

PREM 19/1574

Confidential Filing

Coronary heart disease, CHD.  
on Medical Aspects of Food  
Policy (CONNA) Panel Report  
on Diet and Cardiovascular  
Disease.

NATIONAL  
HEALTH

JULY 1984

Referred to	Date	Referred to	Date	Referred to	Date	Referred to	Date
<del>12-7-84</del>							
12-7-84							
<del>8-3-85</del>							
7-8-85							
PREM 19/1574							



10 DOWNING STREET

*From the Private Secretary*

7 August 1985

The Prime Minister has now seen your Secretary of State's minute of 6 August about the Report on Diet and Cardiovascular Disease by the Committee on Medical Aspects of Food Policy (COMA). She has also seen the minute by the Minister for Agriculture, Fisheries and Food on the same subject.

The Prime Minister recognises that in some respects the report produced by the Joint Advisory Committee on Nutrition Education is less than satisfactory. In these circumstances, however, she considers that to seek to insist on further amendment would draw even more attention to the deficiencies in the report. She believes therefore that we have no real alternative but to allow the JACNE to proceed to publication without comment from the Government. If comment is absolutely necessary then it should be in as low key a fashion as possible.

I am copying this letter to Ruth Rawling (Ministry of Agriculture, Fisheries and Food), John Graham (Scottish Office), Colin Williams (Welsh Office) and Jim Daniell (Northern Ireland Office).

(Tim Flesher)

Miss Elizabeth Mothersill,  
Department of Health and Social Security.

By

PRIME MINISTER

FOOD

The attached minutes from the Social Services Secretary and the Minister for Agriculture reports possibly the silliest disagreement I have seen reported to <sup>you</sup> me for resolution. The story is this:-

Last year the Government accepted and endorsed a report by the Committee on Medical Aspects of Food Policy (COMA) that recommended reducing the intake of saturated fat in order to reduce heart disease. Subsequently the Social Services Secretary commissioned the Joint Advisory Committee on Nutrition Education (JACNE) to convert this guidance into practical recommendations for the general public. This guidance is now with the Government.

The problem is that in two respects the JACNE booklet goes slightly further than the Government wants in recommending a reduction in the intake of butter and meat. The points in dispute are at Flag A.

The difference of view is that the Social Services Secretary believes that the problems with the booklet are not significant enough to stop publication; the Minister of Agriculture is more worried. He thinks that the document goes further than current Government policy on these two points.

The other crucial factor is that the Government are now being accused of suppressing the report and in any event the British Nutrition Federation (one of the components of JACNE) will publish the booklet on Friday, ~~This is~~ if the Government are prepared to do so.

Two points seem to me relevant to the decision:-

- i) We cannot stop the booklet being published anyway;  
and

- ii) The nuances of drafting between what the Government wants and what JACNE want will only become significant if the Government makes a fuss about it.

In these circumstances I recommend that we accept the Secretary of State for Social Services advice and let publication go ahead, with instructions to MAFF to say on the points at issue that the JACNE advice goes slightly further than they would wish. I also suggest that I convey a certain amount of displeasure at being called upon to resolve such a trivial issue.

*The less said about it, the better  
rob.*

*TJ*

Tim Flesher

7 August 1985



From the Minister

**PRIME MINISTER**

**REPORT ON DIET AND CARDIOVASCULAR DISEASE BY THE COMMITTEE  
ON MEDICAL ASPECTS OF FOOD POLICY (COMA)**

1. The Secretary of State for Social Affairs' minute of 6 August reports the disagreement between him and me over publication of a booklet prepared by the JACNE. I see the facts differently from him and feel that there are other important considerations to be taken into account.

2. There is no dispute about the policy we have agreed. We have adopted the recommendations of COMA as part of Government policy on diet and health. The JACNE booklet, commissioned by the Secretary of State, is meant to tell ordinary people what changes the COMA recommendations require in the typical British diet. Its job is to publicise Government policy.

3. However it goes further than COMA in a number of important respects on butter, meat, eggs and the question of cholesterol. The cumulative effect of these differences is to make it a more extreme document than the carefully balanced COMA Report.

4. If it were published without any further amendment, it would have a most unfortunate effect on the implementation of our policy. I whole-heartedly agree with the Secretary of State that the Government cannot be seen to be divided. The success of the policy depends on acceptance by the public of agreed dietary advice and on acceptance by the food industry of the need, on health grounds, for extensive changes in the pattern and methods of food production. We also have to persuade a reluctant European Commission of the need, again on health grounds, for the food labelling measures we propose. All this means that there must be a unanimous front. Our policy implementation would be severely prejudiced if the Government could not say plainly that the booklet expresses what COMA requires, and if industry saw (as they would) that the booklet imposed unnecessary economic cost upon them by going beyond the COMA recommendations.

5 I do not think therefore that we should concede that the JACNE members may distort and damage the policy which they undertook to help us to carry out. In my own efforts to reach agreement, I have concentrated on two or three small but crucial changes (which is not the same thing as one or two small points) which would balance the booklet with COMA. I would be prepared, though with great reluctance, to support the booklet even if the most important point, that on butter, were the only amendment to be made. However the Secretary of State says that he sees no prospect of any further change at all. Yet the HEC is subject to Government control while the BNF have not yet had it brought home to them by

Ministers that their well intentioned support for early publication without further amendment is a threat to the dietary policy which they support. I believe that Government has not yet exhausted its resources and that these should be used to the full rather than that we should run away from the difficulties caused by JACNE members who flout our wishes.

6. Finally, if we had to agree to publication without change, it would not be possible to paper over the differences between our policy and the booklet as easily as the Secretary of State suggests. His formula seriously underplays them, and we should have to make it clear to the public exactly where and how the booklet went further than COMA.

M. J.  
6 August 1985

^







PRIME MINISTER

REPORT ON DIET AND CARDIOVASCULAR DISEASE BY THE COMMITTEE ON  
MEDICAL ASPECTS OF FOOD POLICY (COMA)

You will have seen the reports in The Sunday Times and in yesterday's Guardian that the Government is suppressing or censoring nutritional advice produced by an independent body, under pressure from food and agriculture lobbies.

The facts are as follows:

- Last year the Government accepted and endorsed a report by COMA that recommended reducing the intake of saturated fat in order to reduce coronary heart disease.
- I commissioned the Health Education Council (HEC) and British Nutrition Foundation (BNF), together with their Joint Advisory Committee on Nutrition Education (JACNE), to convert the COMA scientific recommendations into practical dietary guidance for the general public. This guidance is now with me.
- Two small points on the text are in dispute (see Annex). On butter, the Minister for Agriculture, Fisheries and Food and I agree that it is worded more strongly than the COMA report requires, and the author of the COMA report (Sir Philip Randle) shares our view. On cooking, Sir Philip Randle and the Chief Medical Officer consider the JACNE text acceptable: I accept their advice; the Minister for Agriculture, Fisheries and Food does not.

I have no powers to stop copies of the JACNE booklet being given to the Press. I have certainly no powers to prevent the BNF from publishing it independently. And I understand the BNF will release

E.R.

a Press Notice tomorrow, Wednesday, expressing concern at the delay and that they propose to issue the text of the booklet to the press on Friday if there is no firm indication from us that we will publish. I would have formally to direct the HEC not to publish if I wished to stop them.

We have already negotiated a number of changes with JACNE. I see no prospect of further changes now being agreed. In my judgement we make ourselves look foolish by continuing to convey an impression of suppression - particularly since I have neither the power nor the desire to do so. The Government cannot be seen to be divided on this.

There is everything to be said in my view for having the booklet published in an objective way, albeit with some qualification on our part. Our line would then be that the Government welcomes the booklet as helping to show how each of us can choose our own way to cut back on saturated fats; that there are some points which the Government cannot endorse because they go slightly beyond the COMA recommendations; but that the Government expects that people will apply the advice in a commonsense way. Michael Jopling does not agree and, for this reason, I am referring the matter to you since I believe we have no real alternative but to agree that HEC and BNF proceed to publish the booklet with comment from the Government as set out above.

Kenneth Clarke would be available for any meeting on this.

I am copying this minute to Michael Jopling, George Younger, Nicholas Edwards and Douglas Hurd.

*Elizabeth Matherell*

6 August 1985

*for* N F

*(Approved by the Secretary of State)*

JACNE GUIDANCE: POINTS IN DISPUTE

BUTTER

JACNE draft: "Butter has a lot of saturated fat. If you do not want to do without butter completely, why not have an alternative handy so that you are not using butter all the time."

Government proposal: "Butter has a lot of saturated fat. You will find it easier to reduce the amount of butter you eat by having an alternative handy."

COOKING

JACNE draft: "Try using less meat - add more beans and vegetables."

Government proposal: Omit above sentence.





Ministry of Agriculture, Fisheries and Food  
Whitehall Place London SW1A 2HH

From the Minister's Private Office

NBPM  
MEA 8/13

Stephen Hickey Esq  
Private Secretary to the Secretary of State  
Department of Health and Social Security  
Alexander Fleming House  
Elephant and Castle  
London SE1 6BY

8 March 1985

*Dear Stephen*

**COMA REPORT ON DIET AND CARDIOVASCULAR DISEASE**

Officials in the agricultural departments and DHSS have been considering the Government's response to this report, which was published last July. My Minister now wishes to announce our response to those recommendations which affect agriculture and food policy, and I enclose a copy of his proposed statement, which I understand reflects the views of the Parliamentary Under-Secretary of State for Health.

My Minister would like to make this announcement, via a Written Reply, on Tuesday 12 March. I would be grateful for any comments by midday on Monday.

I am copying this letter to Mark Addison (No.10), to Private Secretaries of members of H Committee, to Murdo MacLean (Chief Whip's Office) and to Richard Hatfield (Cabinet Office).

*Yours ever*  
*C I Llewelyn*

C I LLEWELYN  
Private Secretary

DRAFT QUESTION

To ask the Minister of Agriculture, Fisheries and Food whether the Government have yet completed consideration of those recommendations in the Report of the Committee on Medical Aspects of Food Policy on Diet and Cardiovascular Disease which are of concern to his Department: and whether he will make a statement.

DRAFT REPLY

1. I have examined carefully the recommendations in the COMA Report on Diet and Cardiovascular Disease in consultation with my Rt Hon Friends the Secretaries of State for Social Services, Scotland, Wales and Northern Ireland. Since the Report was published in July last year officials have also held preliminary discussions with representatives of food and drink manufacturers, distributors, retailers, consumers, and local authority organisations. My Rt Hon Friend the Secretary of State for Social Services has invited the British Nutrition Foundation and the Health Education Council to ask their Joint Advisory Committee on Nutritional Education to produce practical guidance for families based on the recommendations. We are therefore working towards implementing all the COMA recommendations to Government. Much remains to be done but I can now announce the Government's general proposals on those recommendations which affect agricultural and food policy.

2. COMA made important proposals for the labelling of the fat content of food. The Government intend to introduce statutory requirements concerning foods which make a significant

contribution to the fat intake in the diet. Such foods should be labelled with their total fat content and their saturated fatty acid content. In the important cases of butter, margarine, table spreads, cooking fat and other edible oils, the saturated fatty acid content would be shown with the trans fatty acid content as a combined figure. The new requirements would cover not only packaged food but also foods sold loose, although the detailed labelling requirements would need to be varied to allow for the particular circumstances of different parts of the food industry and there will therefore be further consultations on some of the more difficult problems. Labelling of individual portions is clearly not practical in the case of catering establishments. However, the Government will discuss with the trades covering all such cases how to ensure in a practical way that they can play their part in providing consumers with information about the fat in the foods they serve. Foods which do not make a significant contribution to fat intake would be outside the new labelling requirements: they include such items as most fruit and vegetables, cereals and bread and flour.

3. Representatives of the food industry have asked the Government to consider full nutrition labelling of all foods covering such things as energy, protein, and carbohydrate content as well as fat content. We do not propose to introduce compulsory full nutrition labelling but will prepare draft guidelines and will circulate them for comment to all the interests concerned. While full nutrition labelling would therefore remain voluntary, the Government will consider whether to prescribe a standard

format by regulation, in order to avoid the confusion among consumers that differing formats might cause.

4. The Government, the Consumers Association and the National Consumers Council are collaborating in a survey of consumer understanding of, and requirements for, fat content and nutrition labelling. The results are expected in May and will be taken into account in reaching the Government's final conclusion.

5. COMA recommended that all alcoholic drinks should be labelled with the percentage of alcohol by volume. Similar proposals for Community regulations have been made by the European Commission and are to be debated by Parliament. The Government will take careful account of the views of Parliament and of the Commission's proposals before reaching a decision, but believe that regulations should be introduced in line with the COMA recommendations.

6. COMA recommended that alternative preparations of food should be made available with lower saturated fat or lower salt contents. The Government will continue its discussions with the industry on this matter and note that there are already a number of alternative lower fat products on the market, such as low fat dairy products, table spreads and sausages.

7. I have considered the recommendation for the production of leaner carcasses of cattle, sheep and pigs. So far as cattle and sheep are concerned, I have concluded that it would be



appropriate to adjust the certification standards applying under the respective variable premium schemes so as to exclude from eligibility the fatter animals (i.e. in the case of cattle those falling into fat class 5; and those covered by the fatter end of the MLC's fat class 4 in the case of sheep). I believe that, given reasonable notice, beef and sheep producers should be able to make the necessary adjustments to their husbandry and breeding practices. I accordingly have it in mind that these changes should be effective from the beginning of the 1986 marketing years. Meanwhile, my officials and MLC staff will be collaborating in a suitable programme of advisory events. There are no corresponding arrangements for pigs, but the trend there continues to be towards the production of leaner animals.

8. I have carefully noted the recommendations to consider ways of removing from the Common Agricultural Policy those elements which might discourage dietary change. The Government believe that production should be geared to consumer demand as expressed in the market place. In general the commodity regimes of the CAP do not discourage individuals from implementing the COMA dietary recommendations if they wish to do so. The Government will however in future take this recommendation fully into account, with other relevant considerations, in determining the UK position in negotiations on the CAP. The European Commission has proposed that the general consumer butter subsidy should lapse at the end of 1984/85 and the Government intends to accept this provided other relevant decisions are satisfactory.

9. In carrying out its proposals the Government must bear in mind its responsibilities as a member of the EEC where food labelling law is already harmonised. We will therefore remain in close touch with the European Commission.

10. The Government recognises that some parts of the industry face genuine practical problems which will have to be resolved in further discussion; but I am confident that all those involved will continue to adopt the same constructive and co-operative approach as they had done hitherto. I intend to issue proposals for regulations later this year.

11. In the meantime, my Rt Hon Friend the Secretary of State for Social Services expects that the guidance being sought from the Joint Advisory Committee on Nutritional Education will be published in the early summer, and that it will be followed by nutrition advice for schools and other groups. In addition, the catering guidance provided by his Department for use by hospitals, local authorities and many private catering establishments is being revised to reflect COMA advice. Finally, work is going forward to assess the possibilities for better and more cost effective ways of identifying people at high risk of coronary heart disease, including research into the means of facilitating measurement of blood lipids.

TO BE ISSUED AT ..... 4.30

July 12, 1984

MICHAEL JOPLING COMMENTS ON COMA REPORT

Speaking in London today, about the Committee on Medical Aspects of Food Policy (COMA) Panel Report on Diet and Cardiovascular Disease, the Rt Hon Michael Jopling, MP, Minister of Agriculture, Fisheries and Food said:

"This is a most important and authoritative Report by the Government's independent medical advisers. It is important above all because it aims to reduce the level of heart disease. The incidence of heart disease is higher in the United Kingdom than in the great majority of other developed countries and the Government recognise it as a major problem.

"But in addition, the Report will help to provide a basis on which advice to the public about healthy eating generally can be based. However, since it quite rightly looks at the national diet very broadly, it now needs to be translated into more specific advice which will enable people differing in their age, activities and health to decide how they can improve their own diet. That is something in which, as Minister of Food, I am very much interested and to which the Government attaches great importance. Incidentally, this Report will, I hope, knock on the head stories - so much more exciting than the truth - that the Government has suppressed evidence on the link between diet and health.

"The Report is also a useful antidote to the extremists who appear to want to make our traditional eating habits into some kind of political scandal. But it does recommend a broad shift in the

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No 241

nation's diet away from the consumption of saturated fat towards fibre-rich carbohydrates like bread and cereals. There is also a recommendation to eat more fruit and vegetables. So we may expect changes in what the public demands.

"This will present both difficulties and opportunities to all those who produce, process or distribute our food. Challenge is not new to them, and I believe that they will respond not only because of their skill in providing what the public need, but also because they recognise fully the vital importance of the nation's health.

"The direction in which the Report points is not new. It reinforces the general advice the Government has already given and trends in eating habits which have already begun. Some of the steps it recommends are being taken: for example, the Government has done a great deal to improve the labelling of food and drink, and is now discussing with the industry possibility of fat content labelling. Work like that will continue, and will be extended where this Report suggests the need for it. **The Government will of course** study all the recommendations most carefully, and is confident of full co-operation from the food and agriculture industries in the consultations that will be needed. But if the Report points clearly in a direction in which we are already moving, it is no less important for that."

#### NOTE FOR EDITORS

On July 5, 1984 the Rt Hon Michael Jopling, MP, Minister of Agriculture, Fisheries and Food spoke about food and diet in Britain - Press Notice No 232 refers.



NORTHERN IRELAND OFFICE  
WHITEHALL  
LONDON SW1A 2AZ

SECRETARY OF STATE  
FOR  
NORTHERN IRELAND

The Rt Hon Norman Fowler MP  
Secretary of State for Social Services  
Alexander Fleming House  
Elephant & Castle  
London SE1 6BY

*As per mins  
12/7*

11 July 1984

*Dear Mornah*

DIET AND CARDIOVASCULAR DISEASE

*attached*

I have seen a copy of your letter of 2 July 1984 to Willie Whitelaw on this subject. The issues involved have considerable importance for Northern Ireland, from the points of view of both Health and Agriculture.

Northern Ireland has the highest incidence within the United Kingdom of death from coronary heart disease and I welcome any proposals which are soundly based and likely to contribute to a reduction in that incidence.

The proposals will of course have implications for the food and agriculture industries but it seems to me that if over-reaction can be avoided, there is unlikely to be an immediate major effect on primary production. Provided therefore that we can be satisfied that the arrangements proposed at (b) on page 2 of your letter, will result in dietary guidance which is sensible and balanced, I would be content with the line you propose.

I am copying this letter to the Chairman and members of 'H' Committee and to the Prime Minister.

*[Handwritten signature]*

1 JUL 1984

12 1 2 3  
4 5 6  
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PRIVY COUNCIL OFFICE  
WHITEHALL, LONDON SW1A 2AT

11 July 1984

*again  
Dubs  
11/3*

*Dear Norman*

**DIET AND CARDIOVASCULAR DISEASE**

Thank you for your letter of 2 <sup>attached</sup> July about the publication of the COMA report.

I have seen the comments from Quintin Hailsham and Arthur Cockfield, who approached the subject from rather different view points but both agree with the way in which you intend the report should be presented. You will also have seen that the Prime Minister would like you to take account in presentation of the probability that the report will not be well received by the farming community. Subject to any other comments you receive in the time available, you may take it that you have H Committee clearance for the proposals.

I am sending copies of this letter to the Prime Minister, the members of H Committee, the Minister of Agriculture, and to Sir Robert Armstrong.

*Norman Fowler*

The Rt Hon Norman Fowler MP

CC81

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD  
WHITEHALL PLACE, LONDON SW1A 2HH



From the Minister  
CONFIDENTIAL

The Rt Hon Norman Fowler MP  
Secretary of State for Social Services  
Department of Health and Social Security  
Alexander Fleming House  
Elephant & Castle  
London SE1

Prime Minister (2) nbpm  
You were concerned about handling  
farmers' reactions to this report.  
Attached is a draft statement  
which Mr Jopling proposes to issue.  
10 July 1984  
DJS  
#17

*Norman*

Thank you for sending me a copy of your letter of 2 July to Willie Whitelaw outlining your proposals for handling the COMA Panel Report on Diet and Cardiovascular Disease. I am content with these. Many of the Report's recommendations are directed at my Department or at the food and agriculture industries. I am anxious that these industries should be encouraged to support the Government's position, which inevitably involves economic problems for them. I therefore think that, as their sponsoring Minister, I should make a press statement on -- 12 July after publication. I attach a copy of what I propose to issue, and would be glad of your agreement.

I am also concerned that the dietary advice which is to be prepared for consumers following the Report is well-balanced and as impartial as possible. I would not disagree with your proposal to refer this matter to JACNE, but I am somewhat uneasy about it in view of recent experiences we have had with the HEC. I am sure you will agree with me that our officials should keep in close touch throughout the JACNE discussions to ensure that the departmental observers carry real weight. Certainly, we must avoid a repetition of the sort of difficulties we had with the HEC over Food for Thought.

I am copying this letter to the Prime Minister, members of H Committee and Sir Robert Armstrong.

*Michael Jopling*

MICHAEL JOPLING

attached



DRAFT

POSSIBLE STATEMENT ON COMA REPORT ON DIET AND HEART DISEASE

This is a most important and authoritative Report by the Government's independent medical advisers. It is important above all because it aims to reduce the level of heart disease. The incidence of heart disease is higher in the United Kingdom than in the great majority of other developed countries and the Government recognise it as a major problem.

But in addition, the Report will help to provide a basis on which advice to the public about healthy eating generally can be based. However, since it quite rightly looks at the national diet very broadly, it now needs to be translated into more specific advice which will enable people differing in their age, activities and health to decide how they can improve their own diet. That is something in which, as Minister of Food, I am very much interested and to which the Government attaches great importance. Incidentally, this Report will, I hope, knock on the head stories - so much more exciting than the truth - that the Government has suppressed evidence on the link between diet and health.

The Report is also a useful antidote to the extremists who appear to want to make our traditional eating habits into some kind of political scandal. But it does recommend a broad shift in the nation's diet away from the consumption of saturated fat towards fibre-rich carbohydrates like bread and cereals. There is also a

recommendation to eat more fruit and vegetables. So we may expect changes in what the public demands.

This will present both difficulties and opportunities to all those who produce, process or distribute our food. Challenge is not new to them, and I believe that they will respond not only because of their skill in providing what the public need, but also because they recognise fully the vital importance of the nation's health. Again, as I said last week, I refute entirely the extremist stories that there is some kind of conspiracy in the food industry. Like all industries, it tries to provide what it believes the customer wants.

The direction in which the Report points is not new. It reinforces the general advice the Government has already given and trends in eating habits which have already begun. Some of the steps it recommends are being taken: for example, the Government has done a great deal to improve the labelling of food and drink, and is now discussing with the industry the possibility of fat content labelling. Work like that will continue, and will be extended where this Report suggests the need for it. The Government will of course study all the recommendations most carefully, and is confident of full co-operation from the food and agriculture industries in the consultations that will be needed. But if the Report points clearly in a direction in which we are already moving, it is no less important for that.

3.

Possible line to take on questions relating to agricultural policy (only if raised in questions to press branch

(1) The CAP

The Report suggests that changes in the CAP may be desirable. The Government takes account of advice on matters relating to health and diet in considering agricultural and food policy, both domestically and as a member of the European Community. But obviously we are working in a Community of Ten where immediate changes may not be easy.

(2) Need to change fat content in milk, grading standards for fatstock and the butter subsidy

These are all matters to which the Government will give careful consideration.



CONFIDENTIAL



10 DOWNING STREET

cc: LPO  
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*From the Private Secretary*

9 July, 1984

Diet and Cardiovascular Disease

The Prime Minister has seen a copy of your Secretary of State's letter of 2 July to the Lord President about the COMA Report on the relationship between diet and cardiovascular disease.

The Prime Minister has noted that your Secretary of State proposes to publish this Report on 12 July and - subject to the views of colleagues - would be content for him to do so.

The Prime Minister has commented that the Report is unlikely to be well received by the farming community, and she would be grateful if this point could be taken into account in public presentation.

I am sending copies of this letter to the Private Secretaries to the other members of H Committee and to Richard Hatfield (Cabinet Office).

DAVID BARCLAY

S. A. Godber, Esq.,  
Department of Health and Social Security

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16/7

DB



HOUSE OF LORDS,  
SW1A 0PW

5 July 1984

Prime Minister (2)  
!

Norman letter!  
not

My dear Norman:

DIET AND CARDIOVASCULAR DISEASE

will request if required.

In your letter of 2nd July to Willie Whitelaw enclosing your Chief Medical Officer's Committee on Medical Aspects of Food Policy Report, you proposed that there should be a Press Conference on the day of publication but you do not think that Ministerial involvement would be appropriate. I agree.

I have lived through too many of these pontifications by fashionable dieticians who change diagnosis and prescription every five years to believe any of them. What I do believe is that excess kills. A little of what you fancy does you good. But let it remain a little. There is a great temptation for Governments to join the bandwagon of vitamins, fibre, etc. They should distance themselves from all this. Fashions change.

De gustibus non <sup>est</sup> disputandum.

I am copying this as you did yours.

yrs:

The Right Honourable  
Norman Fowler, M.P.,  
Secretary of State for  
Social Services.

19 JUL 1964



CONFIDENTIAL

CABINET OFFICE,  
WHITEHALL, LONDON SW1A 2AS

Chancellor of the Duchy of Lancaster

4 July 1984

*shop*  
*2nd*  
*6/7*

*Alan Thomas,*

DIET AND CARDIOVASCULAR DISEASE

*will request if required*

May I say very strongly how much I agree with what you say in your letter of 2nd July to Willie.

Like smoking, you cannot prove anything - except that the status quo means widespread mortality and it can never be wrong to try and stop that. There will of course be powerful interests arguing the contrary. But sometimes it pays in political if not moral terms to find oneself on the same side as the mass of the people.

I am copying this letter to members of H Committee and to the Prime Minister.

*Yours,*  
*Arthur*

COCKFIELD

The Rt Hon Norman Fowler MP  
Secretary of State for Social  
Services  
Department of Health and Social  
Security  
Alexander Fleming House  
Elephant and Castle  
London SE1

CONFIDENTIAL



24 JUL 1964





cc Covering letter only  
to B1

## DEPARTMENT OF HEALTH &amp; SOCIAL SECURITY

Alexander Fleming House, Elephant &amp; Castle, London SE1 6BY

Telephone 01-407 5522

From the Secretary of State for Social Services

- 1) Mr Fletcher
- 2) Prime Minister (4)

The Rt Hon The Viscount Whitelaw CH MC  
Lord President of the Council  
Privy Council Office  
68 Whitehall  
LONDON  
SW1A 2AT

Mr Fowler proposes to  
publish this report on diet  
and heart disease on Thursday  
2 July 1984 12 July.  
Summary at flag A.

Dear Willie.

The James work  
very pleased!

DMB  
3/7

## DIET AND CARDIOVASCULAR DISEASE

Following concern about the levels of coronary heart disease - which are very high in the United Kingdom - the Chief Medical Officer's Committee on Medical Aspects of Food Policy (COMA) were asked to study the relationship between diet and cardiovascular disease. They have now produced their report: a list of the main recommendations is at Annex A and a copy of the report is also enclosed. Colleagues are invited to note the basis on which I propose to publish the report following discussion - because of its significant implications for the food and agriculture industries - with colleagues in the Ministry of Agriculture, Fisheries and Food, Welsh Office, Scottish Office and Northern Ireland Office.

Among the recommendations are proposals to reduce fat intake affecting milk, butter, cheese, biscuits and meat. A substantial decrease in salt intake is commended. The report does not guarantee that an individual who makes these changes will be immune from cardiovascular disease but the message is that eating in moderation, with the modest switch in eating pattern that the report indicates, is a prudent and sensible precaution.

Over the last two years public interest in this subject has increased. There has been a report by an expert Committee of the World Health Organisation (WHO), translated into a "national diet" by an ad hoc group of nutritionists and health educators. The Government has been wrongly accused of suppressing and ignoring this work. We have defended ourselves by reference to COMA. The report must therefore be published, and as quickly as possible to avoid unnecessary speculation.

E.R.

I propose that the publication be on Thursday 12 July, announced through an inspired PQ and Press Release. The main points would be:

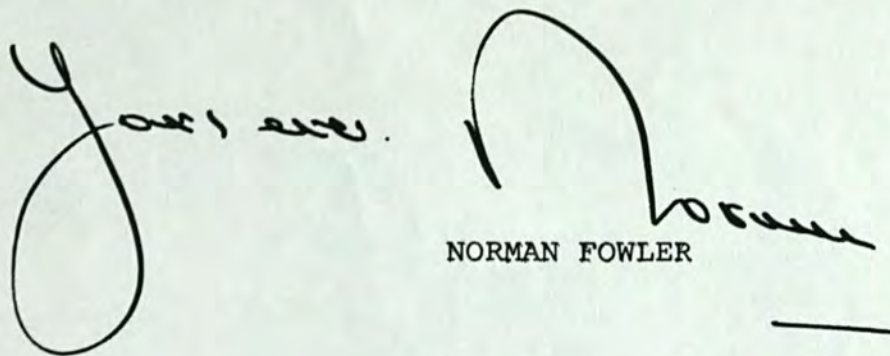
- (a) Diets are essentially for individuals to determine. To do this they need information on a good diet and information on what is in food.
- (b) DHSS will be inviting the Health Education Council and the British Nutrition Foundation to produce dietary guidance based on the COMA report, through their Joint Advisory Committee on Nutrition Education.
- (c) DHSS and MAFF would continue discussions recently begun with industry on fat content labelling.
- (d) Government would consider the wider implications for agriculture, in discussion with those concerned.

Clearly there will be claims and counter claims following publication of the report. COMA did not feel that the scientific evidence warranted going as far as the WHO Committee, and their recommendations are less stringent. It will be said that they have been influenced by Government on behalf of industry. We will be pressed for immediate statutory control on food labelling. Conversely, the food and agriculture industries may argue that the report goes beyond what the present scientific evidence can sustain. Certainly COMA recognise in their report that the evidence often does not amount to proof.

I would propose that the Chief Medical Officer plus the key COMA author should give a Press Conference on the day of publication. However, I do not think that Ministerial involvement would be appropriate.

I am copying this letter to H Committee colleagues and also to the Prime Minister.

I would be grateful to know by 10 July if colleagues are content.



NORMAN FOWLER

DIET AND CARDIOVASCULAR DISEASE

Main Recommendations

GENERAL PUBLIC

1. Avoid obesity by an appropriate food intake and regular exercise
2. Don't smoke and avoid excessive alcohol intake
3. On average, reduce intake of saturated fatty acids by 25% and of total fat by 17%
4. Avoid further increases in sugar intake
5. Decrease salt intake
6. Compensate for less fat by fibre-rich carbohydrates

DOCTORS

7. Special advice on diet for people at risk of coronary heart disease
8. Doctors to be vigorous in identifying and advising people who have an increased risk of coronary heart disease

HEALTH EDUCATION

9. Inform the general public about how to construct a healthy diet and regulate physical activity

FOOD INDUSTRY

10. Labelling of fat content
11. More stringent declaration of alcohol content
12. Reduce saturated fatty acids and or common salt (as appropriate) in such products as milk, meat and meat products, cereal products and bread

FURTHER REVIEW

13. Establish joint machinery for on going review of prevention of coronary heart disease

GOVERNMENT

14. Promote health education
15. Follow up recommendations 10, 11, 12
16. Encourage production of learner sheep, cattle and pigs
17. Remove from CAP those elements which may discourage people from changing their diet

18. Cost-benefit analysis of methods for identifying those at risk of coronary heart disease and of preventive methods. Research into cheaper and simpler methods to facilitate measurement of blood lipids and blood pressure.

TWO ILLUSTRATIVE EXAMPLES OF EFFECT ON AVERAGE DIET  
(THESE EXAMPLES ARE NOT INCLUDED IN THE REPORT)

1. Semi-skimmed milk only

Cut back: cheese to  $2/3$   
meat to  $6/7$   
butter to  $1/4$   
biscuits to  $1/2$   
salt in cooking to  $4/5$

Increase: margarine (to replace butter)  
fish  
wholemeal bread

2. Semi-skimmed milk only

Substitute:  $2/3$  fat cheese for full cream cheese  
Cut back: meat to  $6/7$   
butter, margarine and other fats (spreadable, non-spreadable and cooking) to  $9/10$   
biscuits to  $1/2$   
salt in cooking to  $4/5$

Increase: fish  
wholemeal bread

Final draft 28/6/84

Department of Health and Social Security

Report on Health and Social Subjects

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DIET AND CARDIOVASCULAR DISEASE

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Committee on Medical Aspects of Food Policy

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DIET AND CARDIOVASCULAR DISEASE

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Committee on Medical Aspects of Food Policy

Report of the Panel on Diet in Relation to Cardiovascular Disease

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J.V.G.A. Durnin  
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## Preface

It is ten years since an earlier Panel of the Committee on Medical Aspects of Food Policy produced a report on diet and coronary heart disease. During this time, mortality rates for cardiovascular disease have remained high and coronary heart disease continues to be an important public health problem in the United Kingdom. In view of this, the Committee recommended to my predecessor, Sir Henry Yellowlees, that a further review be made of the relationship between diet and cardiovascular disease so as to take account of more recent evidence and research findings. The first meeting of the new Panel was held in April 1982.

Because of the long time interval since the previous report, the task of making a full review of the subject has been particularly onerous. We congratulate the Chairman of the Panel, Professor Philip Randle FRS, on his skill in steering the Panel through its deliberations and thank him for all the care that he has devoted to the preparation of the report and for his ready advice to the secretariat. We are grateful to him and to all the members of the Panel for contributing their time and expertise. This fresh and thorough look at the problems has provided a firm basis on which to build, and the establishment of an ongoing review would allow account to be taken of new findings as they become available. The Panel, in its consideration of the complex relationship between diet and cardiovascular disease, has acknowledged that the evidence falls short of proof. Nevertheless, in the opinion of the members, it is sufficiently consistent that, if changes in the diet occur in the directions recommended, benefits to health are likely to occur. The Panel has declined to prescribe a national diet since there are unlimited ways in which each individual can act to enjoy an overall diet and lifestyle conducive to good health. The task of interpreting the recommendations in terms of foods that people eat has been left for others to perform.

I welcome this report as a major contribution towards the development and formulation of policies for food and nutrition within the United Kingdom, and in the hope that the toll of cardiovascular disease will thereby be reduced.

E D Acheson  
Chairman of Committee on Medical Aspects of Food Policy

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## Contents

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### Preface

#### 1. Introduction

- 1.1 Terms of reference
- 1.2 Interpretation of terms of reference
- 1.3 Meetings of the Panel
- 1.4 Perspectives
- 1.5 Form of the Report

#### 2. Summary and recommendations

- 2.1 Recommendations to the general public
- 2.2 Recommendations to medical practitioners
- 2.3 Recommendations for health education
- 2.4 Recommendations to producers, manufacturers and distributors of food and drink
- 2.5 Recommendations for further review
- 2.6 Recommendations to Government

#### 3. The Current Position

- 3.1 Death rates from Cardiovascular Diseases in England and Wales, Scotland and Northern Ireland.
- 3.2 Diet in the United Kingdom

#### **4. Summary of the basis of the recommendations**

4.1 Saturated fatty acids

4.2 Common salt

4.3 Dietary fibre

4.4 Obesity

#### **5. Achieving the recommendations for dietary change**

#### **6. Appendices**

A. Affiliations of members of the Panel

B. Acknowledgements

C. Major topics reviewed by the Panel

#### **7. References**

In the south suburbs at the Elephant,  
Is best to lodge: I will bespeak our diet,  
Whiles you beguile the time and feed your knowledge

Twelfth Night  
Act 3, Scene 111

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## 1. Introduction

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### 1.1 Terms of reference

To advise the Committee on Medical Aspects of Food Policy on the significance of the relation between nutrition and cardiovascular disease and to make recommendations.

### 1.2 Interpretation of terms of reference

1.2.1 The major cardiovascular diseases reviewed, in relation to nutrition, were coronary heart disease, cerebrovascular disease, and peripheral vascular (arterial) disease. The report is concerned mainly with coronary heart disease, because nearly all of the evidence available is concerned with this disease. Alcoholic cardiomyopathy has been considered in making a recommendation about alcohol intake.

1.2.2 The absolute and relative importance of coronary heart disease and cerebrovascular disease as causes of death in England and Wales, Scotland and Northern Ireland is shown in Section 3. The ICD code numbers (International Classification of Diseases [1]) of these categories of disease are also shown in that section.

### 1.3 Meetings of the Panel

1.3.1 The Panel was appointed at the end of 1981 following an earlier recommendation of the Committee on Medical Aspects of Food Policy. It has met ten times including one two-day residential meeting. The review of published evidence extended to February 1984.

1.3.2 Ten years have elapsed since the publication of the previous report on Diet and Coronary Heart Disease [2] by a Panel of the Committee on Medical Aspects of Food Policy. Because of the long interval our review has been substantial and detailed. We have discussed

over 40 working papers prepared by members of the Panel, and by experienced investigators who were not members of the Panel, and we have taken into consideration over 600 published scientific papers.

1.3.3 We wish to express our appreciation and thanks for expert assistance to the observers and to the Secretariat. We are grateful to colleagues who have made available to us helpful reviews and working papers and statistical information and who have attended our meetings to give evidence. Their names are recorded in Appendix B.

#### 1.4 Perspectives

1.4.1 We have attempted in this Report to interpret complex evidence in such a way that our conclusions are clear to the general public; to those responsible for offering guidance to the general public in relation to health and nutrition; to medical practitioners in giving advice to patients; to producers, manufacturers, and distributors of food and drink; and to those in the Government of the United Kingdom responsible for preparing legislation on food and drink, for allocating resources to the promotion of health and the prevention of disease, and for determining agricultural policy in the United Kingdom and in the European Economic Community. In the light of our experience as a Panel it has also seemed appropriate to draw attention to the need for further and ongoing review.

1.4.2 Diet is a matter to be decided by individuals and by families after consideration of its possible bearing on health and of such guidance as may be available. So far as we are aware no Government has attempted to enforce recommendations relating to nutrition and cardiovascular diseases by direct legislation. It seems likely that legislation based on agricultural policy, and on economic policies connected with the production of food and with the sale of food and drink, may have a significant indirect effect on nutrition in relation to cardiovascular disease.

1.4.3 If diet is to be decided by individuals then it is necessary that some foods and drinks should carry sufficient information about their composition to enable members of the public who wish to adjust their intake

nutrition and cardiovascular disease. The evidence considered has ranged from the results of studies relating diet with atheroma and with thrombosis to the results of dietary or multiple risk factor intervention trials. A list of the major topics that have been reviewed is given in Appendix C. Because no one line of evidence is conclusive it has been necessary for us to determine whether the balance of evidence justifies a recommendation for dietary change. This consideration has also led us to make recommendations about the need for further review and for identifying people who are at increased risk from coronary heart disease (see also 1.4.1 and 1.4.5).

## 1.5 Form of the Report

1.5.1 The recommendations are given in Section 2 and are accompanied, where necessary, by a brief explanatory statement. Mortality rates for cardiovascular diseases and information about the composition of the United Kingdom diet are reviewed in Section 3. The lines of evidence upon which the principal recommendations are based are summarized in Section 4. The feasibility of making dietary changes to implement the recommendations to the general public is considered in Section 5. References are given in Section 7 and are confined to essential sources of facts and figures. To the best of our knowledge all major papers relevant to the subject under review have been taken into consideration. For the convenience of those interested reference is made to a small number of more detailed reviews of evidence at the end of each sub-section in Section 4.

1.5.2 The recommendations are unanimous recommendations unless a statement is made to the contrary.

1.5.3 The recommendations are mainly concerned with dietary changes to decrease the incidence of coronary heart disease. For cerebrovascular disease high blood pressure appears to be of greater significance than other risk factors (see 1.4.6). The risk of high blood pressure is increased by obesity and by high alcohol intake, and may be influenced by the intake of common salt.



of particular dietary components to do so. Where such adjustments will be facilitated by making available alternative forms of certain foods agricultural policy should not discourage their availability.

1.4.4 We are required in this report to make recommendations to the general public regarding nutrition with the object of decreasing the incidence of cardiovascular diseases in general and of coronary heart disease in particular. As a matter of general principle, their implementation should also afford a reasonable prospect of improvement in life expectancy overall, and in the quality of life for the population as a whole. It follows that they should also provide diets capable of satisfying adults and children alike (see also 1.5.6).

1.4.5. Within the general population of the United Kingdom it is possible to identify, by clinical and laboratory investigation, individuals who have an increased risk of coronary heart disease. We believe it is important to identify such individuals, and to give consideration to ways and means of facilitating their identification, so that special advice may be given to them.

1.4.6 In reaching conclusions and making recommendations our discussions have concentrated on the following risk factors: cigarette smoking, obesity and insufficient physical activity which are risk factors that people may learn to recognise and correct for themselves; raised blood pressure, raised total serum cholesterol, other abnormalities of serum lipids, diabetes mellitus, use of some types of contraceptive pill (especially in older women and when other risk factors are present) and familial predisposition which are risk factors that may be detected by medical practitioners. Cigarette smoking, physical activity and the contraceptive pill have been reviewed because it has been necessary to consider their importance in relation to nutrition.

1.4.7 In affected individuals, the mechanisms that have led to the cardiovascular diseases under review, are rarely known with a high degree of precision. Because of this it has been necessary to evaluate the significance of many different lines of evidence for a relation between

1.5.4 Sudden unexpected cardiac death accounts for more than 50% of deaths due to coronary heart disease and several mechanisms have been implicated. We are not aware of any reason to separate sudden cardiac death from coronary heart disease as a whole for the purposes of the recommendations that follow.

1.5.5 In referring to food energy in the recommendations alcohol has been excluded. Individual intake of alcohol varies considerably and we have not regarded alcohol as a normal component of the diet.

1.5.6 The recommendations that follow are intended mainly for older children and for young and middle-aged adults; for older people the possible benefits are less likely. They are not intended for infants (i.e. those under one year of age) and the recommendation for fat (2.1.1) is not appropriate for children under the age of five. The advice relating to infants and young children, here and in recommendation 2.1.1, is from the Panel on Child Nutrition of the Committee on Medical Aspects of Food Policy.

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## 2. Summary and Recommendations

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### 2.1 Recommendations to the general public

2.1.1 The consumption of saturated fatty acids\* and of fat in the United Kingdom should be decreased. There are no specific recommendations for change in the consumption of polyunsaturated and monounsaturated fatty acids, but to facilitate the recommendation for saturated fatty acids\* we recommend that the ratio of polyunsaturated fatty acids to saturated fatty acids\* (the P/S ratio) may be increased to approximately 0.45. The intakes recommended are 15 per cent of food energy for saturated fatty acids\* and 35 per cent of food energy for total fat. Individuals whose intakes are in excess of these levels are advised to reduce them to the recommended levels. This recommendation for change is not intended for infants; or for children below the age of five who usually obtain a substantial proportion of dietary energy from cows' milk; or for people who already consume a diet low in saturated fatty acids\* for ethnic or other reasons.

This is a majority recommendation (9 out of 10 panel members; see 4.1.11). The lines of evidence upon which it is based are summarized in Section 4.1.

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\*Inclusive of trans fatty acids - see 2.1.2. Saturated fatty acids\* is used as an abbreviation for saturated plus trans fatty acids (here and in 2.1.1.1). Saturated fatty acids (no asterisk) is used in the strict chemical sense and does not include trans fatty acids.

Table 2.1: Recommended average daily intakes of total fat, and of saturated\* and polyunsaturated fatty acids.

Category	1981 average [3,4]	Recommended average
<b>Total fat:-</b>		
g. per day	104	77-87#
per cent energy	42	31-35#
<b>Saturated fatty acids*:-</b>		
g. per day	49	37
per cent energy	20	15
<b>Polyunsaturated fatty acids:-</b>		
g. per day	11.4	8.6 -16.7#
per cent energy	4.7	3.5 - 6.8#
P/S ratio	0.23	0.23-0.45

\* Inclusive of trans fatty acids - see 2.1.2.

# Depends upon the P/S ratio; the upper limit corresponds to the recommended ratio of approximately 0.45.

2.1.1.1 The current and recommended intakes and P/S ratios are summarised in Table 2.1. The average decrease recommended for saturated fatty acids\* is 25 per cent (one-quarter). The average decrease recommended for fat is 17 per cent (one sixth) at the recommended P/S ratio of approximately 0.45 (or 25 per cent or one-quarter if the current P/S ratio of 0.23 is retained).

2.1.1.2 Families who elect to switch from whole cows' milk to semi-skimmed or skimmed milk in implementing the recommendation for fat, are advised in the light of current evidence, to continue to provide whole cows' milk for children below the age of five.

2.1.1.3 The report of the Expert Committee of the World Health Organization [5] has recommended that the dietary energy derived from saturated fatty acids should be limited to 10 per cent and that from fat to 30 per cent of food energy. Our recommendations of 35 per cent (total fat) and of 15 per cent (saturated plus trans fatty acids) are designed to take account of practical considerations in the United Kingdom. We doubt whether the stringent dietary changes which the World Health Organization recommendation requires, would be implemented by the general population at the present time. We all recommend such changes for people with increased risk of coronary heart disease (see 2.2.1 and 2.2.2).

2.1.2 It is recommended that trans fatty acids should be regarded as equivalent to saturated fatty acids for the purposes of recommendations 2.1.1 and 2.2.2 (see also 2.4.1, 2.4.2). Otherwise there are no specific recommendations about the dietary intake of trans fatty acids

2.1.3 There are no specific recommendations about the dietary intake of cholesterol.

Cholesterol intake in the United Kingdom diet is approximately 350 - 450mg/ day in adults and is likely to fall if the recommendation regarding intake of saturated fatty acids is implemented. We believe that current intake is not excessive and that evidence for an

influence of this level of intake on blood cholesterol is inconclusive.

2.1.4 The Panel recommends that intake of simple sugars (sucrose, glucose and fructose) should not be increased further.

These sugars and foods containing them are appreciable sources of food energy and may contribute to obesity (see 2.1.8). Certain foods containing these sugars may also contribute saturated fatty acids (eg cakes, biscuits) (see 2.1.1). The Panel notes that restriction of intake of these sugars has been recommended on other health grounds (eg dental caries).

2.1.5 An excessive intake of alcohol is to be avoided on more general health grounds. No specific recommendations are made in respect of low or moderate intake of alcohol in relation to cardiovascular disease.

An excessive intake of alcohol is defined as >100ml/day (>80g/day) for men and >65ml/day (>52g/day) for women. A moderate intake is defined in respect of coronary heart disease as <43ml/day (<34g/day) for men and <29ml/day (<23g/day) for women. Excessive intake of alcohol may have an adverse effect on the incidence of cardiovascular diseases. The effect of low or moderate intake has not been adequately tested. The importance of alcohol intake in relation to obesity has been stressed in Recommendation 2.1.8.

2.1.6 The Panel recommends that the dietary intake of common salt should not be increased further and that consideration should be given to ways and means of decreasing it.

We believe that the intake of salt in the United Kingdom diet (approximately 7-10 g per day) is needlessly high. The salt content of many foods makes it difficult for the public to effect an immediate and substantial change in intake. Approximately 70 per cent of intake is salt present in food, much of it added during manufacture. Approximately 30 per cent is added at table or in

cooking and this could be decreased immediately (see 2.1.7., also 1.4.3., 1.5.3., 2.4.5., 2.6.2). The lines of evidence upon which this recommendation is based are summarized in Section 4.2.

2.1.7 The Panel sees advantages in compensating for a reduced fat intake with increased fibre-rich carbohydrates (e.g. bread, cereals, fruit, vegetables) provided that this can be achieved without increasing total intake of common salt or simple sugars (see 2.1.4, 2.1.6). Otherwise there are no specific recommendations about the intake of dietary fibre. The lines of evidence upon which this recommendation is based are summarized in Section 4.3.

2.1.8 Obesity should be avoided both in adults and in children by a combination of appropriate food intake and regular exercise. Those who are overweight are advised to adjust food intake in relation to physical activity until their weight is within the acceptable range (acceptable weight ranges are defined and given in a report of the Royal College of Physicians [6]).

In general weight should be maintained at that of early adult life (except where this was outside the acceptable range). The level of food intake required to maintain weight within the acceptable range depends upon physical activity. We recommend a combination of regular exercise and appropriate food intake. It is important to recognise that alcohol may contribute to overweight. In this recommendation the term obesity is used comprehensively to include other risk factors that may be associated with it. The lines of evidence upon which this recommendation is based are summarized in Section 4.4.

2.1.9 There are no specific dietary recommendations for people who smoke cigarettes. We recommend that people should not smoke cigarettes.

Cigarette smoking is a risk factor for coronary heart disease, for peripheral vascular (arterial) disease, for chronic bronchitis and its cardiovascular complications, and for other (non-

cardiovascular) diseases, notably lung cancer. We are not aware of any convincing evidence that diet may mitigate effects of cigarette smoking on the risk of cardiovascular disease. There is a risk of overweight when cigarette smoking is stopped and this may be prevented by a combination of regular exercise and appropriate food intake.

2.1.10 There are no specific recommendations about the intake of oxidized cholesterol or of erucic acid in the United Kingdom diet. Further research is needed to ascertain whether dietary oxidized cholesterol is absorbed or incorporated into atherosclerotic plaques. The Panel is satisfied with the provisions of the 1977 Erucic Acid in Food Regulations [7].

2.1.11 The Panel recommends that addition to the diet of supplements of n-3 polyunsaturated fatty acids (eg. eicosapentaenoic acid) is a matter for research and cautions against the unsupervised use of such preparations.

There is evidence that certain n-3 polyunsaturated fatty acids alter platelet behaviour and bleeding time and may, therefore, reduce the possibility of intravascular thrombosis. The long term effects of a high intake of these fatty acids are not known.

2.1.12 There are no specific recommendations about the dietary intake of Vitamin E, which we believe will be adequate for the diet which may result from the recommendations in this report.

2.1.13 There are no specific recommendations about the hardness of water.

The Panel has discussed the evidence suggesting that undue softness of water may be associated with an increased risk of coronary heart disease and has noted that an EEC directive due to be implemented in 1985 will require that the hardness of water must not be reduced artificially below 150mg of CaCO<sub>3</sub>/litre [8]. Individual members of the public who soften water in their own homes may wish to take the precaution of drinking unsoftened water.



2.1.14 There are no specific recommendations about the consumption of protein as such.

It may be noted that animal protein is often associated with fat that is rich in saturated fatty acids (see 2.1.1) whereas vegetable protein may be associated with dietary fibre (see 2.1.7).

2.1.15 There are no specific recommendations about the dietary intake of Vitamin C (ascorbic acid) other than to attain the recommended daily amount (currently 30mg/day for adults in the United Kingdom).

2.1.16 There are no specific recommendations about the dietary intakes of Vitamin D, trace elements or other metal ions. The Panel believes that further studies are needed in respect of intake of Vitamin D, selenium and magnesium in relation to cardiovascular diseases. We have noted the recommendations made in 1974 by the World Health Organization [9] for further studies of the possible role of a number of metal ions and of iodine and fluorine, in relation to cardiovascular diseases.

## 2.2 Recommendations to medical practitioners

2.2.1 Special advice regarding diet should be given to people who have been shown by clinical and laboratory investigation to have an increased risk of coronary heart disease. Such people may include or be identified among those with a strong family history; individuals in whom several risk factors are present concurrently; close relatives of individuals with familial hypercholesterolaemia; and individuals with diabetes mellitus.

2.2.2 In such cases it is recommended that saturated fatty acids should contribute no more than 10 per cent and total fat no more than 30 per cent of food energy. It is recommended that dietary cholesterol should be below 100mg/1000 calories and that dietary fibre should be in excess of 30g/day. In the case of diabetic subjects the Panel endorses the Dietary Recommendations for Diabetics prepared by the Medical Advisory Committee of the British Diabetic Association [10].

2.2.3 Medical practitioners should be vigorous in identifying and advising people who have an increased risk of coronary heart disease.

The evidence upon which recommendations 2.2.1 to 2.2.3 are based is summarized in Sections 4.1 and 4.3.

2.2.4 The Panel wishes to emphasise the importance of an adequate intake of potassium-rich foods (principally fruit and vegetables) for individuals taking the common diuretic drugs; this is particularly desirable when these drugs are prescribed for the elderly.

## 2.3 Recommendations for health education

2.3.1 Those responsible for health education should inform the general public of the recommendations and how to implement them. In particular advice should be given on how to construct diets and regulate physical activity in order to minimize the risk of cardiovascular disease and avoid obesity.

Experience gained in trials designed to test the effect of risk factor intervention on the incidence of coronary heart disease has shown repeatedly that compliance depends critically upon the level and quality of counselling given to participants. The percentage contribution of saturated fatty acids to food energy in the United Kingdom diet has not changed significantly over the past twenty years notwithstanding the publication of a number of reports in this country and elsewhere advocating decreased intake of saturated fatty acids. If people are to change their diet then they must be informed of the need for change and of how the change may be implemented, and be given the necessary enabling information.

2.4 Recommendations to producers manufacturers and distributors of food and drink

2.4.1 The percentage by weight of fat and of saturated, polyunsaturated and trans fatty acids in butter, margarine, cooking fats, and edible oils should be printed on the container or wrapping in which they are sold. Consideration should be given to providing in addition (i.e. not in place of) uniform and more simple labelling codes to enable the general public to distinguish easily between fats and oils with low or high contents of saturated fatty acids.

2.4.2 Information comparable to that specified in 2.4.1 should be provided, wherever practicable, for all other foods with a fat content of more than 10 per cent by weight, or which are major contributors to fat intake. If the foods are sold in prepacked form, the information should be printed on the package wherever possible. If the foods are not sold prepacked the information should be displayed prominently at retail outlets. The foods in this category are mainly meats and meat products, milk and cream, cheese, and cakes and biscuits

2.4.3 The concentration of alcohol (ethanol) in beers, ciders, wines, spirits and any other drinks containing more than 1.2 per cent of alcohol by volume should be printed on the container in percentage by volume. The concentration in drinks that are dispensed should be displayed prominently at retail outlets.

The current position is that every prepacked drink with an alcoholic strength by volume of more than 1.2 per cent must be labelled with its alcoholic strength expressed by volume (per cent volume) or by mass (per cent mass) but exemptions were made [11]. The purpose of the recommendation is to seek the removal of exemptions.

2.4.4 Recommendations to government regarding legislation and codes of practice with respect to labelling of foods and drinks in respect of 2.4.1, 2.4.2 and 2.4.3 are given in Section 2.6.

2.4.5 Where appropriate, foods or food products with lower contents of saturated plus trans fatty acids and or common salt than is at present customary should be made available to the general public. Examples are milk, meats, and meat products such as sausages, hamburgers and minced meats, margarines (trans fatty acids), and breads and other cereal products.

## 2.5 Recommendations for further review

2.5.1 The Panel recommends that bodies which have assumed responsibility for advising the general public, medical practitioners, and Government about the prevention of cardiovascular disease in the United Kingdom should consider establishing joint machinery for an ongoing review. The relevant bodies identified by the Panel as having discharged some or all aspects of this function in the past are the Department of Health and Social Security, the Royal College of Physicians of London and the British Cardiac Society.

2.5.1.1 Ten years have elapsed since the publication of a report of an Advisory Panel on Diet in relation to Cardiovascular Disease of the Committee on Medical Aspects of Food Policy [2]. In the intervening years a Joint Working Party of the Royal College of Physicians of London and the British Cardiac Society published a report on the Prevention of Coronary Heart Disease in 1976 [12].

2.5.1.2 Because the interval since the publication of the earlier report from the Committee on Medical Aspects of Food Policy has been so long the Panel has found that the work involved in producing a new report has been considerable. Moreover, we have only been responsible for a review of diet in relation to cardiovascular disease and not for a review of other risk factors, although these were in the event reviewed in relation to diet. The Panel has noted that the American Heart Association has published three reports on this subject in the past ten years and seven reports since 1957 [13].

2.5.1.3 We believe that the prevention of cardiovascular disease by dietary and other means is a sufficiently important subject to merit

ongoing review. The advantages of an ongoing review are perceived as including continuity, the evolution of a coherent policy as opposed to periodic recommendations, and greater public awareness of its importance. An evolving policy could also facilitate public education and change on the part of all sections of the food industry.

2.5.1.4 It is appreciated that advantages may be perceived in terms of independence of view and the presentation of different perspectives by reports from more than one body. However, the Panel believes that the independence and high reputation of the different bodies that may contribute to an ongoing review are such as to ensure that different viewpoints and perspectives would be adequately safeguarded.

## 2.6 Recommendations to Government

2.6.1 Means should be found to educate the general population of the United Kingdom in habits of eating and physical activity that will minimize the risk of cardiovascular disease and of obesity. The process of education should be started in schools (Recommendations for health education; Section 2.3).

2.6.2 Consultations should take place between the relevant Government Departments and the producers, manufacturers and distributors of food and drink which will lead to legislation and to Codes of Practice to improve public knowledge of the composition of foods (Sections 2.4.1 - 2.4.2); improve public awareness of the alcohol content of alcoholic drinks (Section 2.4.3); and lead to the provision of alternative preparations of some foods with lower contents of saturated and of trans fatty acids and / or common salt (Section 2.4.5) (Recommendations to producers, manufacturers and distributors of food and drink; Section 2.4).

2.6.3 Consideration should be given to ways and means of encouraging the production of leaner carcasses in sheep, cattle and pigs (for example

by adjustments to the operation of the carcass grading systems).

2.6.4 Consideration should be given to ways and means of removing from the Common Agricultural Policy those elements of it which may discourage individuals and families from implementing the recommendations for dietary change.

2.6.5 An enquiry should be made into the cost and benefit that may accrue from more vigorous attempts to identify people who have an increased risk of coronary heart disease. Research into cheaper and more simple methods which may facilitate more widespread measurement of blood lipids and of blood pressure should be encouraged.

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### 3. The Current Position

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#### 3.1 Cardiovascular disease mortality in the United Kingdom

3.1.1 Coronary heart disease and cerebrovascular disease are the certified causes in 40 per cent of deaths in men and 38 per cent of deaths in women (Figure 3.1), greatly exceeding that due to any other group of diseases. Deaths from coronary heart disease outnumber those from stroke by more than 2 to 1 (in men, by 3.4 to 1).

3.1.2 Most deaths from cardiovascular disease occur in old age, the median age of death being 74 years for coronary heart disease and 79 years for stroke; nevertheless, in England and Wales deaths from coronary heart disease also causes the annual loss of a quarter of a million years of 'working life', with nearly 30 000 deaths in men under the age of 65.

3.1.3 Mortality from strokes has been declining in Britain since the 1950's and more recently this decline has probably been accelerated by the widespread treatment of hypertension.

3.1.4 Time-trends in coronary heart disease mortality are presented age-specifically in Table 3.1, and for all ages (standardized) in Figure 3.2. Rates are throughout much higher in Scotland and Northern Ireland than in England and Wales, both for men and women. In the 1950's the rates in men were rising in all three countries. Latterly they have tended to decline a little (except for older men in Northern Ireland). Rates in women have been generally stable at ages under 65 but when all ages are included (Figure 3.2) rates overall appear to have been declining throughout the period.

3.1.5 The United Kingdom has not yet experienced the dramatic declines

in mortality from coronary heart disease enjoyed by a number of other countries (USA, Canada, Australia, New Zealand, Belgium, Finland). As a result, Britain's position in comparison with other countries is increasingly conspicuous. In a world ranking of mortality from coronary heart disease in 1978, countries of the United Kingdom occupied three of the top five positions for men and two of the top five positions for women (Table 3.2).

### 3.2 Diet in the United Kingdom

3.2.1 Tables 3.3 and 3.4 give data from the Food Consumption Level Estimates (from 1952) and from the National Food Survey [16] (from 1950). The Consumption Level Estimates are based on the total national production of food in the United Kingdom, together with allowances made for imports and exports, whereas the National Food Survey is derived from foods entering households. The National Food Survey estimate is not complete because it does not include alcoholic drinks, sweets or chocolates and does not make full allowance for food eaten outside the home.

3.2.2 Before 1950, such data as are available suggest that the average intake of energy per person increased by about 300 - 400 kcal/day (1.3 - 1.7 MJ) from the early 1920's up to 1950. The proportion of protein in the diet remained fairly constant (at 11 to 12 per cent of total energy). The percentage energy from fat in the diet remained comparatively constant at about 36-37 per cent. The proportionate quantity of carbohydrate decreased until the 1930's and then rose a little during and immediately after the 1939 - 1945 war to 52-54 per cent of the energy intake.

3.2.3 The equivalent data for the average diet since 1950 are recorded in Table 3.4. These data suggest that the total energy content of the diet per head in the average household continued to rise slightly until the mid 1950's. Since then it has declined gradually but consistently so that it is now about 400 kcal/day (1.7 MJ) less than it was in 1960. Protein has remained fairly constant with perhaps a small increase in the last 10 years. The percentage of energy from fat in the diet increased from about



37 per cent in 1950 up to 42 per cent since the late 1960's . The National Food Survey data show no sign that this has been decreasing in the past few years. Carbohydrate intakes show the opposite trend; as fat has been increasing so carbohydrate has occupied a steadily decreasing proportion of the total energy - from about 51 per cent in the early 1950's to about 45 per cent in recent years. Within the total for carbohydrate, consumption of sucrose has decreased. It remained relatively steady until the early 1970's with a sudden drop of about 12 per cent in 1974-1975 and a further fall within the past 4 or 5 years. Intake per head is now about 20 per cent less than in 1974.

3.2.4 The ratio of polyunsaturated to saturated fatty acids (the P/S ratio) has altered since 1959. Table 3.5 shows a decline in the saturated fatty acids from 53g/per head/day in 1959 and 57g/head/day in 1969 down to 44g/head/day in 1982. Polyunsaturated fatty acids increased from 9g in 1959 and 11g/head/day in 1969 to 12g in 1982; the two effects combined have resulted in a P/S ratio of 0.17 - 0.19 in 1959-69 being increased to 0.27 in 1982.

3.2.5 In addition to saturated fatty acids being reduced by about 10g/day, monounsaturated fatty acids also were less by about 5-8g/head/day giving the impression that an appreciable decline in total fat intake has coincided with an obvious increase in the proportion of fat in the diet. The explanation is that the total energy content of the diet has fallen. In other words less fat is being eaten now, on average, but it constitutes a higher proportion of the total energy relative to 25-30 years ago. A likely explanation for the decline in energy consumption is a decline in physical activity.

3.2.6 The fibre content of the British household diet since 1956 is given in Table 3.6. Remarkably little alteration in absolute quantities seems to have taken place although, since total energy has fallen, the proportion of fibre in the diet must have increased.

3.2.7 To the best of our knowledge there is no adequate information on trends in consumption of common salt.

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#### 4. Summary of the Basis of the Recommendations.

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This brief summary of the lines of evidence which form the basis of our major recommendations is included mainly for the benefit of those who may wish to evaluate the report but are not familiar with the scientific background. We have not attempted to give a comprehensive account because such an account must either be inappropriately long, or else selective and hence subject to bias. There are a number of recent reviews of the subject matter summarized below and references to some of them are appended to each subsection.

##### 4.1 Fat and fatty acids

- 4.1.1 The recommendations concerning dietary fat in this report are based on several lines of evidence relating dietary intake of saturated fatty acids to the incidence of coronary heart disease. The most direct evidence is given in 4.1.2. The other lines of evidence are indirect.
- 4.1.2 Comparisons between countries have shown a strong positive relationship between the proportion of dietary energy derived from saturated fatty acids and mortality from coronary heart disease. There is also some evidence for an inverse (or negative) relationship between both dietary intake and blood and adipocyte lipid contents of linoleic acid (a polyunsaturated fatty acid) and mortality from coronary heart disease. Within any one country there is no convincing evidence for such relationships, except possibly for blood and adipocyte lipid contents of linoleic acid.
- 4.1.3 Within any one of several countries a strong positive but curvilinear relationship has been established between total plasma cholesterol and the incidence of coronary heart disease. Inherited forms of hypercholesterolaemia have provided the strongest evidence for this relationship. Not only is the incidence of coronary heart disease increased grossly in these disorders, but clinical manifestations appear

at a much earlier age.

- 4.1.4 Isocaloric and other dietary studies in man have shown that dietary saturated fatty acids increase plasma total cholesterol whereas dietary polyunsaturated fatty acids decrease plasma total cholesterol.
- 4.1.5 Studies in primates other than man have shown that diets high in saturated fatty acids can lead to cholesterol-rich atherosclerotic lesions in coronary arteries. The relevance of such studies to man is not known.
- 4.1.6 There is emerging evidence, requiring more evaluation, that reduction of plasma cholesterol in man may be associated with slower progression - or possibly regression - of partly obstructing atherosclerotic lesions in femoral and coronary arteries.
- 4.1.7 There is evidence in animal species that coagulation indices and the development of intravascular thrombosis may be increased by dietary intake of saturated fatty acids and decreased by dietary intake of polyunsaturated fatty acids. Evidence in man is insufficient for such a conclusion.
- 4.1.8 In controlled clinical trials in which total plasma cholesterol has been decreased by diet, or diet plus cholesterol-lowering drugs, or cholesterol-lowering drugs alone in people with initially high total plasma cholesterol the incidence of coronary heart disease has been reduced.
- 4.1.9 There has been no controlled clinical trial of the effect of decreasing dietary intake of saturated fatty acids on the incidence of coronary heart disease nor is it likely that such a trial will be undertaken. The cost, with sufficient numbers over a sufficient period of time, is prohibitive. Multiple risk factor intervention trials (directed mainly at diet and smoking) have not shown convincing evidence of benefit but most of the participants in these trials have been middle-aged.
- 4.1.10 In some countries national dietary recommendations have included substantial increases in the P/S ratio possibly for reasons given in 4.1.2, 4.1.4 and 4.1.7. The Panel does not regard the evidence as sufficient grounds for recommending a substantial increase for the general population in the United Kingdom. The P/S ratio that we recommend is common in many countries with a lower incidence of coronary

heart disease and carries no obvious disadvantages. The population effects of P/S ratios of 1 and beyond are unknown.

4.1.11 Nine of the ten members of the Panel have concluded individually that there is sufficient consistency in this evidence to make it more likely than not that the incidence of Coronary Heart Disease will be reduced, or its age of onset delayed, by decreasing dietary intake of saturated fatty acids and total fat. We are all agreed that the evidence falls short of proof. The tenth member believes that this evidence is insufficient but that benefit may accrue insofar as the recommended change in diet contributes to the avoidance of obesity.

4.1.12 A more detailed account of evidence may be found in Dr N.B. Myant's book on Cholesterol [20] and in the Rationale of the Diet-Heart Statement of the American Heart Association [13].

#### 4.2 Common salt

4.2.1 High salt intakes have frequently been linked with the prevalence of high blood pressure in communities but a mechanism whereby salt could lead to the development of essential hypertension has not been established.

4.2.2 Cross-cultural studies show a statistical association between estimates of salt intake and the average blood pressure of a community but detailed investigations within a single community frequently fail to demonstrate such a relationship. Complicating factors may be the difficulty in establishing the habitual salt intake of individuals, the presence of only a minority of salt-sensitive individuals within a population, and the possible effects of weight gain, high fat and low potassium intake in promoting a rise in blood pressure. Reducing fat intake leads to a fall in blood pressure in some studies and an increase in potassium intake sometimes has a similar effect. Prolonged studies with these dietary manipulations are rarely performed but community studies in Finland and Belgium suggest that a variety of dietary changes do lead to a fall in average blood pressure.

4.2.3 Some feeding trials on normotensive and hypertensive adults show small reductions in blood pressure when salt intake is deliberately reduced, the effect being greater in those with high blood pressure.

4.2.4 Recently it has been suggested that the hormonal response to manipulating sodium intakes (i.e. changes in renin and aldosterone secretion) depends on the chloride rather than the sodium moiety of salt. This observation and animal studies showing chloride sensitivity in some of the genetic models for hypertension suggest that the sodium content of salt is not necessarily responsible for change in blood pressure.

4.2.5 A more detailed account of evidence may be found in the World Health Organization's Report on the Primary Prevention of Hypertension [21].

#### 4.3 Dietary fibre and complex carbohydrates

4.3.1 Epidemiological studies carried out in the United Kingdom, Puerto Rico, Hawaii, and Holland suggest that high intakes of dietary fibre or complex carbohydrates are associated with a reduced incidence of coronary heart disease. It is not possible to establish conclusively that this effect is independent of all other dietary variables. In each of these studies dietary fibre or complex carbohydrates is either one of the strongest or the only dietary variable related to coronary heart disease.

4.3.2 Dietary fibre favourably influences blood concentrations of cholesterol and glucose, and there is some evidence of favourable influence on certain haemostatic variables shown to be associated with an increased risk of coronary heart disease. It is difficult to disentangle separate effects of dietary fibre and complex carbohydrate because they are usually present together in food.

4.3.3 The various components of dietary fibre may exert different effects. The gel types appear to have the most marked effects on blood cholesterol and glucose. However, epidemiological data suggest that cereal fibre is protective against coronary heart disease.

4.3.4 No specific dietary intervention studies have been undertaken, though an increase in fibre-rich carbohydrate was part of the overall diet strategy in the Oslo Prospective Heart Disease Study.

4.3.5 The present United Kingdom diet in adults contains approximately 20g fibre/day (see Table 3.6). An increase in intake of approximately 50% could be beneficial in other respects, but the protective effect in

relation to coronary heart disease has not been adequately tested. An increase in intake of some foods containing cereal fibre (especially commercially available breads) may increase intake of common salt.

4.3.6 A more detailed account of the evidence (including effects of fibre in other diseases) may be found in the report of the Royal College of Physicians on Medical Aspects of Dietary Fibre [22].

#### 4.4 Obesity

4.4.1 Obesity has traditionally been defined as present when weight is more than 20 per cent above the upper level of the desirable weight for height (calculated from data collected for the Build and Blood Pressure Study in the pre-war period and presented by the Metropolitan Life Insurance Company of New York). In the same terms overweight refers to those who exceed the upper level.

4.4.2 More recent insurance statistics have led to the proposal that an upward revision of the weight standard is warranted, but when the excess mortality of the thinner smokers is taken into account then the original tables are seen to be appropriate for both smokers and non-smokers of both sexes. These standards are derived from data on very large numbers of insured adults in the United States, and are consistent with smaller scale British epidemiological surveys and with a large recent independent U.S.A. study of smokers and non-smokers.

4.4.3 There has been a progressive increase in the average weight for height of adults in Britain over the last 40 years and by 1981 over 40% of middle-aged men and women were overweight [23]. The environmental factors accounting for this weight increase are many including a decline in physical activity and change in dietary patterns. Diets rich in fat and simple sugars and with little dietary fibre are considered conducive to weight gain.

4.4.4 There is an increased risk of coronary heart disease in the overweight especially in younger men. In this group mortality from coronary heart disease was, for example, approximately 30 per cent higher in those with a relative weight excess of 10 per cent.

4.4.5 Overweight is associated with an increased risk of hypertension, increased plasma cholesterol and diabetes mellitus. These may account

for at least part of the increased risk of coronary heart disease. Most studies have shown no residual effect of weight on risk once age, sex and the above risk factors have been taken into account.

4.4.6 A more detailed account of evidence may be found in the Report on Obesity of the Royal College of Physicians [6].

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## 5. Achieving the Recommendations for Dietary Change

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- 5.1 Our recommendations, especially those for fat, were formulated to take account of practical considerations in the United Kingdom and to provide a diet capable of satisfying all relevant age groups (2.1.1 and 2.1.1.3; 1.4.4 and 1.5.6). The purpose of this section is to show the credibility of these statements and to give general guidance (in quantitative terms where possible), as to how the recommendations may be implemented.
- 5.2 It was not part of our remit to provide detailed information about the various dietary changes which individuals or families could adopt in implementing the recommendations. We recognise that this information is an essential requirement and we have recommended that means should be found of providing it (2.3.1). Simple methods are needed so that individuals who wish to follow the recommendations can assess their present diet and determine what changes are required.
- 5.3 Table 5.1 shows the major sources of saturated and polyunsaturated fatty acids, and of total fat in the United Kingdom diet in 1981. The table shows also total intakes (inclusive of trans fatty acids), and the intakes and associated changes required to implement the recommendations. The data are from Tables 33 and 34 of the Annual Report for 1981 of the National Food Survey Committee [3] except for trans fatty acids which are taken from a recent study on fatty acids and sterols in the British diet [4]. The major sources of saturated fatty acids are milk and cream (approximately one-fifth), meat and meat products (approximately one-quarter), butter, margarines and cheese (approximately one-third) and cooking fats and oils (approximately one-tenth)
- 5.4 Milk and cheese are foods available in alternative forms with lower contents of saturated fatty acids and fat. These constituents are about halved in semi-skimmed milk and largely absent from skimmed milk. Cheeses are available (both hard and soft) with contents of



Table 5.1: Major sources of fat and of saturated and polyunsaturated fatty acids in the United Kingdom diet. National averages 1981 [3].

Food item	Fat		Fatty Acids			
	g/day	% total	Saturated g/day	% total	Polyunsaturated g/day	% total
All milk, cream	14.5	14.0	8.5	18.8	0.4	4.0
Cheese	5.0	4.9	3.0	6.6	0.1	1.2
All meat	28.0	27.0	11.5	25.3	2.0	17.2
Butter	12.3	11.9	7.3	16.0	0.3	3.0
Margarine	13.5	13.1	4.5	9.9	2.6	23.1
Other fats	12.1	11.7	4.3	9.4	2.3	20.3
Biscuits	4.5	4.4	2.3	5.0	0.5	4.4
<b>Total of items</b>	<b>89.9</b>	<b>87.0</b>	<b>41.4</b>	<b>91.0</b>	<b>8.2</b>	<b>73.2</b>
Overall total with trans fatty acids*	104		49		11.4	
Recommended total	87		37		up to 16.7	
Recommended change	-17		-12		up to +5.3	

\* Trans fatty acids, 4.3 per cent of all fatty acids [4]. Total energy 9.3MJ (2210kcal). Meat includes poultry, offal, other meat products.

Table 5.2: Fatty acids in some edible fats and oils

Food item	Fatty Acids (g/100g)	
	Saturated plus Trans	Polyunsaturated
butter	73	2
margarines <sup>1</sup>	49-66	6-10
margarines <sup>2</sup>	28-32	55-48
lard	42	9
compound cooking fat	40	14
cooking oils	10-15	72-30

<sup>1</sup> margarines high in saturated plus trans fatty acids; <sup>2</sup> margarines low in saturated plus trans fatty acids. Sources are [24,25] except for trans fatty acids [Ministry of Agriculture, Fisheries and Food, unpublished data].

saturated fatty acids and fat which are about two-thirds of those of cheeses currently consumed in the average diet [3]. About 40 per cent of the decreases in saturated fatty acids and fat recommended nationally could be achieved by avoiding cream, replacing whole milk with semi-skimmed milk and switching to the lower fat cheeses. If skimmed milk was used approximately 80 per cent of the decreases recommended nationally could be accomplished.

5.5 Meat and meat products are foods for which alternative forms with lower contents of saturated fatty acids and fat are becoming more widely available as a result of changes in husbandry or in manufacturing processes. Consumption of saturated fatty acids could be decreased now by substituting, for example, some non-fatty fish (relative content of saturated fatty acids about 5 per cent) or poultry e.g. chicken (relative content about 30 per cent).

5.6 Butter, margarine and other fats (lard, compound cooking fats and oils) are foods where substitutes (for butter) or alternatives (for other categories) with a lower content of saturated (plus trans) fatty acids, are available. It is in this group that there is major scope for increasing polyunsaturated fatty acids to assist in implementation. Relative concentrations of saturated plus trans, and polyunsaturated fatty acids (g/100g) are shown in Table 5.2. The scope for change in these categories is limited mainly by the recommended P/S ratio of 0.45.

5.7 One method of implementing the recommendation for saturated fatty acids and for total fat in the United Kingdom diet is to decrease consumption of fat from each food item in Table 5.1 by about one-quarter. The energy loss (about 1MJ or 225kcal) could be made good by increased consumption of bread, other cereals, fruit and vegetables. With wholemeal bread alone the additional consumption needed would be about 105g/day. The overall effect on other constituents would increase fibre by about 9g and common salt by about 1g (simple sugars would be unchanged). The increase in fibre approximates to that which may confer benefit (2.1.7., 4.4.5). The increase in common salt could be corrected by a decrease of about one-third in salt used in cooking or at table.

5.8 An alternative approach, likely to be more acceptable and therefore

to be recommended, requires a smaller decrease in fat through an increase in polyunsaturated fatty acids. For most people this will necessitate shifts in consumption between butter, margarines and other fats and cooking oils (see 5.6). The energy loss occasioned by this approach is about 0.7-1MJ or 150-220kcal depending upon the food items that are changed. This loss may be made good as described in 5.7.

5.9 We have satisfied ourselves that the recommended total intakes and the recommended changes in intake of fat, saturated plus trans fatty acids, and polyunsaturated fatty acids (bottom of Table 5.1) conform with practical considerations in the United Kingdom (see 5.1). We have tested this by constructing diets based on the principles in 5.4 - 5.6, 5.8, and recording quantities, as in Table 5.1. No record is given here because some members of the Panel believe that such a record may be taken as a recommendation, and it is not part of our task to make such recommendations (see 5.2).

5.10 If the recommendations contained in this report are implemented by a substantial proportion of the general population then there will be implications for agriculture and food manufacture. Consideration of these implications was not part of our remit although we are sensitive to their importance. The implications for agriculture and food manufacture of more extensive dietary changes than we have recommended here, have been considered in detail in a report entitled Coronary Heart Disease, Plans for Action [26].

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## 6. Appendices

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### Appendix A: Affiliations of Members of the Panel

#### Chairman

Professor P.J. Randle                      Department of Clinical Biochemistry  
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#### Members

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## Appendix B. Acknowledgements

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Dr M.R. Alderson

Professor J. Dobbing

Mr C.J.W. Foy

Dr M.I. Gurr

Professor June K. Lloyd

Dr M.G. Marmot

Miss Jean Marr

Dr. B.W. Nichols

Professor T.E. Oppe

Mr C. Robbins

Professor A.G. Shaper

Miss Caroline Walker

Dr G.C.M. Watt

Dr R.J. Wawman

Dr D.R.R. Williams



**Appendix C. Major Topics Reviewed by the Panel in relation to  
Cardiovascular Diseases and Diet.**

Mortality rates in the United Kingdom and in England, Northern Ireland,  
Scotland and Wales.

Diet in the United Kingdom.

Trends in coronary heart disease mortality: sudden cardiac death.

Reports on diet and cardiovascular diseases in other countries.

The role of classes of lipids in the diet, in the circulation and in the  
tissues: lipids and thrombosis: polyunsaturated fatty acids:  
oxysterols, trans fatty acids.

Serum cholesterol and non-cardiovascular mortality.

Proteins, carbohydrates, dietary fibre, vitamins, trace elements.

Alcohol.

Smoking

Minerals and blood pressure.

Obesity, exercise.

Oral contraceptives and diet.

Clinical trials of dietary manipulation and of clofibrate and  
cholestyramine.

Diabetes mellitus and diet.

The natural history of cardiovascular diseases, including immunological  
aspects and the regression of atherosclerosis.

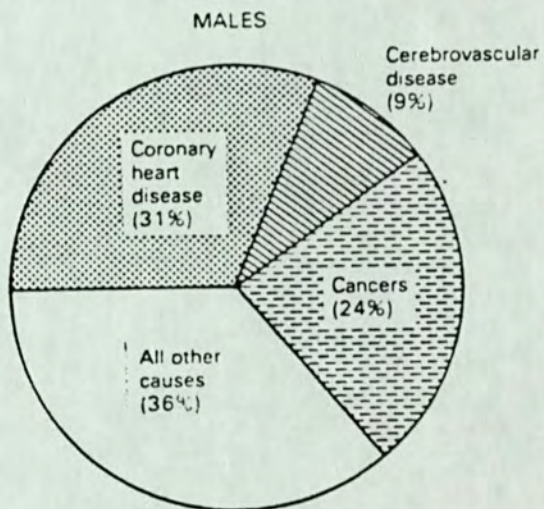
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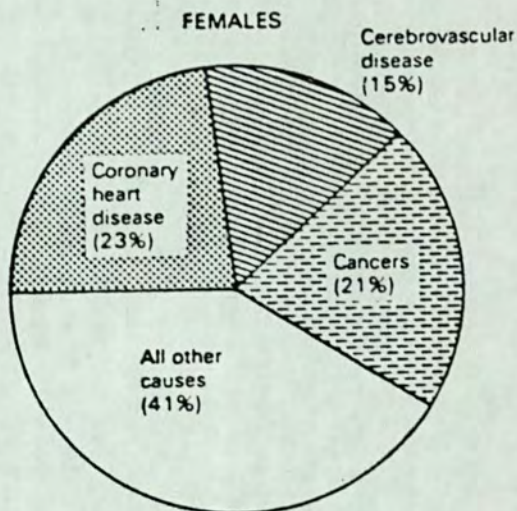
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Figure 3.1: Proportion of all deaths in England and Wales (1982) attributed to coronary heart disease (ICD 410-414), cerebrovascular disease (ICD 430-438), cancers (ICD 140-239) and all other causes. Source: Office of Population Censuses and Surveys.



Total number of deaths: 290 166  
 Death rate (all ages) per million: 12 017



Total number of deaths: 291 695  
 Death rate (all ages) per million: 11 456

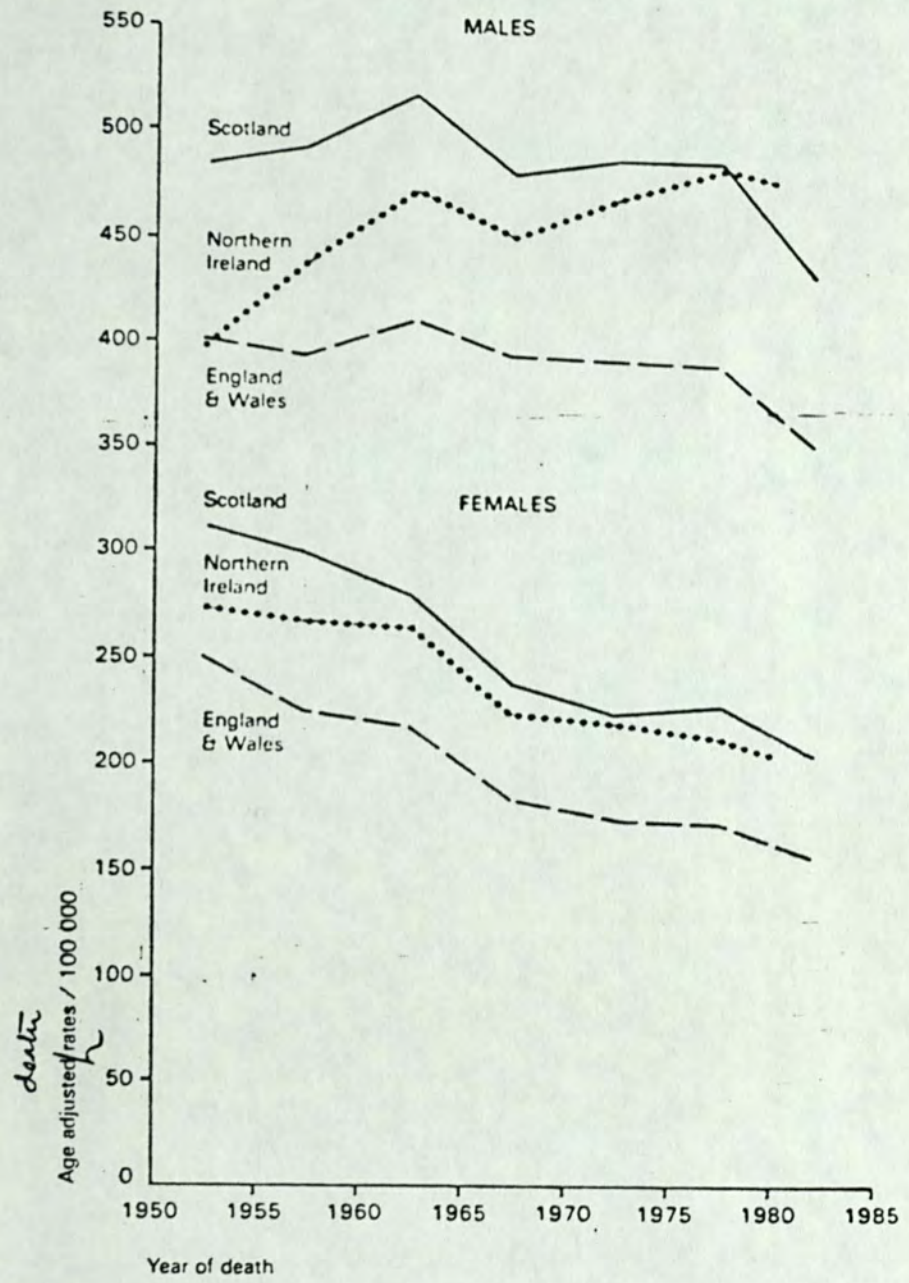
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death

Figure 3.2: Age adjusted rates/100 000 for arteriosclerotic and degenerative heart disease for males and females in England and Wales, Scotland and Northern Ireland Source: [14] and ~~Anderson M.P. unpublished~~ O-P-C-S

International  
mortality  
Statistics

(predominantly  
coronary heart  
disease)



Same  
size

Table 3.1: Death rates from coronary heart disease/100 000 for males and females aged 35-44, 45-54 and 55-64 years in England and Wales, Scotland and Northern Ireland in the years 1950-51 to 1980-81 (1950-67: ICD(7) 420-422; 1968-1978: ICD(8) 410-414; 1979-1981: ICD(9) 410-414)(1). Source: Office of Population Censuses and Surveys.

Year	England and Wales						Scotland						Northern Ireland					
	35-44		45-54		55-64		35-44		45-54		55-64		35-44		45-54		55-64	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
50-51	33	9	166	43	572	217	55	18	256	74	741	337	49	19	227	82	624	309
52-53	34	7	167	40	557	198	56	17	234	70	760	300	45	18	225	71	642	291
54-55	40	8	180	38	574	190	64	17	267	72	775	304	51	17	214	78	657	316
56-57	42	7	190	36	592	188	60	15	276	69	810	309	52	17	240	67	724	280
58-59	46	7	199	37	613	188	69	19	278	65	821	307	66	15	267	75	784	307
60-61	51	8	212	38	641	192	75	14	311	72	892	323	73	13	266	68	810	293
62-63	59	9	233	42	691	202	82	17	335	79	924	329	78	20	302	81	876	295
64-65	66	11	249	43	700	197	92	17	360	89	959	326	88	17	300	76	830	282
66-67	65	10	247	44	698	196	88	18	337	81	896	316	78	17	302	60	825	276
68-69	62	11	253	43	697	187	82	14	328	77	875	306	79	13	288	61	816	276
70-71	66	10	268	44	702	189	80	19	348	82	891	308	85	15	312	71	889	285
72-73	65	11	288	51	733	196	91	17	366	90	966	330	70	17	366	60	904	323
74-75	63	11	290	51	728	208	85	18	356	84	928	336	84	8	362	70	925	267
76-77	60	10	272	50	721	201	71	19	342	80	915	317	75	13	336	70	906	313
78-79	59	10	278	53	731	202	72	17	359	85	910	313	55	12	332	70	902	320
80-81	53	9	256	46	697	197	69	13	347	77	870	305	66	13	291	64	951	289

Table 3.2: Death rates for coronary heart disease (ICD 410-414) for the fifteen highest ranking countries in 1978 (ages 35-74 standardized) (15).

Males		Females	
Finland	664	Scotland	256
Scotland	656	Northern Ireland	233
Northern Ireland	653	Israel	207
Ireland	542	Ireland	200
England and Wales	533	New Zealand	196
New Zealand	529	U S A	187
U S A	506	Australia	186
Australia	499	Finland	177
Canada	457	England and Wales	173
Denmark	443	Hungary	168
Sweden	436	Bulgaria	162
Hungary	420	Canada	155
Norway	414	Denmark	141
Israel	395	Sweden	132
Netherlands	379	Austria	119



Table 3.3: The mean energy (including alcohol) and the protein, fat and carbohydrate content of the total food supplies of the United Kingdom (Food Consumption Level Estimates) from 1952 to 1982 expressed as the amount per person per day, and the percentage of the total food energy supplied by protein, fat and carbohydrate. In 1980 changes in methods resulted in two estimates. Source: Ministry of Agriculture Fisheries and Food.

Year	Energy		Protein		Fat		Carbohydrate	
	Kcal	mJ	g	% energy	g	% energy	g	% energy
1952	3030	12.7	82	10.8	124	36.8	424	52.4
1953	3100	13.0	82	10.6	130	37.8	425	51.5
1954	3190	13.3	82	10.3	138	38.9	431	50.7
1955	3170	13.3	82	10.4	139	39.5	425	50.3
1956	3170	13.3	83	10.5	139	39.5	422	49.9
1957	3180	13.3	83	10.5	140	39.6	422	49.8
1958	3180	13.3	83	10.5	141	39.9	423	49.9
1959	3130	13.1	84	10.7	138	39.6	415	49.8
1960	3140	13.1	85	10.8	138	39.6	416	49.7
1961	3150	13.2	85	10.8	140	40.0	413	49.2
1962	3170	13.3	87	11.0	144	40.9	408	48.3
1963	3180	13.3	87	10.9	143	40.5	412	48.6
1964	3160	13.2	87	11.0	144	41.0	405	48.1
1965	3140	13.2	87	11.1	140	40.1	404	48.2
1966	3160	13.2	86	10.9	144	41.0	403	47.8
1967	3080	12.9	85	11.1	143	41.8	387	47.1
1968	3090	12.9	85	11.0	144	41.9	387	47.0
1969	3110	13.0	86	11.0	146	42.3	389	46.9
1970	3110	13.0	86	11.1	145	42.0	390	47.0
1971	3080	12.9	85	11.0	144	42.1	385	46.9
1972	3070	12.8	85	11.1	143	41.9	386	47.1
1973	3040	12.7	84	11.1	141	41.6	384	47.3
1974	2960	12.4	84	11.3	132	40.2	383	48.5
1975	2920	12.2	84	11.5	130	40.1	376	48.4
1976	2920	12.2	83	11.4	130	40.1	378	48.5
1977	2930	12.3	83	11.3	131	40.3	378	48.4
1978	2920	12.2	83	11.3	130	40.0	379	48.7
1979	2950	12.3	85	11.5	134	40.8	375	47.7
1980	2850	11.9	82	11.5	128	40.6	363	47.9
1980	2780	11.7	82	11.6	125	40.5	364	47.9
1981	2770	11.6	81	11.6	126	40.9	359	47.5
1982	2800	11.8	81	11.3	128	41.1	364	47.6

Table 3.4: The mean energy (excluding alcohol) and the protein, fat and carbohydrate content of the diet of the average household in Great Britain from 1950-1982 expressed as the amount per person per day, and the percentage of the total food energy supplied by protein, fat and carbohydrate. In 1960 and 1974 changes in methods resulted in two estimates. Source: National Food Survey (16).

Year	Energy		Protein		Fat		Carbohydrate	
	Kcal	mJ	g	% energy	g	% energy	g	% energy
1950	2470	10.3	78	12.5	102	36.8	315	50.6
1951	2470	10.3	76	12.3	100	36.4	318	51.4
1952	2450	10.2	77	12.6	94	34.5	324	52.9
1953	2520	10.5	78	12.4	101	36.0	325	51.6
1954	2630	11.0	77	11.7	107	36.5	340	51.8
1955	2640	11.0	77	11.6	107	36.6	342	51.7
1956	2620	11.0	76	11.5	108	37.1	337	51.4
1957	2590	10.8	75	11.6	110	38.1	325	50.3
1958	2600	10.9	75	11.5	111	38.3	325	50.2
1959	2580	10.8	74	11.5	110	38.3	324	50.3
1960	2590	10.8	76	11.7	112	38.9	320	49.4
1960	2630	11.0	75	11.4	115	39.3	345	49.3
1961	2630	11.0	75	11.4	116	39.6	343	49.0
1962	2640	11.0	75	11.4	117	40.0	342	48.6
1963	2650	11.1	76	11.5	118	39.8	343	48.5
1964	2600	10.9	75	11.6	116	40.3	333	48.0
1965	2590	10.9	75	11.6	116	40.4	332	47.9
1966	2560	10.7	76	11.8	117	41.0	321	47.0
1967	2590	10.8	76	11.7	119	41.3	324	47.0
1968	2560	10.7	75	11.8	118	41.5	318	46.6
1969	2570	10.8	74	11.6	120	42.0	317	46.3
1970	2600	10.9	75	11.5	121	41.8	322	46.5
1971	2530	10.6	74	11.6	119	42.3	310	46.0
1972	2430	10.2	73	11.9	112	41.5	301	46.4
1973	2400	10.0	71	12.0	111	42.0	293	46.0
1974	2360	9.8	70	11.9	110	41.9	288	46.1
1974	2320	9.7	71	12.3	106	41.3	287	46.4
1975	2290	9.6	72	12.6	107	42.2	275	45.2
1976	2280	9.6	72	12.7	105	41.7	277	45.7
1977	2260	9.5	72	12.8	105	41.9	273	45.3
1978	2260	9.5	73	12.9	106	42.0	272	45.1
1979	2250	9.5	73	13.0	106	42.4	268	44.6
1980	2230	9.4	73	13.0	106	42.6	264	44.4
1981	2210	9.3	72	12.9	104	42.2	264	44.9
1982	2180	9.1	70	12.9	103	42.6	258	44.5

Table 3.5: Fatty acids (g/person/day) and ratio of polyunsaturated / saturated fatty acids (P:S ratio) in the average household diet (2,16). In 1974 changes in methods resulted in two estimates.

Year	Saturated	Monounsaturated	Polyunsaturated	P:S ratio
1959	53.0	43.0	9.2	0.17
1969	56.7	46.5	11.0	0.19
1972	52.0	42.9	11.5	0.22
1973	51.5	41.9	11.5	0.22
1974	51.4	41.2	10.8	0.21
1974	50.7	39.8	10.6	0.20
1975	51.7	39.8	10.1	0.19
1976	50.1	39.7	10.5	0.20
1977	47.5	39.0	10.4	0.21
1978	47.2	39.3	10.6	0.22
1979	47.8	39.7	10.7	0.22
1980	46.8	39.6	11.3	0.24
1981	45.6	38.9	11.4	0.25
1982	44.4	38.7	12.1	0.27

Table 3.6. Dietary fibre in the British household diet (g/person/day) between 1956 and 1982 (17-19). Changes in methods resulted in two estimates for 1982.

Year	Hexoses	Pentoses	Uronic acids	non-cellulose polysaccharides	Cellulose	Lignin	total dietary fibre
1956	9.9	2.4	3.4	15.7	5.7	1.1	22.5
1961	9.5	2.3	3.3	15.1	5.6	1.0	21.7
1966	9.0	2.4	3.3	14.8	5.3	1.1	21.2
1971	8.9	2.5	3.3	14.8	5.2	1.0	21.2
1972	8.7	2.4	3.3	14.5	5.1	1.0	20.6
1973	8.6	2.4	3.2	14.4	5.1	1.0	20.5
1974	8.6	2.4	3.2	14.3	5.1	1.0	20.4
1976	8.2	2.5	3.1	13.9	4.8	1.0	19.7
1982	8.2	2.7	2.2	13.2	5.6	1.0	19.8
1982	8.7	4.1	2.1	14.9	5.7	1.7	22.2

