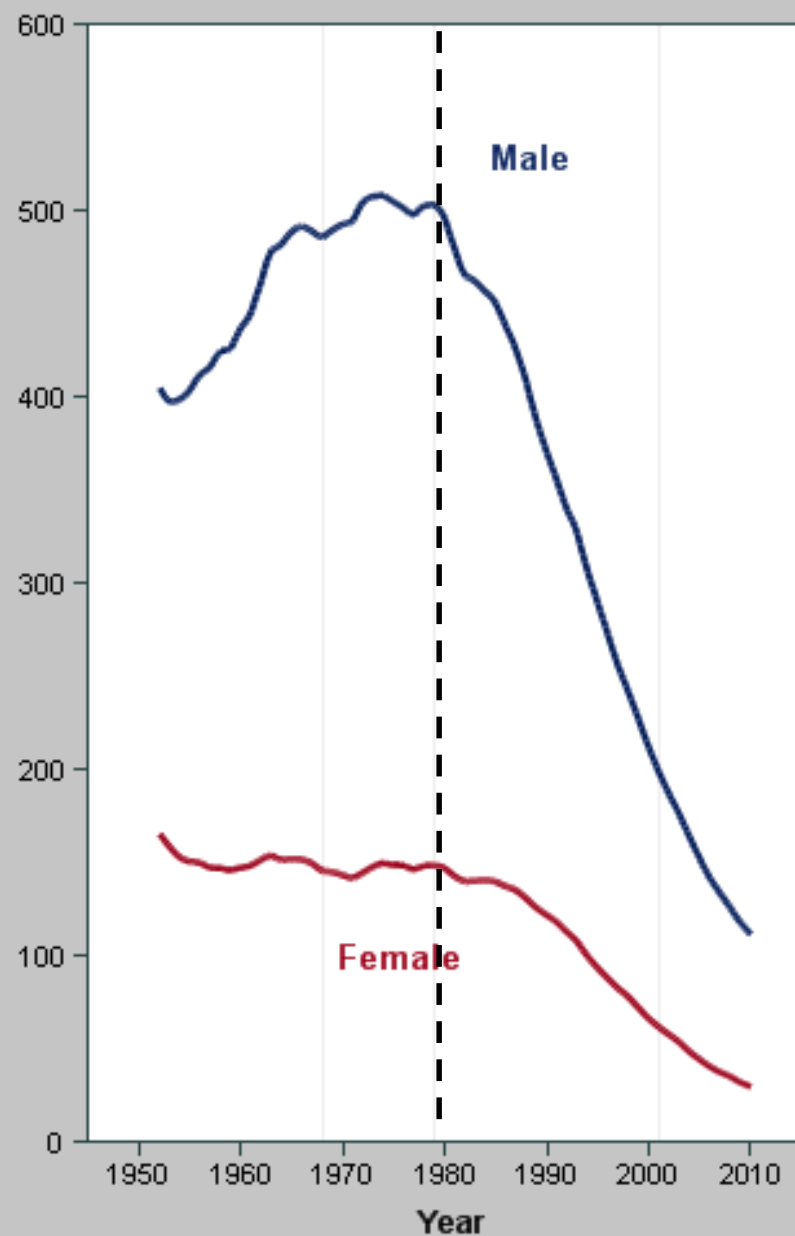
**Mortality trends for coronary heart disease:
age 35-69 years, New Zealand (Aotearoa)**



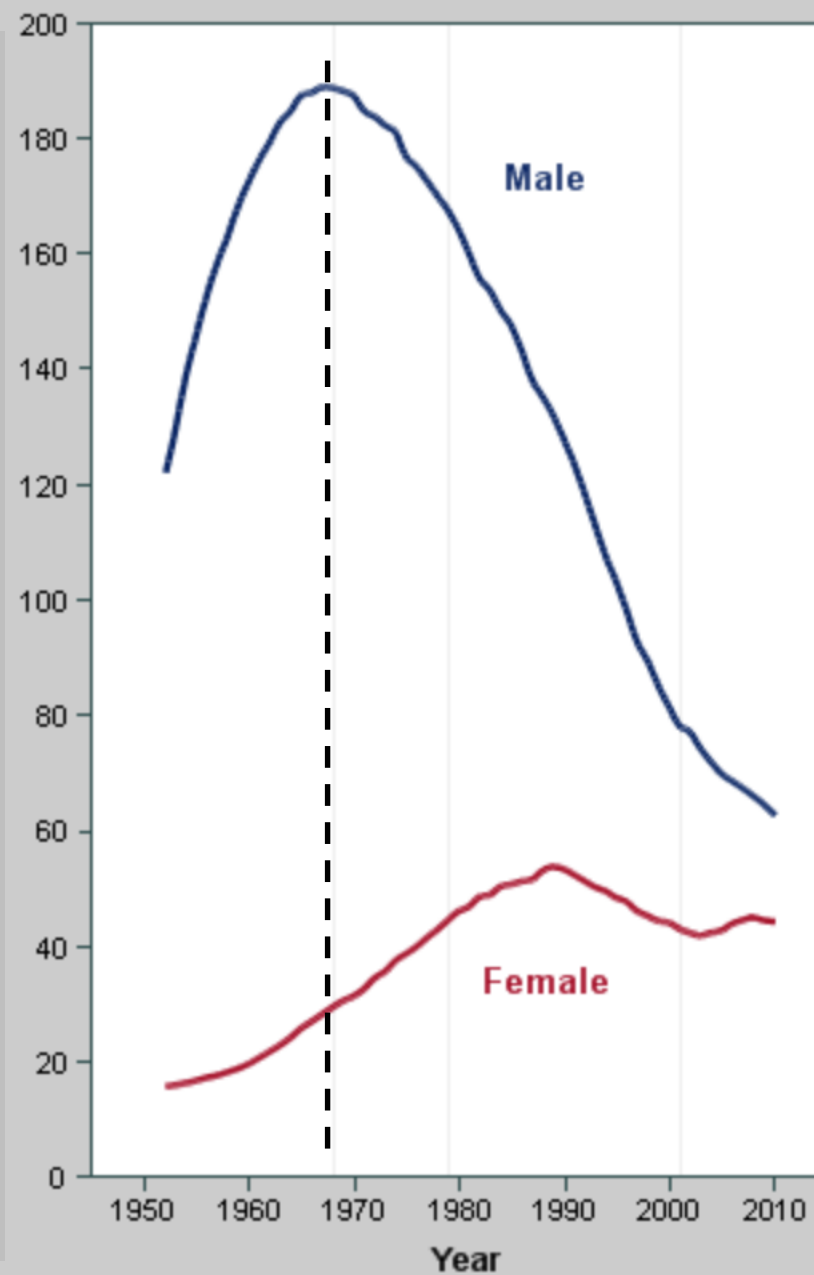
**Mortality trends for lung cancer:
age 35-69 years, New Zealand (Aotearoa)**



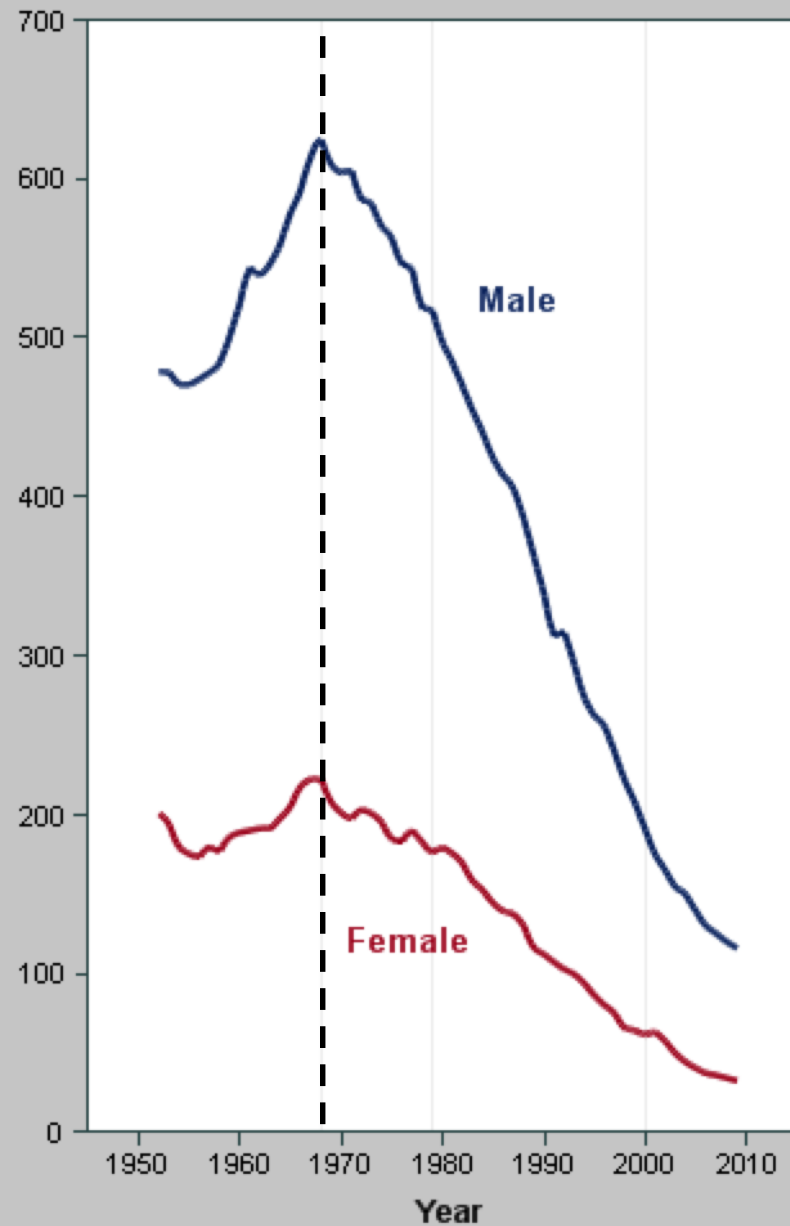
**Mortality trends for coronary heart diseases
age 35-69 years, England and Wales**



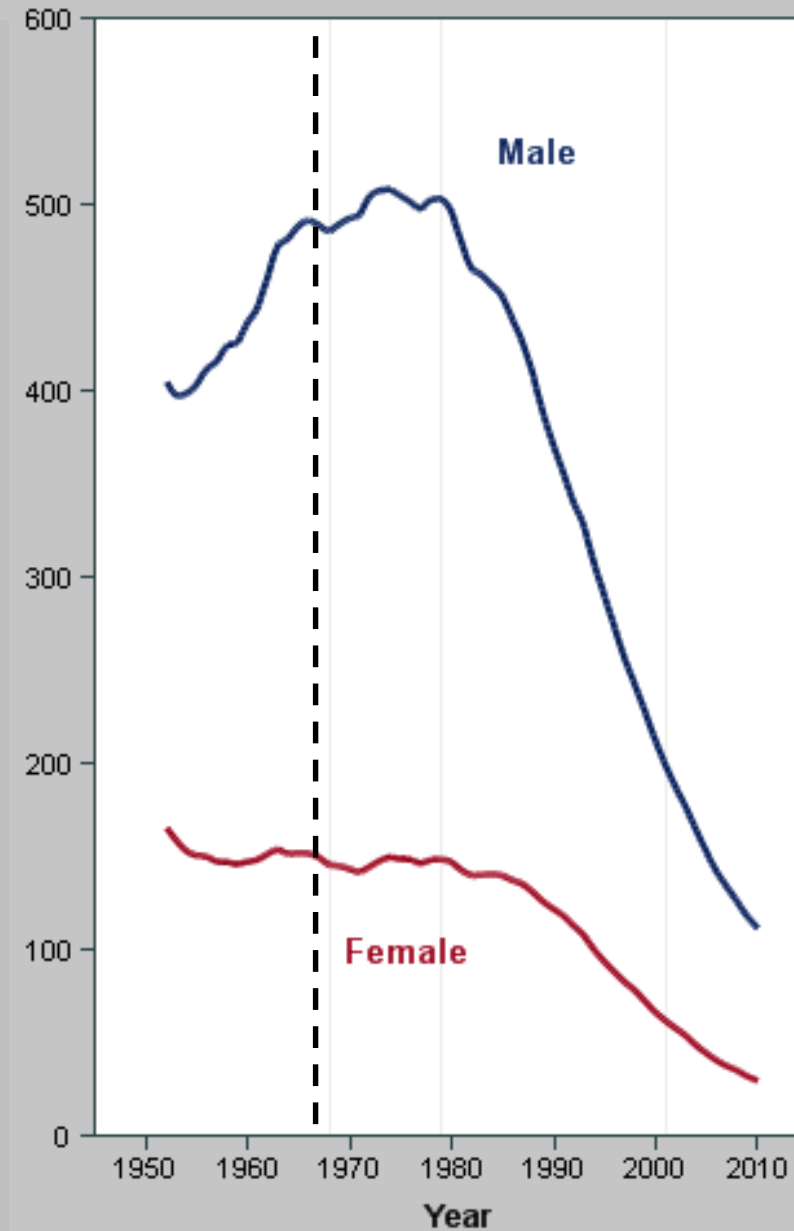
**Mortality trends for lung cancer:
age 35-69 years, United Kingdom**



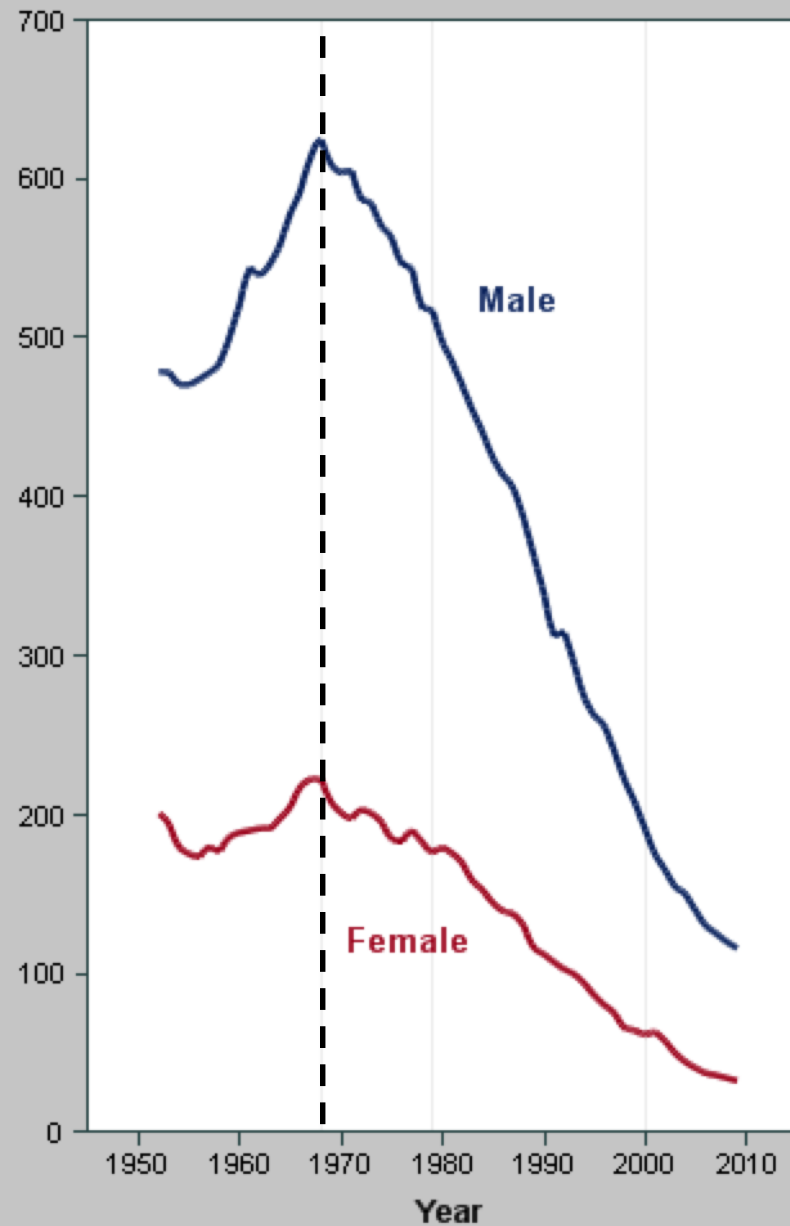
**Mortality trends for coronary heart diseases
age 35-69 years, New Zealand (Aotearoa)**



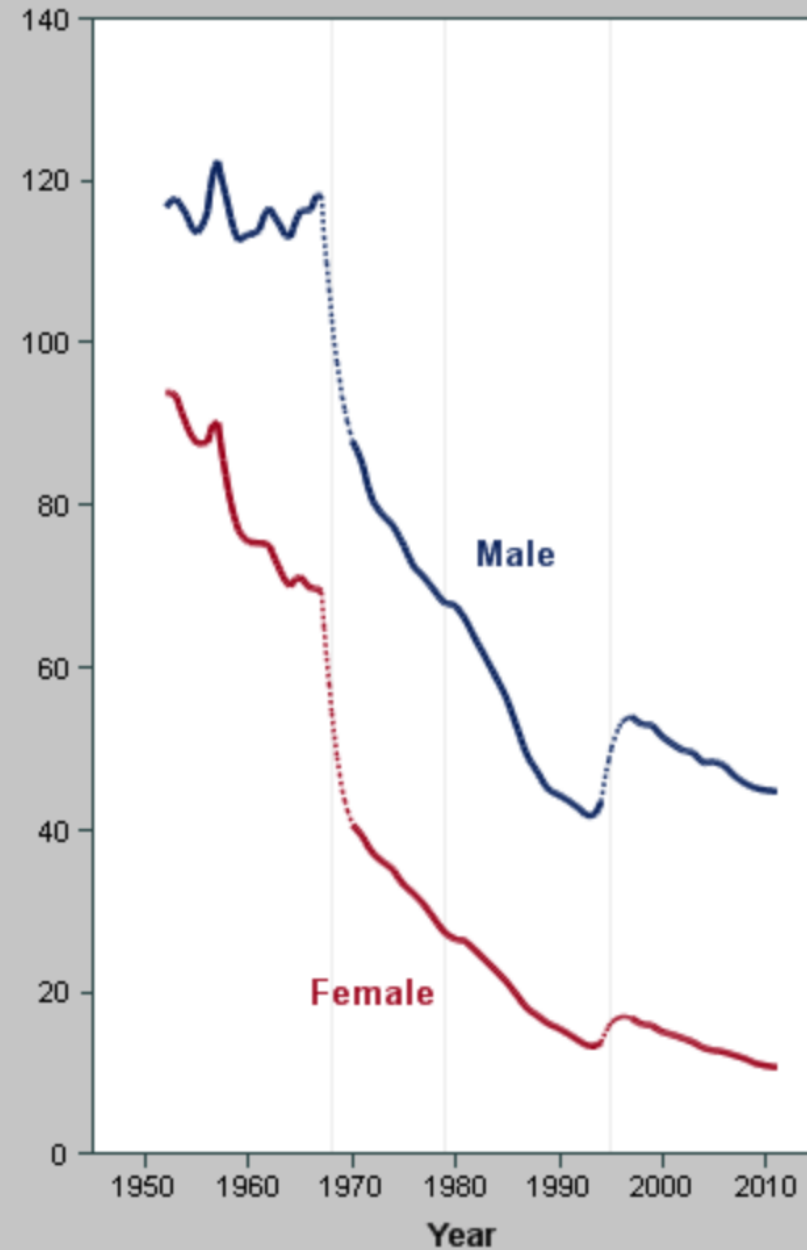
**Mortality trends for coronary heart disease:
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**Mortality trends for coronary heart disease:
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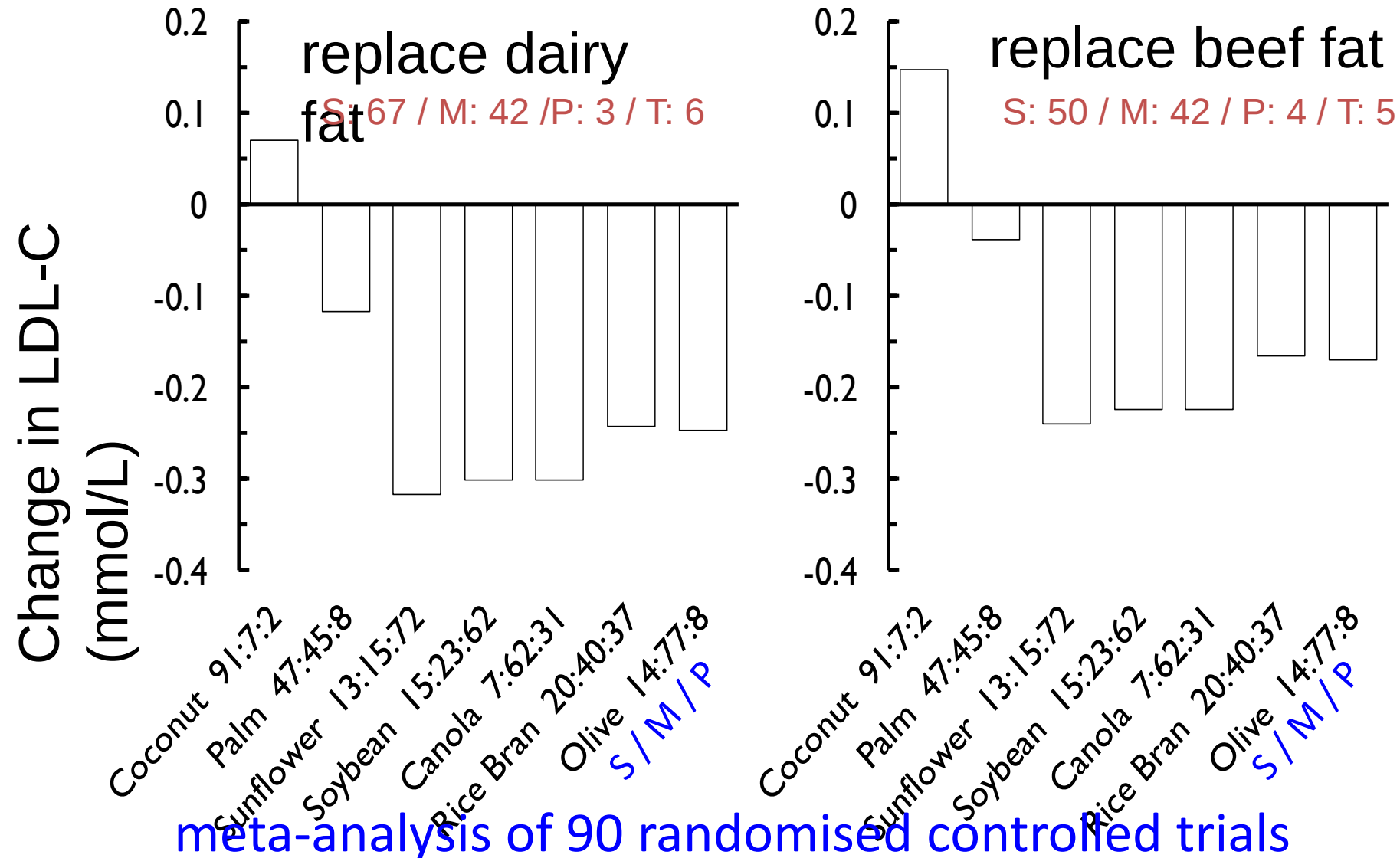


**Mortality trends for coronary heart disease:
age 35-69 years, Japan**

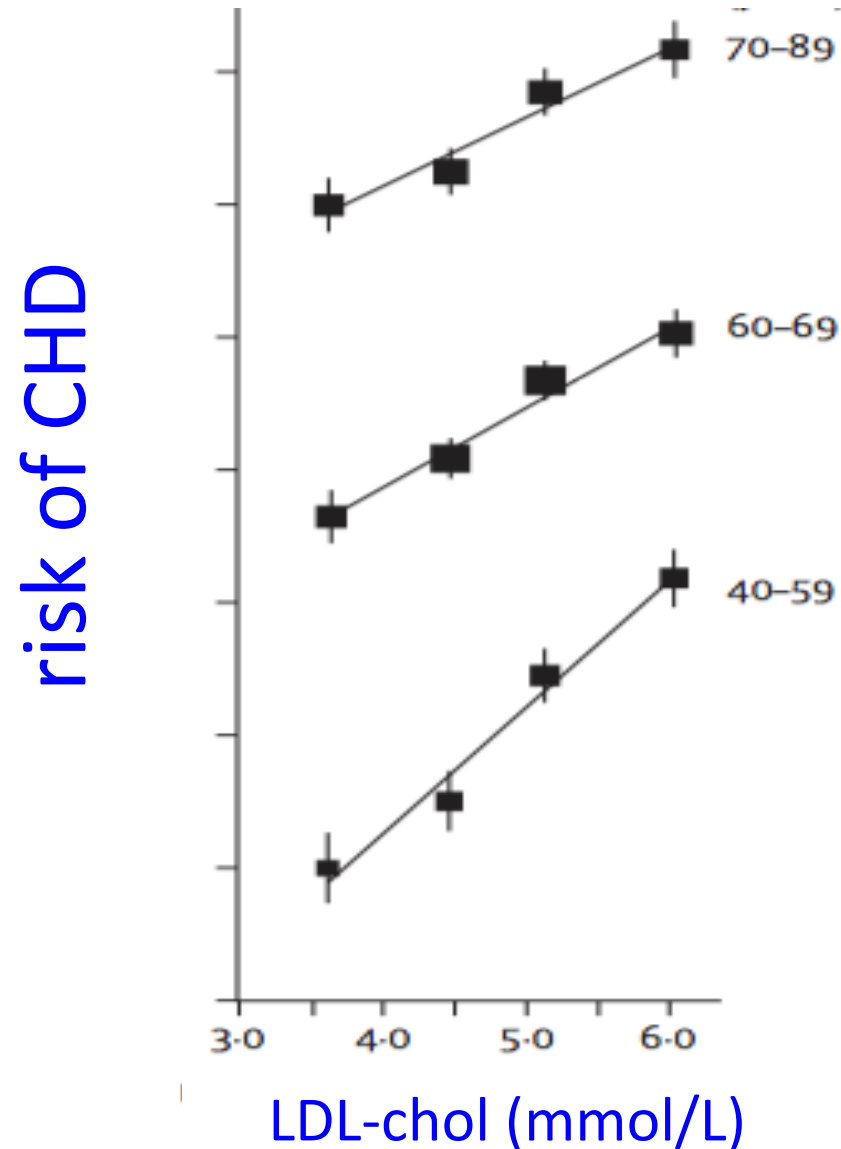


that leaves diet

predicted effects of substituting different fats on LDL cholesterol



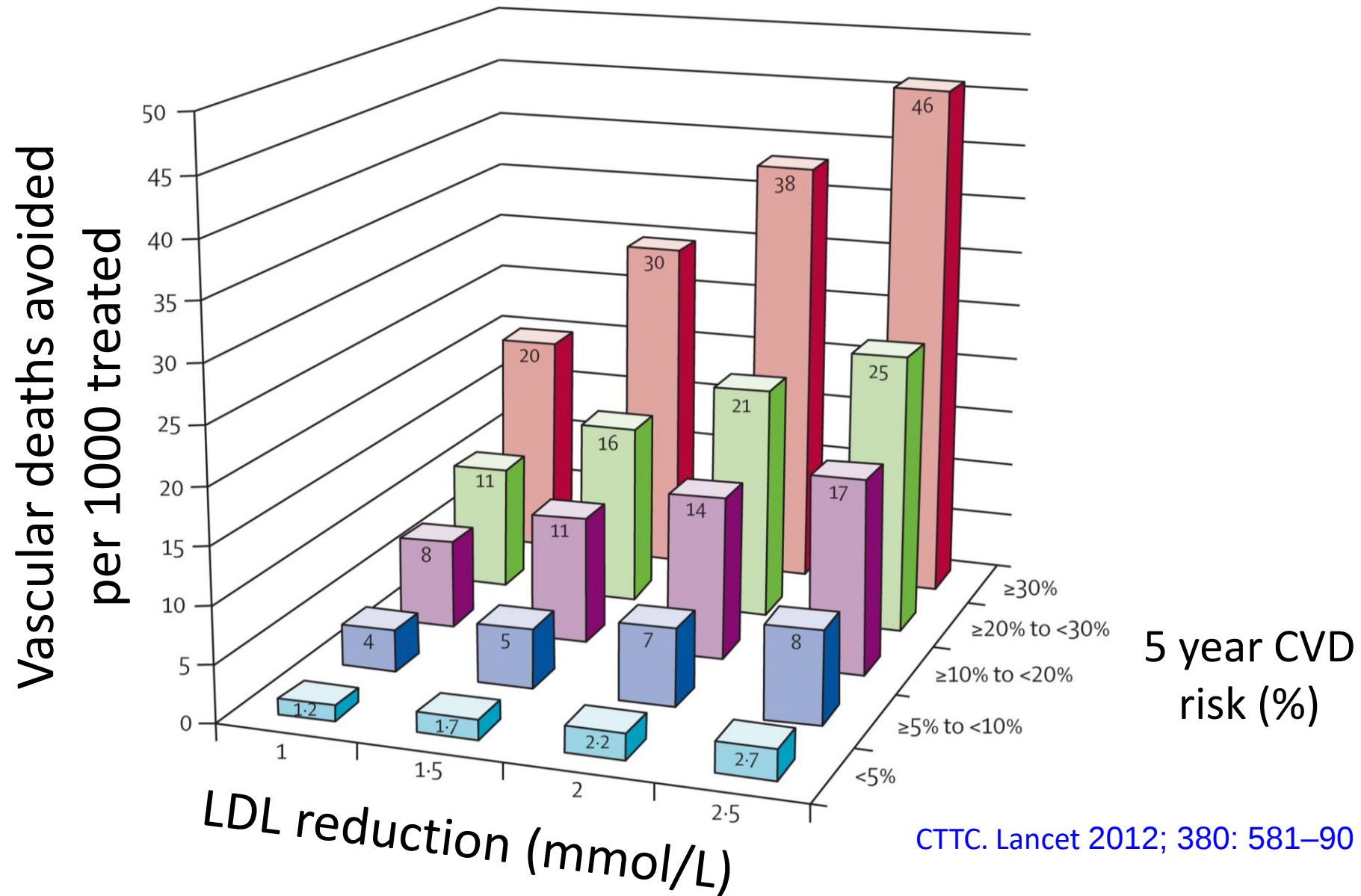
LDL cholesterol & heart attacks



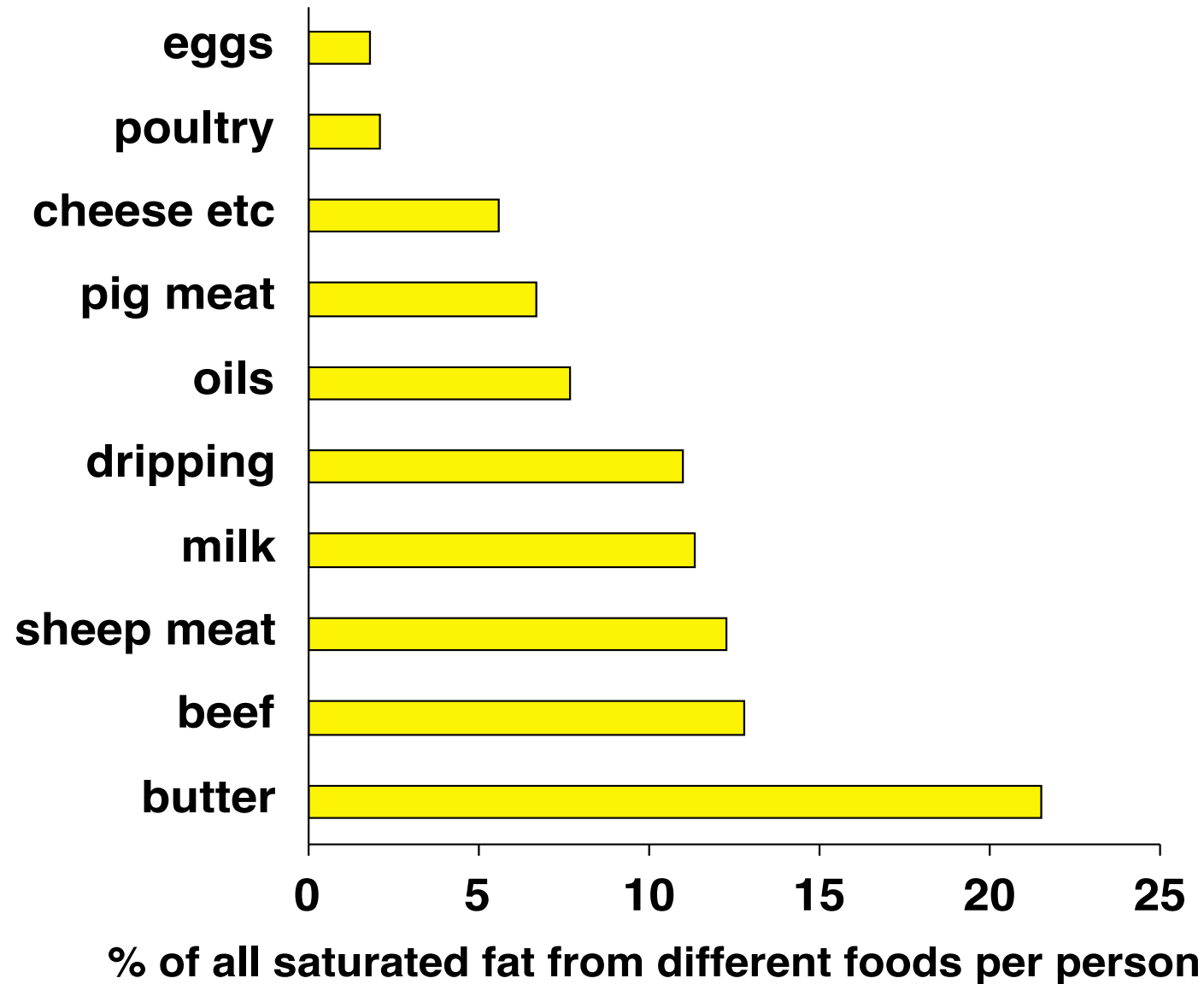
Lancet 2007

meta-analysis of 900,000 people in 61 cohorts followed for > 10 years

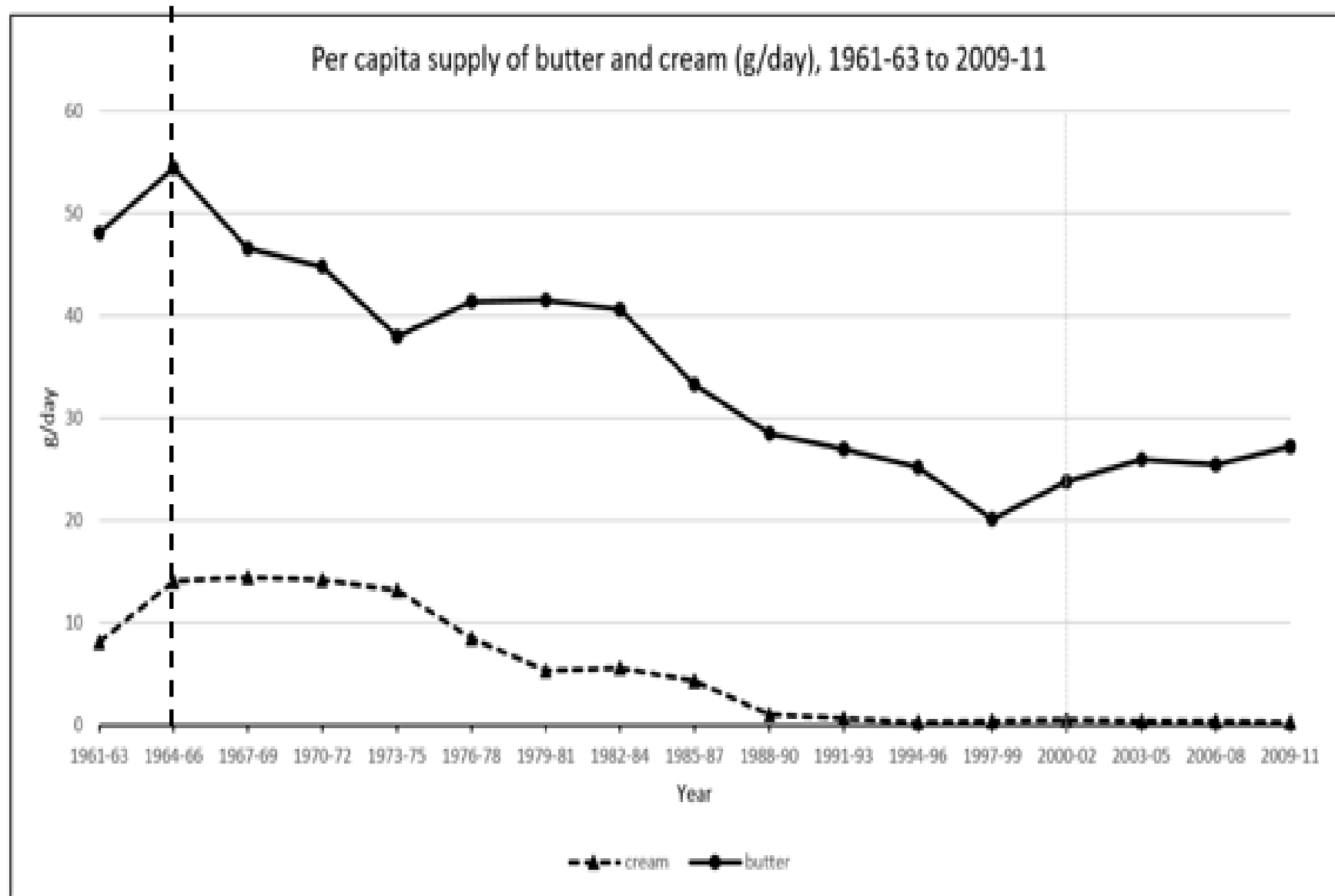
vascular deaths prevented per 1000 treated with statins: by baseline risk and LDL lowering



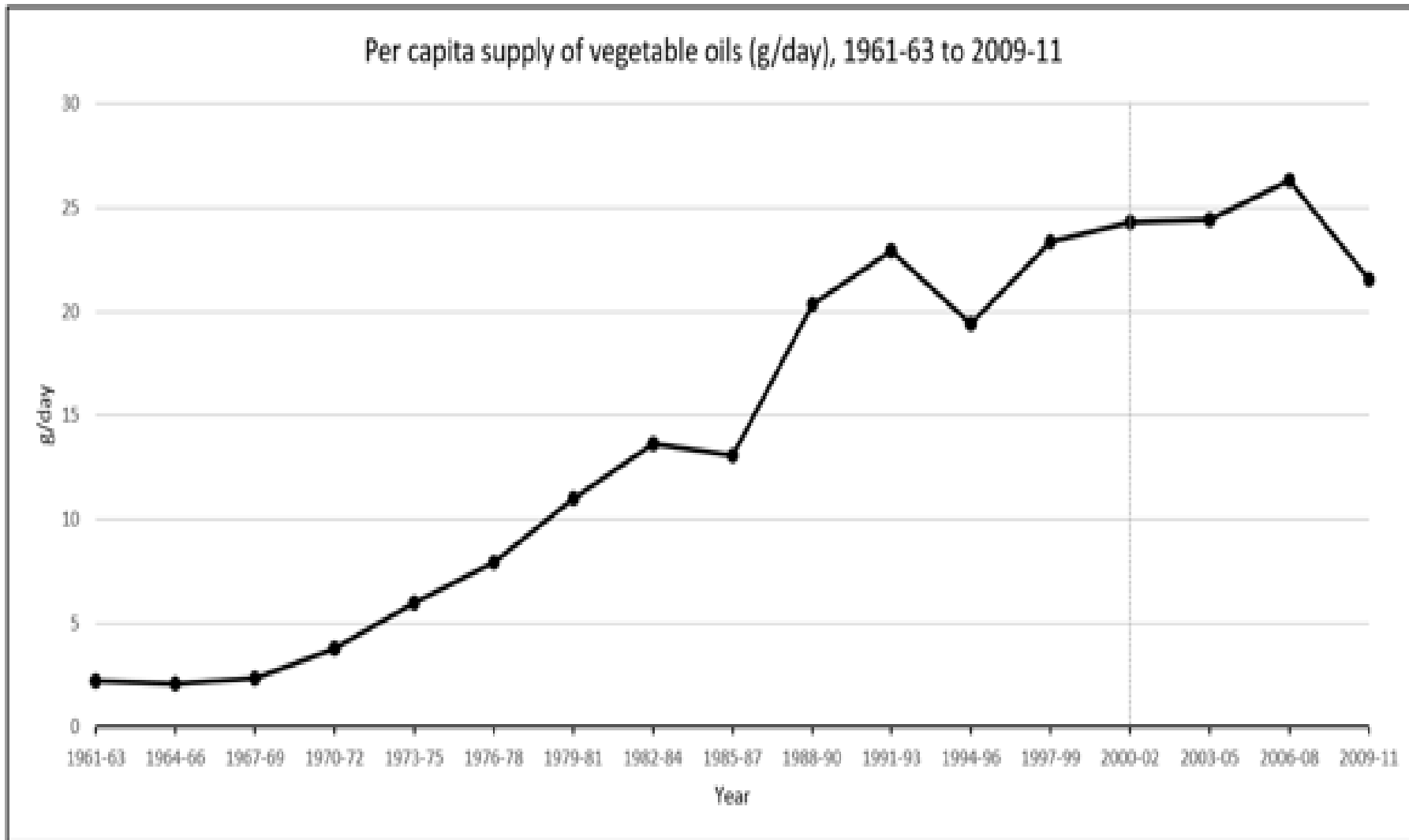
sources of saturated fat in New Zealand diet



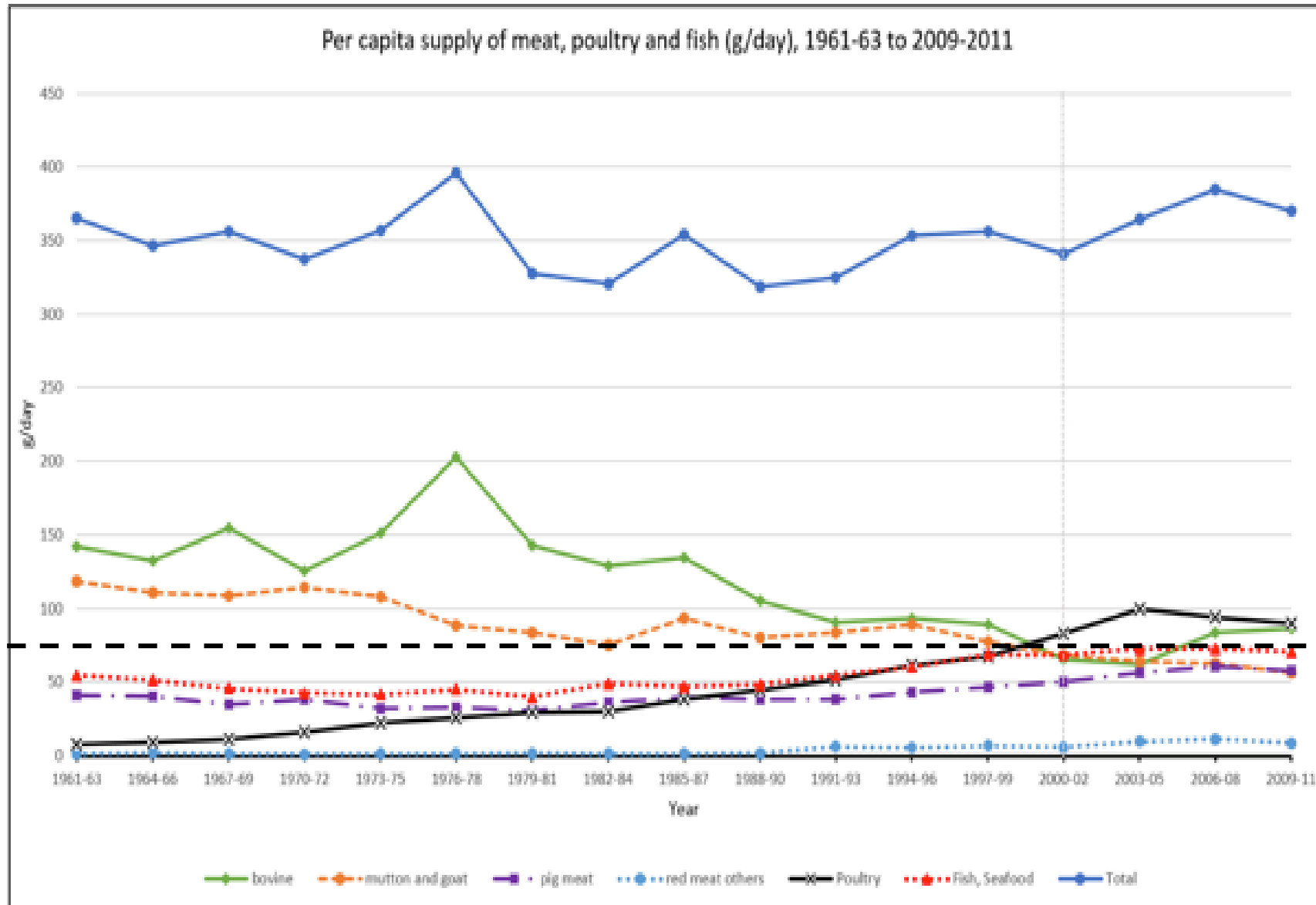
NZ per capita supply butter & cream (g/day) 1961-2011



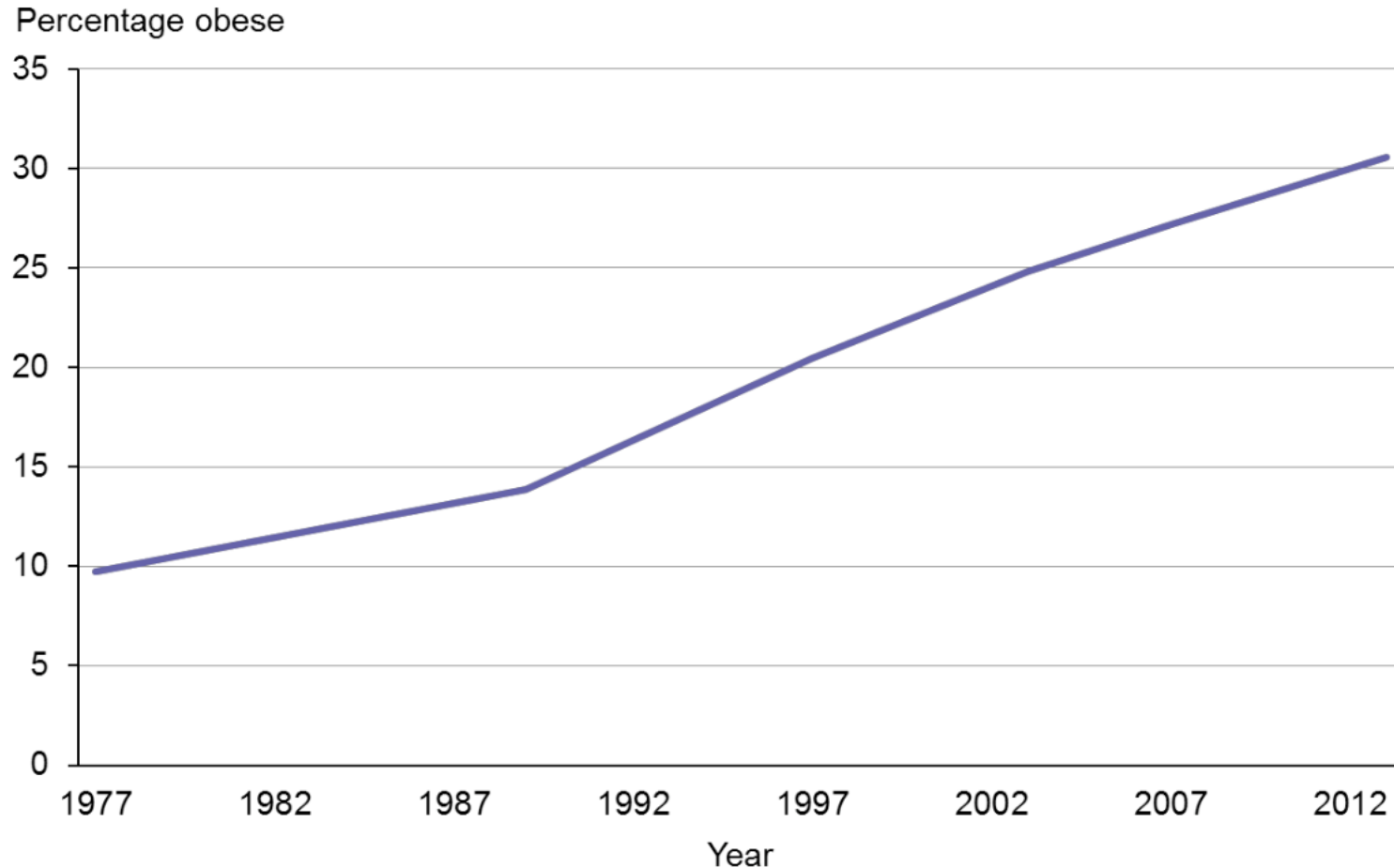
NZ per capita supply vegetable oils(g/day) 1961-2011



NZ per capita supply of meat, poultry & fish(g/day) 1961-2011

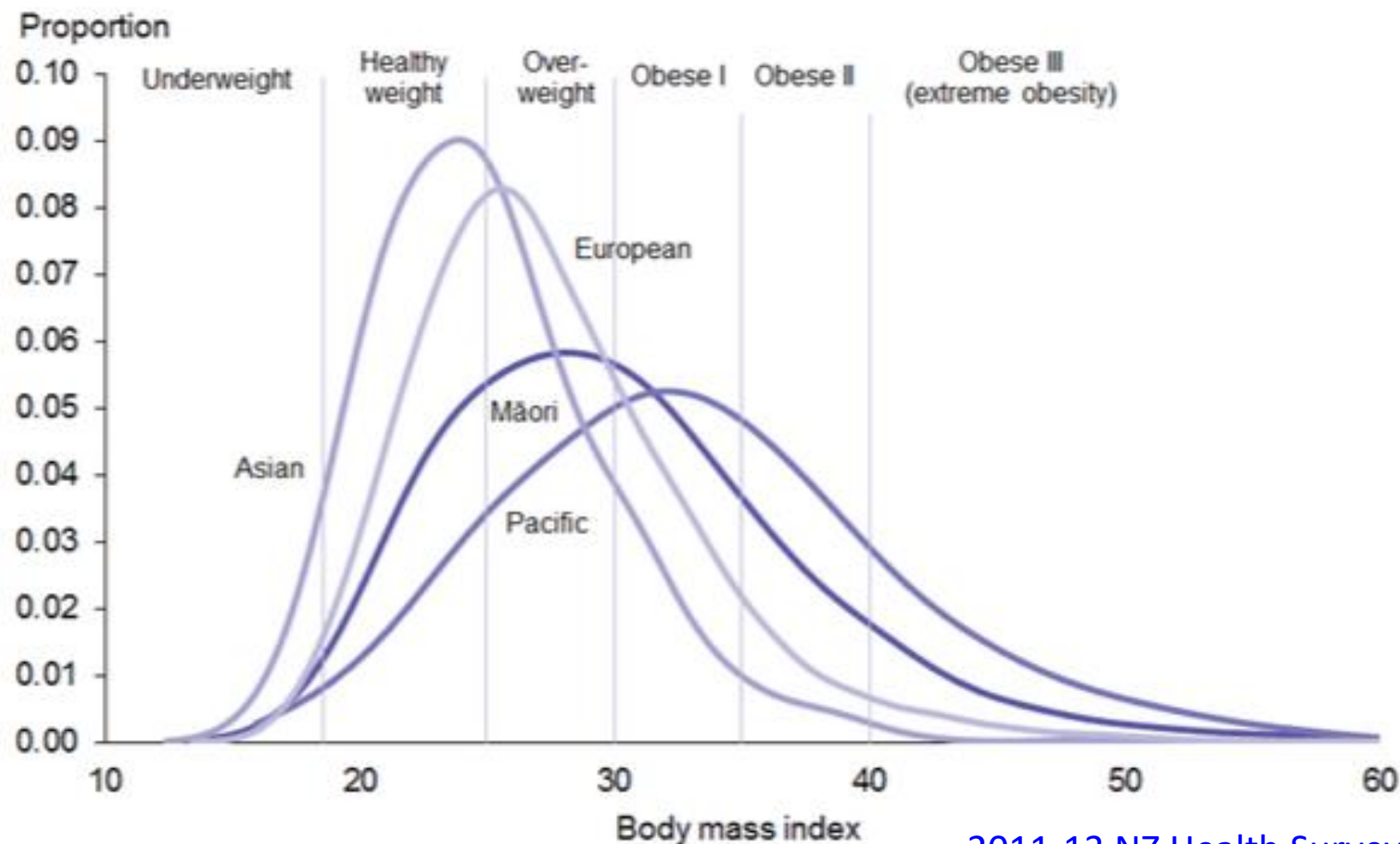


Adult obesity in NZ: 1977-2012/3



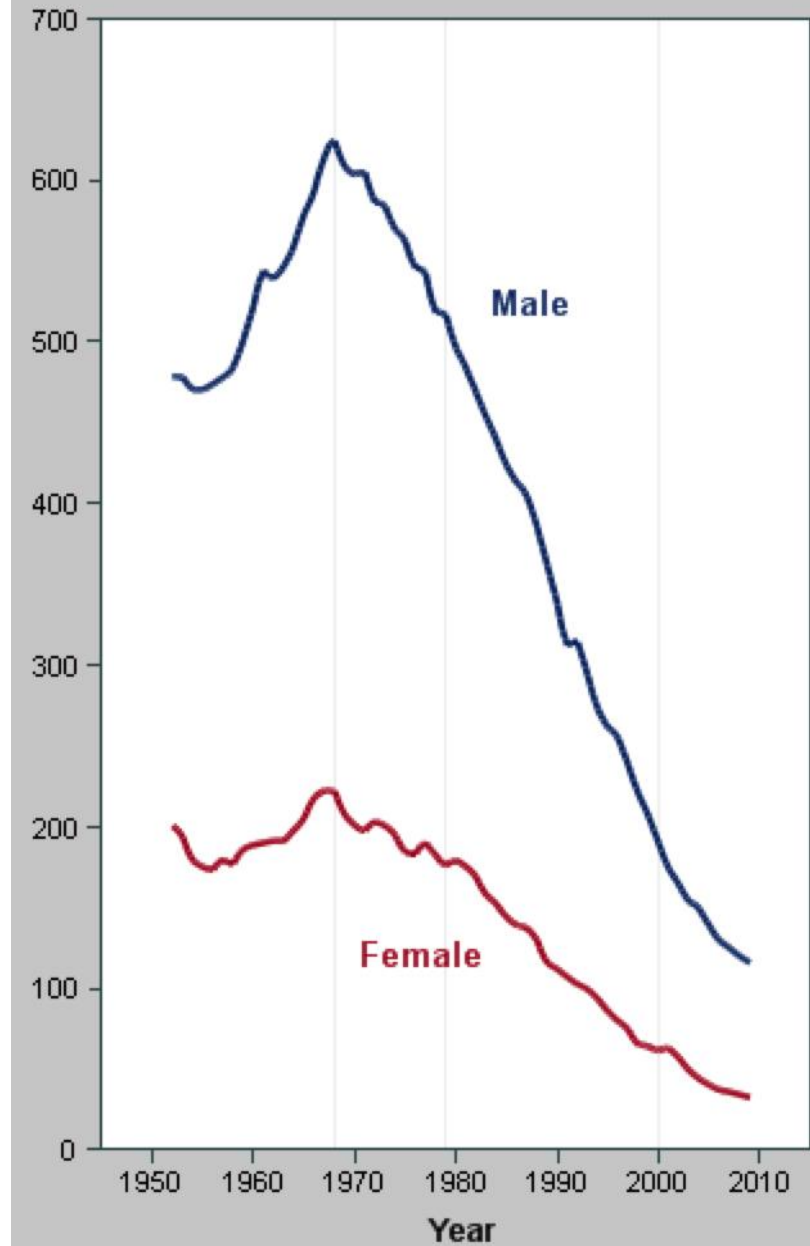
* Note: The 1977 obesity rate refers to adults aged 15–64 years.

BMI in NZ adults 2011-13 by ethnicity: is obesity now the major cause of inequity in NZ?



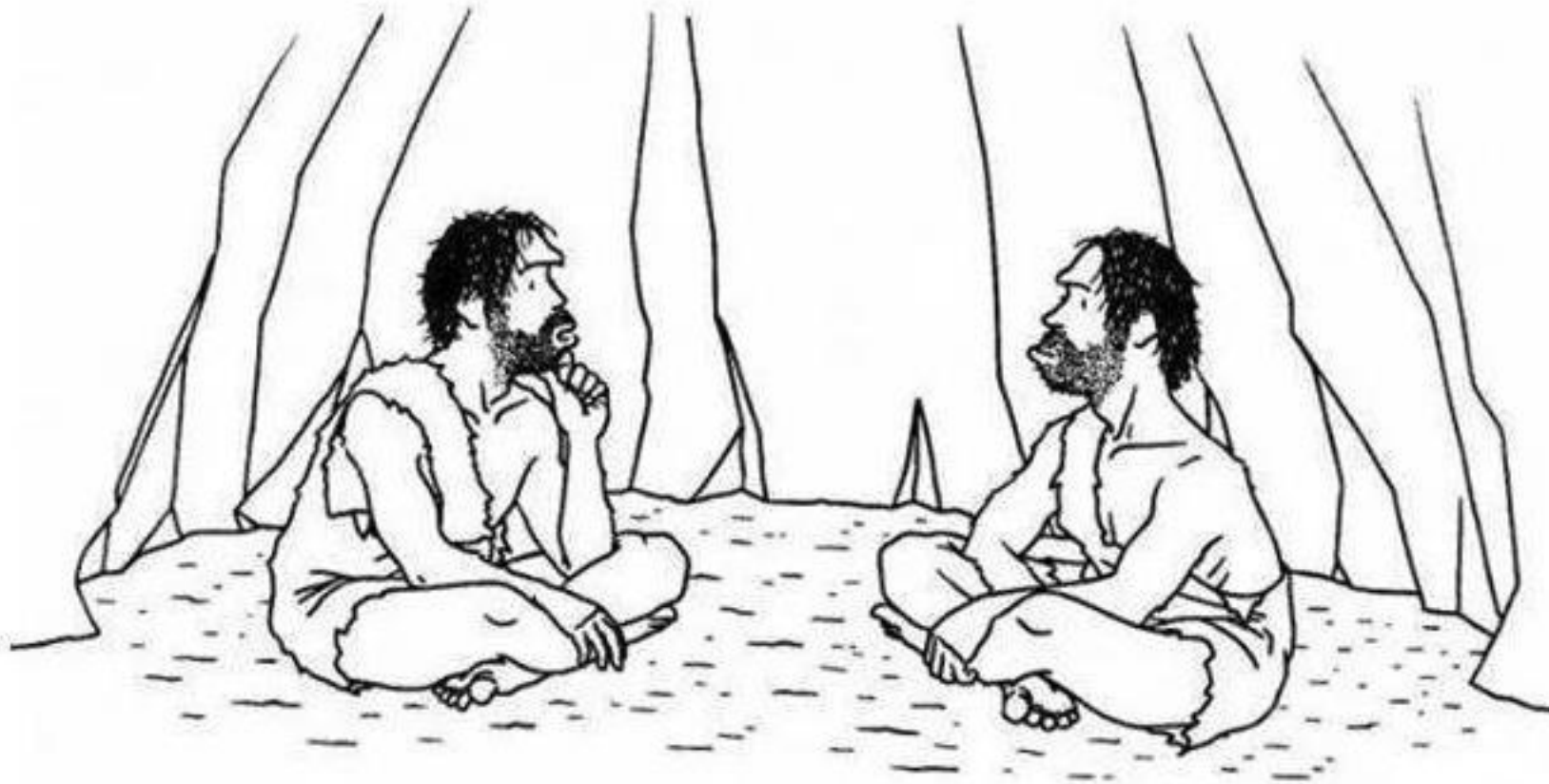


Mortality trends for coronary heart age 35-69 years, New Zealand (A



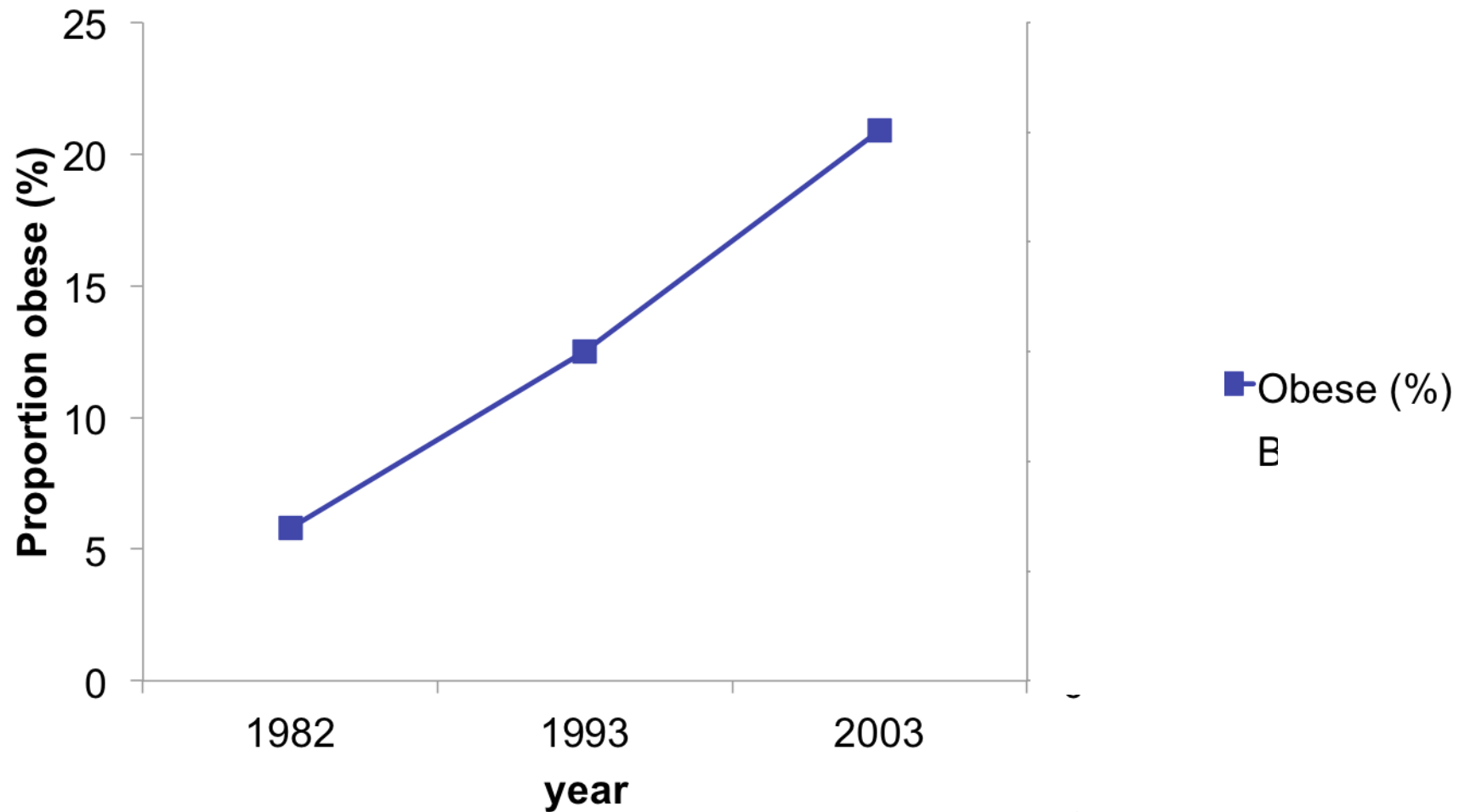
key message 4

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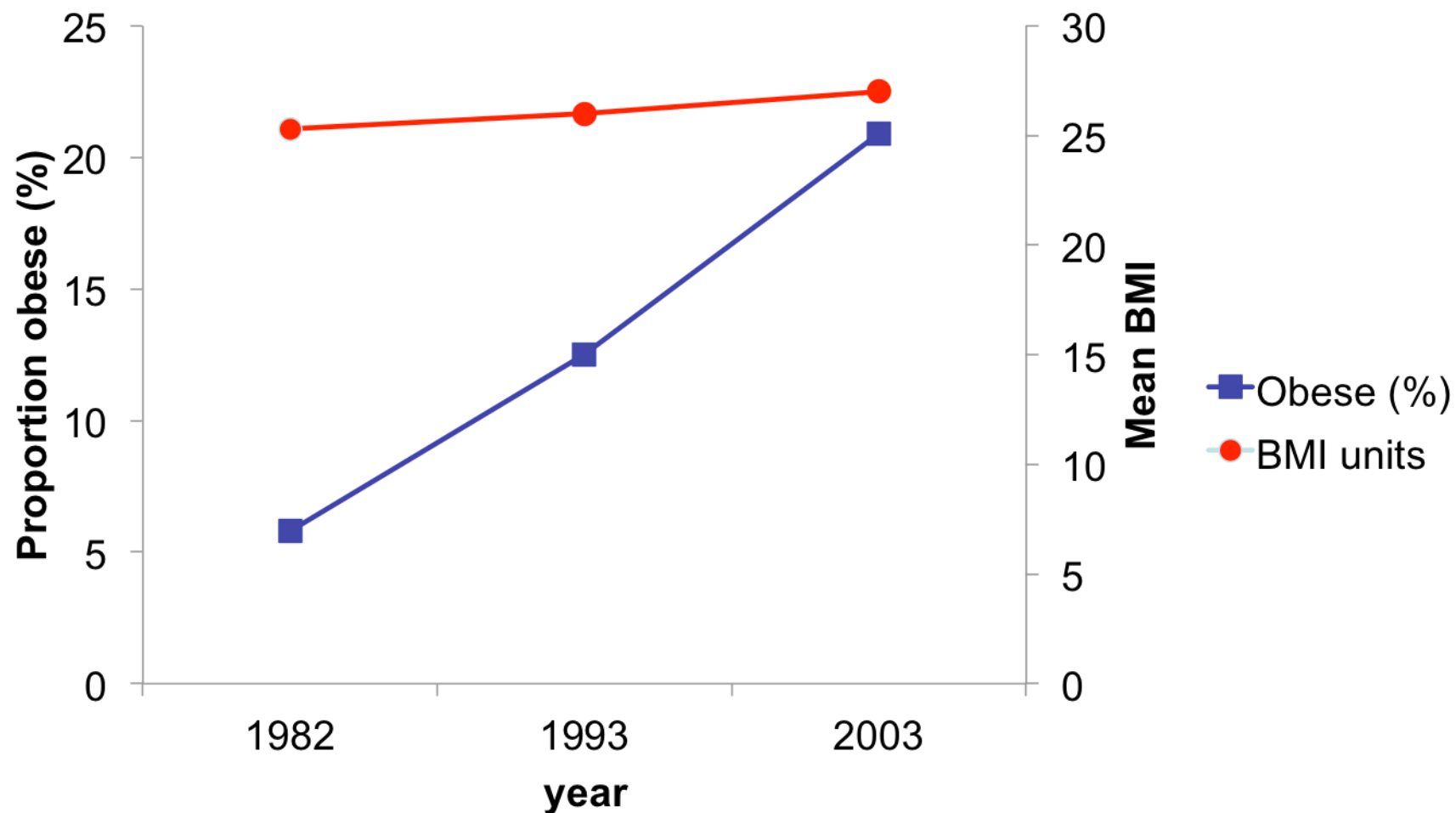
***"I'm thinking of converting to the 21st Century Diet.
I heard they can live up to 100".***

Trends in obesity (% with BMI>30): Auckland men aged 35-44 yrs



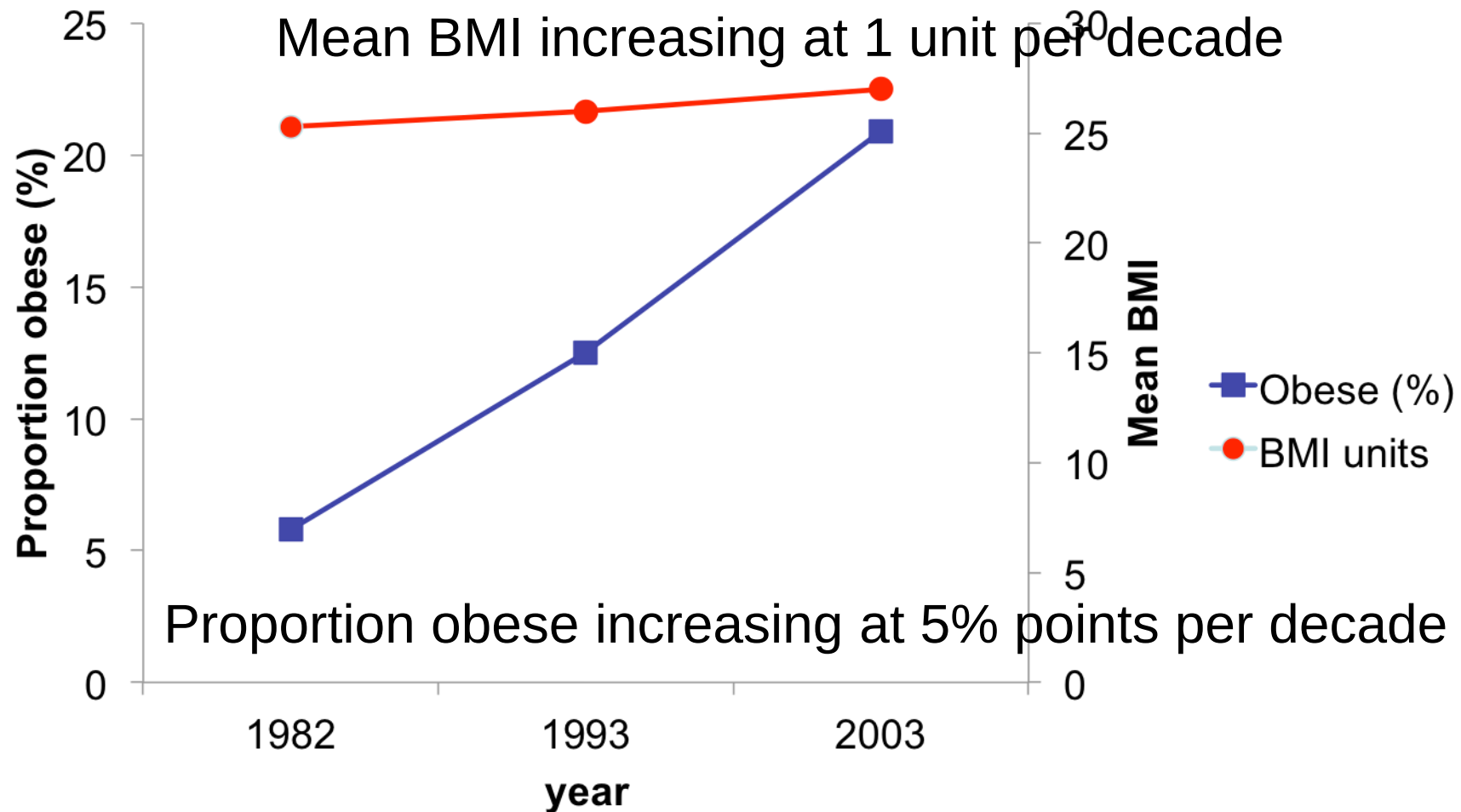
Metcalf et al. NZMJ 2006

Trends in mean BMI & obesity (%): Auckland men aged 35-44 yrs



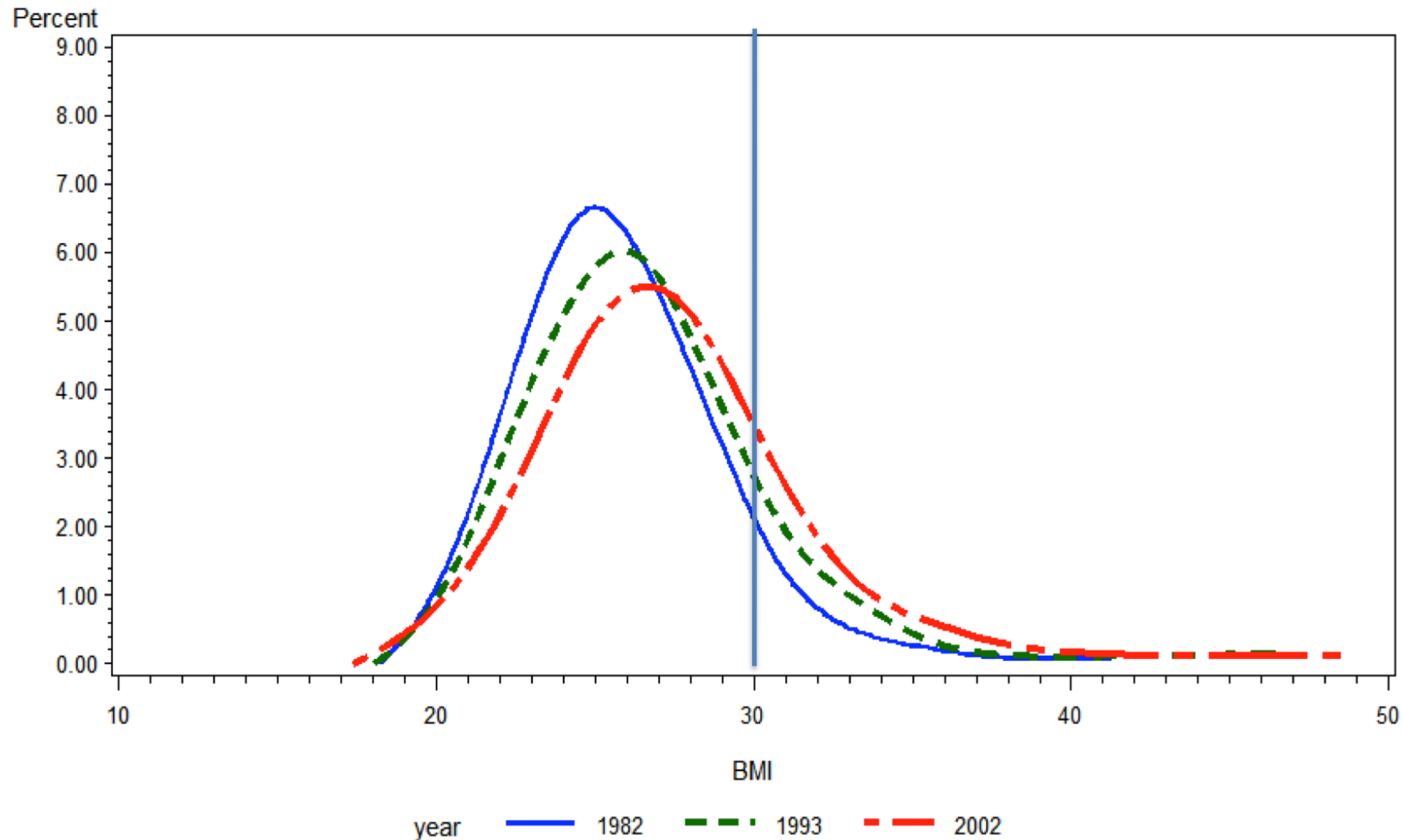
Metcalf et al. NZMJ 2006

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Metcalf et al. unpublished

NZ per capita energy supply (kJ/day) 1961-2011

