



Annual Report 2012

Further copies may be obtained from the SACN website at www.sacn.gov.uk

Contents

	Page number
Foreword	1
About the Committee	2
The Scientific Advisory Committee on Nutrition's Work in 2011	3
SACN Working Groups and Subgroups	4
Approaches to the Nutritional Assessment of Novel Foods Subgroup	5
Carbohydrates Working Group	6
Subgroup on Maternal and Child Nutrition	7
Vitamin D Working Group	8
Annex 1 Committee terms of reference	10
Annex 2 Membership of Committee, Subgroups and Working Groups	11
Annex 3 Members' Biographies	16
Annex 4 Remuneration and Committee finance	22
Annex 5 SACN Main Committee - declaration of interests	23
Annex 6 SACN Working groups - declaration of interests	27

Foreword

In this, the 12th annual report of the Scientific Advisory Committee on Nutrition (SACN), we cover the work of the Committee in 2012.

During 2012, SACN continued work on the early stages of two major reviews; the vitamin D and health review, and the review of complimentary and young child feeding. Meanwhile, work on the carbohydrates and health review continued with steady progress made towards a first draft of the working group report.

While work progressed on these reviews, the Committee finalised two position statements.

The Department of Health asked the Joint SACN/RCPCH Expert Group to provide advice on the use of Body Mass Index (BMI) centile thresholds for defining underweight, overweight and obesity in children aged 2-18 years in the UK. The Committee's advice was published in the "*joint SACN/RCPCH (Royal College of Paediatricians and Child Health) statement on defining child underweight, overweight and obesity in the UK*"

The Department for Environment Food and Rural Affairs (Defra) asked SACN to consider the nutritional implications of repealing the UK Bread and Flour Regulations 1998, as part of the Red Tape Challenge initiative to reduce regulation in all sectors. This advice was published in the "*SACN UK Bread and Flour Regulations position statement*", which formed part of a Defra public consultation on the issue.

In addition, we were pleased to be able to re-appoint six members and for them to continue to participate in the work of the Committee for a further three or four years.

Finally, my thanks go to members of the Committee and its Working Groups and Subgroups for the time and effort committed to SACN's work and public health nutrition in general. I would also like to thank the Secretariat for their support and the high standards they continue to set with the drafting of background papers and SACN reports.



Dr Ann Prentice

Chair

About the Committee

SACN is a UK wide Advisory Committee set up to provide advice to UK Health Departments and other government agencies. Its remit includes matters concerning nutrient content of individual foods, advice on diet and the nutritional status of people.

Members are appointed as independent scientific experts on the basis of their specific skills and knowledge. There are also two members to represent consumers.

The SACN is supported in its work by a secretariat provided by the Department of Health. The Secretariat has scientific expertise that enables them to provide members with comprehensive background information and briefing papers to inform the decision-making processes of the Committee.

SACN's terms of reference are shown at Annex 1.

Openness

SACN is committed to a policy of openness and engagement with interested parties. Papers for the Committee's meetings, agenda and minutes are posted on the Committee website at www.sacn.gov.uk, subject to certain exceptions on grounds of commercial or other sensitive information. As part of the policy on openness, all of the Committee's three main meetings are held in open session.

Membership

Professor Hilary Powers, Professor Angus Walls and Professor Ian Young were re-appointed for a further four years, and Professor Susan Lanham-New, Professor Harry McArdle and Professor Julie Lovegrove for a further three.

The durations of these appointments vary from three to four years in order to stagger the end dates of members' terms.

Details on Membership of the Committee and its Subgroups can be found in Annex 2.

Biographies of all members can be found in Annex 3.

Remuneration and Committee finance

Remuneration and Committee finances are shown in Annex 4.

Declaration of interests

The Committee follows government advice on declaration of interests. Members are asked to declare where there may be a conflict of interest with regard to the issue under scrutiny at each meeting. Members are also requested to provide the Secretariat with an annual declaration of interests, which have been detailed in Annex 5.

Procedures

Meeting agendas are compiled from a number of sources including outstanding items from previous meetings, items suggested by the Committee, outside bodies including Department of Health Committees as well as items brought forward from the Committee work programme. Updates from SACN Subgroups and Working Groups are regular features on the agenda.

SACN's Work in 2012

This is the eleventh annual report of SACN and covers the calendar year 2012.

The Committee met twice in 2012 on 10 February and 12 June. Dr Ann Prentice chaired both SACN main meetings in 2012.

The Subgroup on Maternal and Child Nutrition met three times in 2012, on 31 January, 22 May and 18 October; the Vitamin D Working Group met four times on 28 March, 28 June, 18 September and 7 December; and the Carbohydrates Working Group met four times, on 27 January, 30 April, 4 July and 24 October.

Work Programme

The following issues are on the Committee's current work programme:

- Carbohydrates and Health;
- Vitamin D and health;
- Selenium and health;
- Review of complementary and young child feeding;
- Nutritional implications of new food technologies and processes; and
- Iodine and Health.

More details on the progress of work on the above issues can be found in the subsequent section on SACN's Working Groups and Subgroups.

Forward Look

The Committee considers the following items to be issues for future consideration:

- Sustainable healthy diet;
- Health of women of reproductive age; and
- Impact of nutrition on cognitive development and performance in children.

SACNs Working Groups and Subgroups

The Committee has a number of Subgroups and Working Groups comprising SACN members and co-opted specialists in their subject area. These groups develop recommendations and advice on specific areas of public health nutrition. The groups active during 2012 were:

- Carbohydrates Working Group
- Energy Requirements Working Group
- Subgroup on Maternal and Child Nutrition
- Joint SACN/RCPCH (Royal College of Paediatrics and Child Health) Group, to discuss the use of Body Mass Index (BMI) thresholds for defining overweight and obesity in children
- Vitamin D Working Group

These groups report back on progress to the main Committee at each SACN meeting.

Approaches to the Nutritional Assessment of Novel Foods Subgroup

Background

A joint Subgroup was re-established with the Advisory Committee on Novel Foods and Processes (ACNFP) in 2008 to consider approaches to the nutritional assessment of novel foods, including those from genetically modified sources.

Terms of reference

The Subgroup is reviewing the existing guidelines for the nutritional assessment of novel foods, and considering whether this guidance should be refined to provide applicants with specific details of the nutritional data required to support a novel food application.

It is intended that the resulting advice will be used by:

- ACNFP in its future evaluations of novel foods;
- applicants making novel food applications throughout the UK; and
- the FSA, which will circulate it to other European Union bodies (including the European Food Safety Authority) in order to develop a consistent approach to the nutritional assessment of novel foods.

Activity

The Approaches to the Nutritional Assessment of Novel Foods Subgroup did not meet in 2012. However, Professor Paul Haggarty who acts as cross committee representative for SACN on ACNFP attended five meetings of the ACNFP in 2012 and provided written comments in response to ACNFP postal consultations, providing input on the nutritional assessment of novel foods.

Carbohydrates Working Group

Background

This Working Group was set up in 2008 following a workshop convened by the FSA in 2007 to discuss current government advice relating to carbohydrate intake. Dietary carbohydrate was last considered by the Committee on Medical Aspects of Food Policy (COMA) in 1989 in their report on Dietary Sugars and Human Disease, the 1991 report "Dietary Reference Values for Food Energy and Nutrients for the United Kingdom" and the 1998 report "Nutritional Aspects of the Development of Cancer". It was agreed that under the remit of the Working Group a review of carbohydrates and their relationship to health outcomes should be undertaken to ensure that policy recommendations and advice are kept up to date.

Terms of reference

SACN is requested by the Department of Health and Food Standards Agency to provide clarification of the relationship between dietary carbohydrates and health and make public health recommendations. To achieve this they need to review:

- the evidence for a role of dietary carbohydrates in colorectal health in adults (including colorectal cancer, IBS, constipation) and in infancy and childhood;
- the evidence on dietary carbohydrates and cardio-metabolic health (including cardiovascular disease, insulin resistance, glycaemic response and obesity);
- the evidence in respect to dietary carbohydrates and oral health.
- the terminology, classification and definitions of types of carbohydrates in the diet.

Activity

The Carbohydrates Working Group met on 27th January, 30th April, 4th July and 24th October 2012. In the early part of the year, members commented on revised drafts of the obesity, diabetes, energy intake and eating motivation, and blood lipids chapters of the cardiometabolic health review. By the summer, the cardiometabolic health review was finalised and completed. Members also discussed the draft structure of the Carbohydrates and Health report and methods of grading the strength of the evidence. At the October meeting, the Working Group drew initial conclusions on the evidence on carbohydrates and the risk of type 2 diabetes and discussed carbohydrate intake data from the National Diet and Nutrition Survey.

Subgroup on Maternal and Child Nutrition

Background

The Subgroup on Maternal and Child Nutrition (SMCN) was set up as a specialist standing group to advise Government on issues relating specifically to maternal and child nutrition, an area on which Health Departments need regular scientific advice for policy-making and regulatory purposes.

Terms of reference

The terms of reference for the Subgroup on Maternal and Child Nutrition are to advise, through the Scientific Advisory Committee on Nutrition (SACN), on such aspects of child and maternal diet and nutrition, as are referred to it by the UK Health Departments and SACN.

Activity

The work of the Subgroup in 2012 has focussed on the review of the scientific evidence underpinning UK complementary and young child feeding advice. The terms of reference for the review and scope for the review were agreed by SACN in 2011.

The Subgroup discussed the scope, content and structure of the review at their January and May 2012 meetings. The Secretariat has performed extensive literature searches to help establish the current evidence base regarding the optimal duration of exclusive breastfeeding and the timing of introduction of complementary foods, and has drafted text for the report. To date, this has included the nutritional adequacy of exclusive breastfeeding to six months as well as literature reviews to investigate the association between the introduction of complementary foods and subsequent risk of overweight and obesity. The Subgroup has also begun discussions about the how the evidence that has been identified regarding dietary diversification of the infant diet should be covered in the review.

As part of the review, SACN have asked the Committee on Toxicity to examine the risks of toxicity from chemicals in the infant diet and also what is known about the influence of infant diet on the development of food allergy and atopic and autoimmune disease. In November 2012 the COT published an overarching statement setting out their conclusions regarding the chemicals identified for review. The evidence regarding dietary exposures in the first year of life and the risk of developing atopic and autoimmune disease will be reviewed by an external contractor (Imperial College London) and findings reported in 2015. Close collaboration between the two Committees will continue throughout the review process.

Vitamin D Working Group

Background

Vitamin D is required for calcium absorption and balance. Prolonged deficiency results in rickets in children and osteomalacia (bone weakness and fragility) in adults. Low Vitamin D status might be associated with the development of a range of other diseases (including some types of cancer, cardiovascular disease and multiple sclerosis).

Vitamin D is obtained either from cutaneous synthesis by the action of sunlight on skin, or from the diet. There are few dietary sources: oily fish, fortified products such as margarines and some breakfast cereals, and smaller amounts in red meat and egg yolk. Cutaneous synthesis is the main source of Vitamin D when skin is regularly exposed to sunlight. Dietary sources are more important when sunlight exposure is limited.

Since Vitamin D is produced in the skin from sunlight, the Committee on Medical Aspects of Food Policy (COMA) did not consider that a dietary intake was necessary for adults living a normal lifestyle (Department of Health, 1991). Dietary Reference Values (DRVs) for Vitamin D intake were set only for population subgroups at risk of Vitamin D deficiency: children aged under 4 years; pregnant and breast-feeding women, adults aged over 65 years, individuals with limited exposure to sunlight (e.g. those confined indoors or who wear concealing clothing) and people of Asian origin.

The evidence on Vitamin D and health was last considered by SACN in 2007 (*Update on Vitamin D, Position Statement*). At that time, the committee concluded there was insufficient evidence to amend existing advice on Vitamin D requirements and endorsed the DRVs set by COMA in 1991. Since then, further evidence has become available. Therefore at its meeting in October 2010, SACN agreed to review the DRVs for Vitamin D intake: to consider whether they are still appropriate in the context of current lifestyles (e.g., advice to stay out of sun, wear sunscreen) and if DRVs should be developed for 4-64 year olds.

Terms of reference

To review the Dietary Reference Values for vitamin D intake and make recommendations.

This will require a risk assessment of the vitamin D status of the UK population and consideration of the:

- biochemical indicators of vitamin D status and the validity of the threshold concentrations/ranges used to assess risk of deficiency and excess;
- association between vitamin D status and various health outcomes at different life stages and in different population groups and the effects of biological modifiers;
- contribution of cutaneous vitamin D synthesis to vitamin D status in the United Kingdom taking account of the effects of modifiers of skin exposure to sunlight; the risks of skin damage and other adverse health outcomes associated with sunlight exposure;
- potential adverse effects of high vitamin D intakes;
- relative contributions made by dietary vitamin D intake (from natural food sources, fortified foods and supplements) and cutaneous vitamin D synthesis to the vitamin D status of the UK population.

Since SACN's review will include a risk assessment of UVB sunlight exposure, the SACN Secretariat sought advice from the Committee on Medical Aspects of Radiation (COMARE). COMARE agreed to commission the Health Protection Agency (HPA) to assess the risks of sunlight exposure since it has the relevant expertise. The findings of the HPA assessment will first be considered by COMARE and then by the Working Group. Dr John O'Hagan is the HPA representative at Working Group meetings and provides a link between SACN, HPA and COMARE.

The COT has agreed to review the evidence on effects of high vitamin D intakes. The Committee's findings will then be considered by the Working Group. Ms Cath Mulholland (COT Secretariat) is the COT representative at Working Group meetings and provides a link between SACN and COT. Additional expertise (e.g. dermatologist) may be co-opted at a future date

Activity

The Vitamin D Working Group made good progress in 2011: it issued a call for evidence to inform its review on Vitamin D in March-April 2011 and held two meetings and one teleconference.

At the first meeting, in May 2011, the Working Group agreed the terms of reference and scope of work and discussed how to assess the available evidence, the work plan, its relationship to COMARE/HPA/COT, responses received to the call for evidence, areas for inclusion under Vitamin D biology, and the health outcomes that should be considered.

The second meeting was scheduled for September 2011, however this was cancelled because of insufficient progress. A teleconference was held instead of the meeting. Members were informed of the revised timetable and discussed issues relating to drafting of position statements on various health outcomes for consideration at future meetings.

The Working Group met for the second time in December 2011, to consider Vitamin D biology, the relationship between Vitamin D exposure and status, appropriate biochemical markers and measurement of Vitamin D status, and the relationship between Vitamin D and cancer.

Annex 1

SACN terms of reference

The terms of reference of SACN are to advise the CMOs and/or the Department of Health, and thus, through the CMOs or Department of Health, the government on scientific aspects of nutrition and health with specific reference to:

- nutrient content of individual foods, and advice on diet as a whole, including the definition of a balanced diet and the nutritional status of people;
- monitoring and surveillance of the above;
- nutritional issues which affect wider public health policy issues, including conditions where nutritional status is one of a number of risk factors (e.g. cardiovascular disease, cancer, osteoporosis and/or obesity);
- vulnerable groups (e.g. infants and the elderly) and inequality issues;
- research requirements for the above; and
- individual members may be invited to serve on SACN's Subgroups.

All members and the Secretariat regard it as part of their role to:

- examine and challenge if necessary the assumptions on which scientific advice is formulated and ask for explanations of any scientific terms and concepts which are not clear;
- ensure that SACN has the opportunity to consider contrary scientific views and the concerns and values of stakeholders before a decision is taken; and
- ensure that SACN's advice is clear and comprehensible.

SACN has a UK wide remit and observers from the devolved administration attend SACN main meetings.

Annex 2

Committee members

Chair	Dr Ann Prentice Director, MRC Human Nutrition Research, Cambridge
Members	Professor Peter Aggett Honorary Professor, School of Medicine and Health, Lancaster University, and Emeritus Professor and Past Head of School of Postgraduate Medicine and Health Mrs Christine Gratus (Lay representative) Retired advertising and marketing research director. Ms Gill Fine Public Health Nutritionist Professor Paul Haggarty Head of Lifelong Health, Rowett Institute of Nutrition and Health, University of Aberdeen Professor Timothy Key Professor in Epidemiology and Deputy Director of Cancer Epidemiology Unit, University of Oxford Professor Susan Lanham-New Head, Nutritional Sciences Division and Reader in Nutrition, Faculty of Health and Medical Sciences at the University of Surrey Professor Julie Lovegrove Professor of Metabolic Nutrition and Deputy Director of the Institute of Cardiovascular & Metabolic Research at the University of Reading Professor Ian Macdonald Professor of Metabolic Physiology at the University of Nottingham and Director of Research in the Faculty of Medicine and Health Sciences Professor Harry McArdle Deputy Director of Science and the Director of Academic Affairs at the Rowett Institute of Nutrition and Health, University of Aberdeen Dr David Mela (Industry representative) Science Leader, Unilever R&D Vlaardingen, The Netherlands Professor Hilary Powers Professor of Nutritional Biochemistry and Head of Human Nutrition Unit, University of Sheffield Professor Monique Raats Director of the Food, Consumer Behaviour and Health Research Centre, University of Surrey Professor Angus Walls Professor of Restorative Dentistry and Director of The Centre for Oral Health Research, Newcastle Biomedicine, Newcastle University Dr Stella Walsh (Consumer representative) Postgraduate Programme Leader, Leeds Metropolitan University

Dr Anthony Williams
Reader in Child Nutrition and Consultant in Neonatal Paediatrics, St George's,
University of London

Professor Ian Young
Professor of Medicine and Director of the Centre for Public Health at Queen's
University Belfast

Observers

Dr Alison Tedstone
Department of Health

Dr Fergus Millan
Scottish Government, Health Department

Mrs Maureen Howell
The Welsh Assembly, Health Promotion Division

Dr Naresh Chada
Department of Health, Social Services and Public Safety, Northern Ireland

Secretariat

Department of Health

Ms Rachel Elsom
Ms Mamta Singh
Mr Michael Griffin
Mrs Vicki Pyne
Ms Rachel White
Ms Emma Peacock
Mr Heiko Stolte

Membership of Carbohydrates Working Group

Chair Professor Ian Macdonald (SACN member)
Professor of Metabolic Physiology at the University of Nottingham and Director of Research in the Faculty of Medicine and Health Sciences

Members Professor Alan Jackson (Until June 2010)
Professor of Human Nutrition, University of Southampton

Dr David Mela (SACN Member)
Science Leader, Unilever R&D Vlaardingen, The Netherlands

Professor Timothy Key (SACN member)
Professor in Epidemiology and Deputy Director of Cancer Epidemiology Unit, University of Oxford

Mrs Christine Gratus (SACN member)
Retired advertising and marketing research director.

Professor Ian Johnson (External expert)
Expert in diet and colorectal health & disease, Institute of Food Research

Professor Angus Walls (SACN member)
Professor of Restorative Dentistry and Director of The Centre for Oral Health Research, Newcastle Biomedicine, Newcastle University

Professor Ian Young (SACN member)
Professor of Medicine and Director of the Centre for Public Health at Queen's University Belfast

Professor Julie Lovegrove (SACN Member)
Professor of Metabolic Nutrition and Deputy Director of the Institute of Cardiovascular & Metabolic Research at the University of Reading

Membership of Subgroup on Maternal and Child Nutrition (SMCN)

- Chair** Dr Anthony Williams (SACN member)
Reader in Child Nutrition and Consultant in Neonatal Paediatrics, St George's, University of London
- Members** Professor Peter Aggett (SACN Member)
Honorary Professor, School of Medicine and Health, Lancaster University, and Emeritus Professor and Past Head of School of Postgraduate Medicine and Health
- Professor Annie Anderson (External expert)
Professor of Food Choice, Centre for Public Health Nutrition Research, University of Dundee
- Dr Robert Fraser (External expert)
Reader in Obstetrics and Gynaecology in the University of Sheffield with an Honorary Consultant contract in Obstetrics and Gynaecology at the Sheffield NHS Foundation Trust
- Professor Alan Jackson (External expert)
Professor of Human Nutrition, University of Southampton
- Dr Ken Ong (External expert)
Medical Research Council (MRC), Head of the Epidemiology Unit's programme in Child Growth and Development. Paediatric Endocrinologist at Addenbrooke's Hospital, and Affiliated Lecturer at the Department of Paediatrics, University of Cambridge
- Dr Ann Prentice (SACN member)
Director, MRC Human Nutrition Research, Cambridge
- Dr Siân Robinson (External expert)
Principal Research Fellow at the MRC Lifecourse Epidemiology Unit, University of Southampton
- Professor Monique Raats (SACN member)
Director of the Food, Consumer Behaviour and Health Research Centre, University of Surrey
- Dr Stella Walsh (SACN member)
Postgraduate Programme Leader, Leeds Metropolitan University

Membership of Vitamin D Working Group

Chair Professor Hilary Powers (SACN member)
Professor of Nutritional Biochemistry and Head of Human Nutrition Unit, University of Sheffield

Members Dr Ann Prentice (SACN member)
Director, MRC Human Nutrition Research, Cambridge

Professor Timothy Key (SACN member)
Professor in Epidemiology and Deputy Director of Cancer Epidemiology Unit, University of Oxford

Professor Susan Lanham-New (SACN member)
Head, Nutritional Sciences Division and Reader in Nutrition, Faculty of Health and Medical Sciences at the University of Surrey

Professor Harry McArdle (SACN member)
Deputy Director of Science and the Director of Academic Affairs at the Rowett Institute of Nutrition and Health, University of Aberdeen

Dr Anthony Williams (SACN member)
Reader in Child Nutrition and Consultant in Neonatal Paediatrics, St George's, University of London

Professor Ian Young (SACN member)
Professor of Medicine and Director of the Centre for Public Health at Queen's University Belfast

Professor Kevin Cashman (External expert)
Professor of Food and Health, School of Food and Nutritional Sciences, University College Cork

Professor Roger Francis (External Expert)
Consultant Physician, Metabolic Bone Service, The Newcastle upon Tyne Hospitals

Dr Stella Walsh (SACN member)
Postgraduate Programme Leader, Leeds Metropolitan University

Annex 3

Committee members' biographies

Dr Ann Prentice

Director, MRC Human Nutrition Research, Cambridge. Dr Prentice's main research interests are nutritional aspects of bone health and osteoporosis; dietary requirements for human growth, pregnancy and lactation, and old age with particular reference to micronutrients. She has published extensive peer-reviewed articles, book chapters and reports. Dr Prentice was President of the Nutrition Society (from 2004 to 2007) and has served on a number of national and international advisory committees, including COMA's Subgroup on Nutrition and Bone Health.

Professor Peter Aggett

Honorary Professor, School of Medicine and Health, Lancaster University, and Emeritus Professor and Past Head of School of Postgraduate Medicine and Health, University of Central Lancashire. Professor Aggett is interested in trace element metabolism in health and disease. He has served on national and international advisory committees relating to clinical nutrition, public health nutrition, nutritional requirements, nutrient safety and risk assessment, such as the EC Scientific Committee on Food, the Committee on Toxicology, the Advisory Committee for Novel Foods and Processes, and the Expert group on Vitamins and Minerals. He was a member of COMA for seven years, and is a past chair and secretary of the Committee on Nutrition of the European Society for Paediatric Gastroenterology, Hepatology and Nutrition.

Ms Gill Fine

Gill Fine is an independent Public Health Nutritionist, a Scientific Governor at the British Nutrition Foundation and a Trustee at Diabetes UK and the Institute of Food Research. From 2004-2010, she was the Director of Consumer Choice and Dietary Health at the Food Standards Agency and was responsible for the strategic direction and the delivery of the FSA's Eating for Health and Choice programme. This wide remit comprised nutrition, GM, supplements, organics, additives, novel foods, food standards and general food labelling. She was also responsible for agreeing the overall direction of the Agency's research portfolio across the Group's remit. Ms Fine has firsthand experience of a wide range of food and dietary policies and how they impact on public health. She has served on several Government committees and was previously a member of SACN from 2001 - 2004

Mrs Christine Gratus

Mrs Gratus has a background in advertising, marketing and market research. She was a Director and International Vice-President of J Walter Thompson advertising agency until establishing her own Consultancy in 1990. As a qualitative researcher, Mrs Gratus has spent a lifetime listening to consumers talking about every aspect of their lives, with food high on the list, and is now involved mainly with health and health research. She is a lay member of the Herbal Medicines Advisory Committee and a reviewer for the National Institute for Health Research.

Professor Paul Haggarty

Head of Lifelong Health at Rowett Institute of Nutrition and Health (RINH), University of Aberdeen, and Honorary Clinical Scientist in Grampian NHS Trust. His research interest is in the way diet and environment interacts with genes to determine human health and how this is modulated by social status and behaviour. This involves the study of nutrition, epigenetics and genetics in pregnancy, ageing, cancer, cognition and cardiovascular disease. He is a member of the Advisory Committee on Novel Foods (ACNFP) and the SACN/ACNFP working group on Approaches to the Nutritional Assessment of Novel Foods (ANANF).

Professor Timothy Key

Professor of Epidemiology and Deputy Director of the Cancer Epidemiology Unit, University of Oxford. His research includes the interactions between nutrition and hormones, cancer and cardiovascular disease, and the long-term health of vegetarians and vegans. He is the lead investigator of the Oxford component of the European Prospective Investigation into Cancer (EPIC), which is a European-wide collaborative study, chair of the EPIC Working Group on Nutrition and Prostate Cancer, and chair of the Endogenous Hormones and Breast Cancer Collaborative Group.

Professor Susan Lanham-New

Reader in Nutrition at the University of Surrey and a Registered Public Health Nutritionist. She will take over as the Head of the Nutritional Sciences Division at Surrey from the 1 August 2010. Her research focuses on the area of nutrition and bone health, for which she has won a number of awards including the Nutrition Society Silver Medal. She is Editor of the first academic textbook on 'Nutritional Aspects of Bone Health' (NAoBH). She is a member of the Nutrition Forum for the NOS and the Scientific Advisory Group of British Nutrition Foundation and the 2008 BNF Taskforce on ageing. She was Honorary Communications Officer of the UK Nutrition Society from 2000-2006. Susan is on the Editorial Board of Osteoporosis Review and Osteoporosis International. She is Editor-in-Chief of the Nutrition Society Textbook Series.

Professor Julie Lovegrove

Julie Lovegrove is Professor of Metabolic Nutrition in the Department of Food and Nutritional Sciences and the Deputy Director of the Institute for Cardiovascular and Metabolic Research (ICMR) at the University of Reading. Professor Lovegrove's main areas of research interest are the investigation of nutritional influences on the metabolic syndrome and cardiovascular disease risk, including nutrient/gene interactions. Of particular interest are the effects of dietary fats, carbohydrates and phytochemicals on vascular reactivity, insulin resistance and lipid metabolism in different population groups. She also has experience and interest in ethical issues associated with human research and serves on a number of research ethics committees. Professor Lovegrove represents SACN on the programme committee for the National Diet and Nutritional Survey (NDNS) and Carbohydrates Working Group.

Professor Ian Macdonald

Ian Macdonald is Professor of Metabolic Physiology at the University of Nottingham and Director of Research in the Faculty of Medicine and Health Sciences. His research interests are concerned with the nutritional and metabolic aspects of obesity, diabetes and cardiovascular disease, with additional interests in nutrition and metabolism in exercise. His research involves studies in healthy subjects and various patient groups, and combines whole body physiological measurements, molecular investigation of tissue samples, and dietary interventions. Ian Macdonald is presently Editor of the International Journal of Obesity and Chair of the International Association for the Study of Obesity Finance Committee and was President of the Nutrition Society in 2010.

Professor Harry McArdle

Professor McArdle is Deputy Director of Science and the Director of Academic Affairs at the Rowett Institute of Nutrition and Health, University of Aberdeen. His main research interests involve micronutrients and the critical role they play in growth and development. Current work concentrates on understanding the mechanisms underpinning micronutrient transport across the placenta. Professor McArdle's studies iron and copper metabolism, trying to understand how the fetus and placenta work together to ensure an adequate supply, even if the mother is deficient; a frequent occurrence even in developed society. At the same time, Professor McArdle and his team are trying to identify why iron deficiency during pregnancy results in hypertension in the adult offspring in animal models and whether the results can be extrapolated to humans.

Dr David Mela

Science Leader at Unilever R&D Vlaardingen, The Netherlands. Dr Mela joined Unilever in 1998, following an academic research career in the US and UK. His main expertise is in the biological and behavioural aspects of food choice, eating behaviour and energy balance, from consumer research through energy metabolism. In Unilever, he is mainly involved with research programmes to identify and substantiate the health and nutrition benefits of product formulations and ingredients. He also provides input for the management of specific technical and regulatory issues and represents Unilever on various external academic and trade groups.

Professor Hilary Powers

Professor of Nutritional Biochemistry, Head of Human Nutrition Unit, in the Faculty of Medicine, Dentistry and Health, University of Sheffield. Professor Powers conducts research into the role of B vitamins in health and disease, with specific focus on folate and cervical/colorectal/breast cancer, and the functional importance of interactions between B vitamin status and common genetic polymorphisms. Professor Powers represents SACN on the programme committee for the National Diet and Nutritional Survey (NDNS).

Professor Powers' activities in the nutrition community have included membership of the Standing Committee on Nutrition for the Royal College of Paediatrics and Child Health, of the Expert Panel for the AICR/WCRF Report into Food, Nutrition, Physical Activity and Cancer and on various Grant awarding bodies for the BBSRC and WCRF. She is co-editor of the classic textbook, Human Nutrition (Elsevier).

Professor Monique Raats

Dr Raats is Reader and Director of the Food, Consumer Behaviour and Health Research Centre at the University of Surrey. Her portfolio of research is wide ranging in terms of topics being addressed (e.g. food choice, policy development, food labelling), and methodologies used (e.g. qualitative, quantitative, stakeholder consultation). Since her arrival at the University of Surrey in 2000, she has played a central role in securing research funding for both national and European research projects. She has published over 65 peer-reviewed papers, 16 book chapters, and co-edited two books, "The Psychology of Food Choice" (2006) and "Food for the Ageing Population" (2008). She is one of the founding members and was secretary of the International Society of Behavioral Nutrition and Physical Activity.

Professor Angus Walls

Angus Walls is Professor of Restorative Dentistry and Director of the Centre for Oral Health Research, Newcastle University. Professor Walls' research interests focus on the oral health care problems of an ageing population at a time of marked change in oral health status. The relationships are between diet and oral diseases such as tooth wear, decay and soft tissue pathology, and the number and functional capacity of the residual dentition and foods choice. His work has embraced basic epidemiology and the development of dietary interventions to address specific problems.

Dr Stella Walsh

Dr Walsh has a long-standing interest in the subjects of food and nutrition and is an experienced consumer representative having served on several government and industry Committees and replied to consultations on behalf of consumers. She was the Secretary of the National Federation of Consumers (NFC) and has been a representative for the NFC on the Institute of Grocery Distributors, and other FSA and Defra Committees. She has published several refereed articles for academic and professional journals, book chapters and conference papers on consumer issues linked to her role as a Postgraduate Programme Leader at Leeds Metropolitan University.

Dr Anthony Williams

Reader in Child Nutrition and Consultant in Neonatal Paediatrics, St George's University of London. Dr Williams was the Chair of COMA's Panel on Child & Maternal Nutrition and a member of COMA. He was a member of the Food Standards Agency's Expert Group on Vitamins and Minerals and cross-represented SACN on the Advisory Committee on Novel Foods and Processes between 2003 and 2007. Between 2006 and 2008 he chaired the NICE Centre for Public Health Excellence producing guidance on maternal and child nutrition in low-income families. Since 2009 he has represented SACN on the project board of the Diet and Nutrition Survey of Infants and Young Children.

Professor Ian Young

Ian Young is Professor of Medicine and Director of the Centre for Public Health at Queen's University Belfast. In addition, he is also Associate Medical Director (Research and Development) and Consultant Chemical Pathologist at the Belfast Health and Social Care Trust. Professor Young's main clinical and research interests are in lipid metabolism, carbohydrate metabolism and antioxidants, particularly in relation to the prevention of cardiovascular disease. He is an author of over 250 published research papers and is on the editorial boards of a number of leading international journals. In addition, he is Chair of the Scientific Division of the International Federation for Clinical Chemistry and Laboratory Medicine. He frequently speaks at national and international meetings on lipid management and topics related to laboratory medicine.

Members' biographies (not otherwise covered as SACN members)

Carbohydrates Working Group

Professor Ian Johnson

Ian Johnson is a Research Leader at the BBSRC Institute of Food Research and an Honorary Professor in the Schools of Medicine and Biological Sciences in the University of East Anglia. His general area of research is the fate and biological activities of food components in the alimentary tract, and he is particularly interested in the biological effects of dietary fibre, lipids and secondary plant metabolites, including their behaviour during digestion, interactions with the gut epithelia and bioavailability to humans. He has had a long-term involvement in research on the physical properties of food polysaccharides, and their relevance to the prevention of human disease, including both metabolic disorders and colorectal cancer. He has received research funding from the BBSRC, Food Standards Agency and European Union, and has served as a member of the BBSRC Pool of Experts.

Vitamin D Working Group

Professor Kevin Cashman

Professor Cashman is the Professor of Food and Health at University College Cork, a joint position between the School of Food and Nutritional Sciences and Department of Medicine. He is currently the Head of the School of Food and Nutritional Sciences. His research interests are in the area of vitamin D, nutrition and bone health and dietary requirements for vitamin D.

Professor Roger Francis

Professor Francis is Emeritus Professor of Geriatric Medicine at the Institute for Ageing and Health, Newcastle University, where he continues to research into osteoporosis and Vitamin D. He was also a Consultant Physician at the Bone Clinic, Freeman Hospital until January 2011, when he retired from clinical practice. Professor Francis is Vice-Chair of the Arthritis Research UK Clinical Studies Group on Metabolic Bone Disease. He is also Trustee of the National Osteoporosis Society (NOS). He is Chair of the NOS Clinical and Scientific Committee and served as Editor of their journal *Osteoporosis review* from 2011-2007. He has been Editor in Chief of *Age and Ageing* since 2007.

Subgroup on Maternal and Child Nutrition (SMCN)

Professor Annie Anderson

Professor of Public Health Nutrition at the Centre for Public Health Nutrition Research, Department of Medicine, Ninewells Medical School, University of Dundee. Professor Anderson has represented the International Union against Cancer (UICC) on issues relating to diet and cancer prevention. In addition, she has participated as an expert advisor in a number of NICE, Department of Health, Food Standards Agency and Scottish Government Advisory Committees on topics ranging from nutrient standard of school meals, Low Income Diet and Nutrition Survey and Food and Drink Policy development. Her main research interests are Lifestyle and cancer prevention and theory based, behaviourally focused dietary interventions in children and adults living in disadvantaged communities.

Professor Alan Jackson

Professor of Human Nutrition, School of Medicine at the University of Southampton. Professor Jackson's current work explores the extent to which modest differences in maternal diet and metabolic competence influence fetal development, predisposing to chronic disease in adulthood. Professor Jackson was a member of the Committee on Medical Aspects of Food and Nutrition Policy (COMA) for ten years and was a Consultant Adviser to the Chief Medical Officer on Nutrition from 1989 to 2002. Professor Jackson is a member of the EFSA Panel on Dietetic Products, Nutrition and Allergies.

Dr Robert Fraser

Reader in Obstetrics and Gynaecology in the University of Sheffield with an Honorary Consultant contract in Obstetrics and Gynaecology at the Sheffield NHS Foundation Trust. Research interests include nutritional physiology of human pregnancy, normal and disordered fetal growth and public health aspects of nutrition in pregnancy and lactation. He also has a clinical research interest in pregnancy complicated by maternal diabetes.

Dr Ken Ong

Dr Ken Ong leads the MRC Epidemiology Unit's programme in Child Growth and Development. He is also a Paediatric Endocrinologist at Addenbrooke's Hospital, and an Affiliated Lecturer at the Department of Paediatrics, University of Cambridge. He trained in Paediatric Endocrinology in Southampton, London, Oxford and Cambridge, and has a PhD in Paediatrics and MPhil in Epidemiology, both at the University of Cambridge. His MRC programme studies the genetic, endocrine and dietary regulation of fetal and childhood growth, and its application to the prediction and prevention of childhood obesity. From 2011 he takes up a part-time secondment at the MRC Lifelong Health and Aging Unit in relation to his studies on the National Survey of Health and Development (the British 1946 birth cohort).

Dr Siân Robinson

Dr Robinson is a Principal Research Fellow at the MRC Lifecourse Epidemiology Unit, University of Southampton. Her main research interests are in the nutrition of women, infants and young children, and in understanding the effects of current variations in early diet and nutritional status on growth, development and later function. Between 2006 and 2008 she was a co-opted expert member of the NICE Programme Development Group that produced guidance on maternal and child nutrition and is now currently an external advisor for the Diet and Nutrition Survey of Infants and Young Children and a member of the BNF Task Force on Developmental Programming and Diet.

Annex 4

Remuneration and Committee finance

The amount paid to committee members for fees in 2012 was:

- For Main Meetings and Working Groups, those who chaired a meeting received a total fee of £200 per meeting inclusive of attendance and reading fees.
- Members not chairing received £160 per meeting inclusive of attendance and reading fees.

The sponsoring department also met travel and subsistence costs for those attending Main Meetings and Working Groups/Subgroups.

The cost of the Committee fees, excluding Secretariat resources, for 2012 was £28,870.53. Costs were met by the Department of Health.

Annex 5

SACN Main Committee - declaration of interests

MEMBER	PERSONAL INTERESTS		NON-PERSONAL INTERESTS		ANY OTHER INTERESTS
	Company	Nature of interest	Company	Nature of interest	
Dr Ann Prentice		N/A	As Director of MRC Human Nutrition Research responsibility for institutional interests as listed: Action Medical Research Coca Cola Services SA Diabetes UK Electro Sci. Industries Iron Therapeutics Switzerland AG Kellogg Company LLR-G5 Limited National Centre for Social Research Nestle Playerthree Shield Holding AG The Boden Institute for Obesity The British Dietetic Association The Institute of Brewing and Distilling Thermo Fisher Scientific Weight Watchers Int World Cancer Research Fund	Research Funding Research Funding Research Funding Donor for conference Donor for conference Donor for conference Donor for conference Survey Funding Conference travel costs Consultancy work IP exploitation Conference expenses Research Funding Research Funding Research Funding Research Funding	None
Professor Peter Aggett	Central Lancashire NHS Trust	Non-Executive Director	None	N/A	None

MEMBER	PERSONAL INTERESTS		NON-PERSONAL INTERESTS		ANY OTHER INTERESTS
	Company	Nature of interest	Company	Nature of interest	
	New Zealand Dairy Goat Council	Consultancy: Research Project Management			
	International Association of Dietary Supplements Associations ILSI	Chairmanship (meetings) and lecture fees			
Ms Gill Fine	Sainsbury's	Shareholder	None	N/A	British Nutrition Foundation - Trustee – expenses reimbursed
	Rodda's	Ad hoc consultancy			Diabetes UK - Trustee – expenses reimbursed
	Institute of Food Research	Trustee			
	Dementia UK	Treasurer			
	British Nutrition Foundation	Vice Chair			
	Tesco	Project work on corporate responsibility			
	NICE	Chair of Group for Obese and Overweight Adults			
Dr David Mela	Unilever	Employee and shareholder	None	N/A	None
Dr Stella Walsh	None	N/A	None	N/A	Consumer representation for National Federation of Consumers. FSA and DEFRA Committees and working parties, including Cattle Movement, and Food Borne Disease

MEMBER	PERSONAL INTERESTS		NON-PERSONAL INTERESTS		ANY OTHER INTERESTS
	Company	Nature of interest	Company	Nature of interest	
Mrs Christine Gratus	None	N/A	None	N/A	None
Dr Anthony Williams	None	N/A	Unicef (UK)	Research grant	Trustee, Women and Children First Honorary Fellow, Unicef(UK) Unremunerated professional advisor to: Best Beginnings, Baby Milk Action, Breastfeeding Network, La Leche League (UK), National Childbirth Trust, UK Association for Milk Banking.
Professor Paul Haggarty	Cafe Direct	Shareholder	Food Standards Agency	Reviewing fees contributed to research funds.	Member of the Breast Cancer Campaign Scientific Advisory Board.
Professor Timothy Key	None	N/A	None	N/A	Member of Vegetarian Society Member of the Vegan Society
Dr Susan Lanham-New	D3TEX LTD GlaxoSmithKline Kellogg's Danon	Research Director Shareholder Consultancy Consultancy Consultancy	Wassen International	Research Funding	Participated in 'Health Hangout' funded by Nestle, a web based discussion on vitamin D and bone health, specifically for health professionals. Small honorarium was received.
Professor Ian Young			Unilever The Sugar Bureau	Research Funding Research Funding	None
Professor Julie Lovegrove	GlaxoSmithKline	Consultancy/review writing	Unilever GlaxoSmithKline Jordan Nutricia Sainsburys Sugar Nutrition UK	Research Funding Research Funding Research project funding; PhD student funding Research Funding Food 'in kind; for research Research Funding	None
Professor Ian Macdonald	None	N/A	Mars Incorporated / Mars Europe Unilever Mars Scientific Advisory Council Coca Cola European Scientific Council	Research project funding; PhD student funding Research Project funding & PhD student funding Meeting attendance Meeting attendance	Board member, Obesity International Trading Responsibility Deal Food Network – SACN representative.
Professor Harry McArdle	EBRC SMBH Hannover, Germany	Consultancy	International Copper Association	Research Funding	None

MEMBER	PERSONAL INTERESTS		NON-PERSONAL INTERESTS		ANY OTHER INTERESTS
	Company	Nature of interest	Company	Nature of interest	
Professor Angus Walls	GlaxoSmithKline Chlorhexidize Technology Inc	Consultancy Consultancy	GlaxoSmithKline	Research Funding	None
Professor Hilary Powers	None	N/A	None	N/A	None
Dr Monique Raats	None	N/A	European Commission DG Research and Innovation European Food Information Council MAPP - Centre for Research on Customer Relations in the Food Sector Safefood Food and Agriculture Organization Choices International Foundation Eurasanté European Commission DG Enterprise and Industry Council for Responsible Nutrition—International	Research Funding Research Funding Research Funding Research Funding Research Funding Reimbursement of expenses – Expert advice Reimbursement of expenses – Expert advice Reimbursement of expenses – Expert advice Reimbursement of expenses – Expert advice	None

Annex 6

SACN Working groups and subgroups - declaration of interests

MEMBER	PERSONAL INTERESTS		NON-PERSONAL INTERESTS		ANY OTHER INTERESTS
	Company	Nature of interest	Company	Nature of interest	
Professor Ian Johnson	Barry Callebaut	Consultancy	None	N/A	None
Professor Kevin Cashman	None	N/A	None	N/A	None
Professor Roger Francis	Shire Pharmaceuticals	Speaker at two meetings – received honoraria	None	N/A	National Osteoporosis Society – Trustee and Chair of Clinical and Scientific Committee (Until June 2011)
Professor Alan Jackson	None	N/A	Nutricia Clinical Care Baxter Healthcare	Sponsors of Annual Nutrition Course	None
Dr Robert Fraser	None	N/A	None	N/A	
Dr Sian Robinson	None	N/A	None	N/A	
Dr Ken Ong	None	N/A	Mead Johnson Nutrition	Research funding and consultancy fees contributed to research funds	