Getting to the heart of new risk factors for cardiovascular disease

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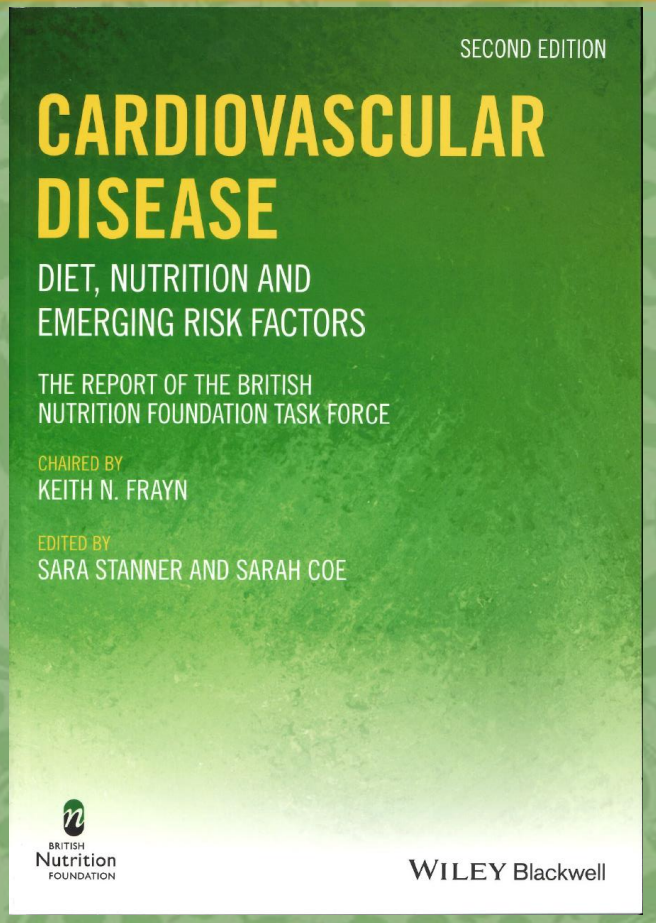
'Nutrition & CVD: The Heart of the Matter'



Cardiovascular disease

"The term *cardiovascular disease* (CVD) refers to a number of individual diseases affecting the cardiovascular system."

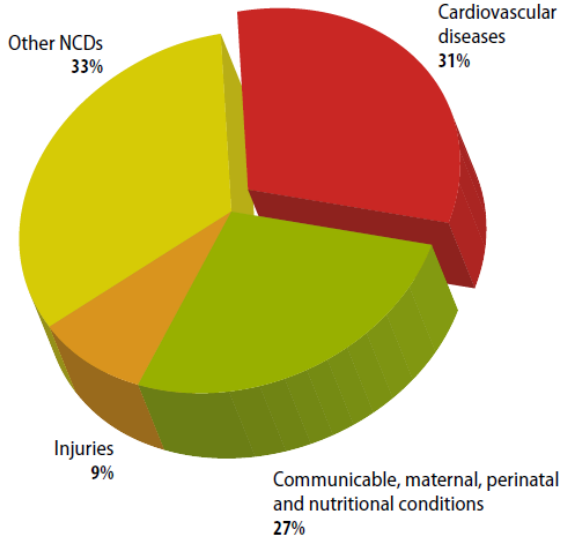
We have concentrated upon:

- Coronary heart disease (CHD)
- Cerebrovascular disease ('stroke')
- Peripheral vascular disease (PVD)

Importance of cardiovascular disease

“Cardiovascular diseases account for over half of all deaths in middle age and one-third of all deaths in old age in most developed countries. Globally CVDs account for 30% of all deaths.”

“CVD is the leading cause of death worldwide, accounting for around 17.3 million deaths each year (31% of all deaths globally). In 2012, it was responsible for the largest proportion of non-communicable disease deaths under the age of 70.”



WHO (2011)

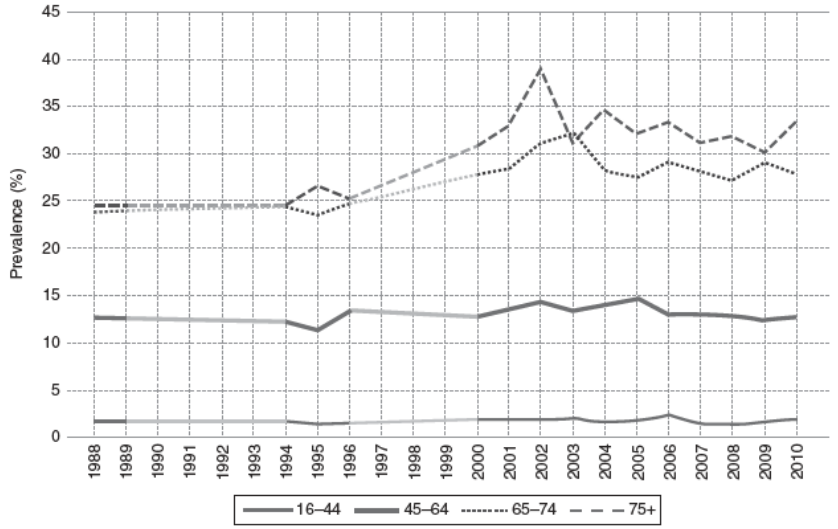


Fig. 1.9 Prevalence of cardiovascular disease reported by the General Household Survey, by age, Great Britain 1988–2010. Source: Townsend et al. (2012).

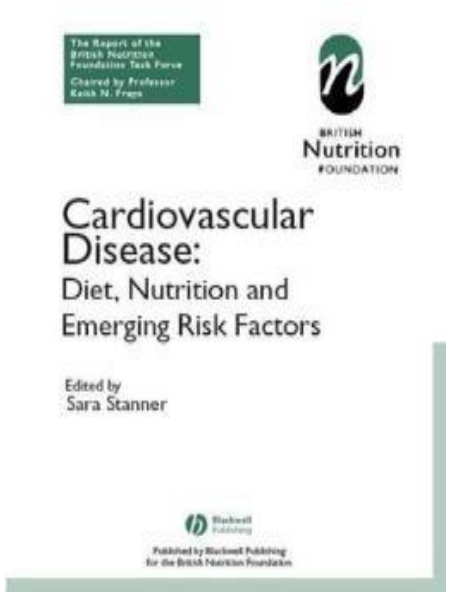
The ‘classical’ (or ‘conventional’) risk factors for cardiovascular disease

Risk factor	Modifiable by diet?
Age	No
Gender	No
Socioeconomic status	(Yes)
Ethnic group	No
Smoking	No
Serum cholesterol (LDL-C+, HDL-C-)	Yes
Serum triglycerides	Yes
Blood pressure	Yes
Diabetes	Somewhat
Physical inactivity	No
Obesity	Yes

‘Emerging’ risk factors for cardiovascular disease

Risk factor
Lipid-related factors (other than cholesterol)
Inflammation- related factors
Vascular function
Coagulation-related factors
Oxidative stress (markers of)
Blood homocysteine concentration/B vitamin status
Microbiome
Factors related to adipose tissue
“*Common mechanisms*”
Abdominal obesity/Metabolic syndrome
Maternal and/or fetal undernutrition

Journey of a Task Force report update



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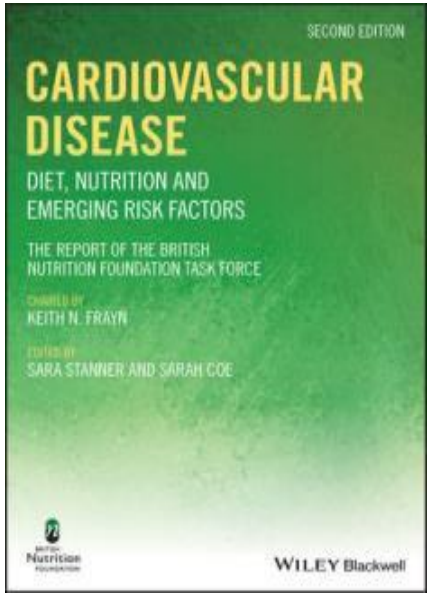


2019

The BNF Task Force on Cardiovascular Disease: Diet, Nutrition and Emerging Risk Factors

Major changes in emphasis since the First Report

Maternal/fetal undernutrition → Lifecourse nutrition

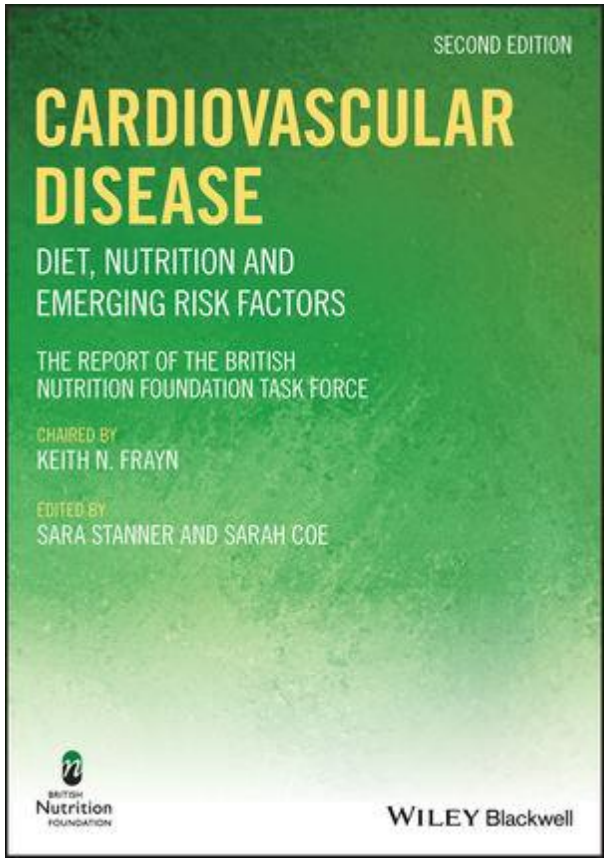
Insulin resistance → Obesity and its associates

Oxidative stress → Much new understanding

Homocysteine → Vitamins and cardiovascular disease

Influences of the human gut microbiome

Physical activity and inactivity → ? Sedentary behaviour



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- Sarah Coe
- Dr Stacey Lockyer
- Beth Hooper
- Dr Lucy Chambers
- Roy Ballam

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Our conclusions

(NB to be summarised in greater detail by Professor Buttriss)

1. Diet extremely important
2. But not any one particular dietary component – no ‘superfoods’
3. Dietary/nutritional effects may be subtle
4. One big effector, not strictly ‘diet’: Physical activity/inactivity

This morning's programme

- *Early life nutrition: the origins of CVD?*
  Prof Caroline Fall, Professor of International Paediatric Epidemiology within Medicine, University of Southampton
- *Diet and inflammation-related factors in CVD*
  Prof Parveen Yaqoob, Professor of Nutritional Physiology, University of Reading
- *Human gut microbiome: a new frontier for CVD*
  Prof Julie Lovegrove, Hugh Sinclair Professor of Human Nutrition, University of Reading

Break

- *Physical inactivity and sedentary behaviour as CVD risk factors*
  Bridget Benelam, Nutrition Communications Manager, British Nutrition Foundation
- *Summing up the public health implications*
  Prof Judy Buttriss, Director General, British Nutrition Foundation

BNF Closing Remarks