



Scientific Advisory Committee on Nutrition

12th MEETING

3 April 2009, Conference Room B, Aviation House

DRAFT MINUTES

Chairman:	Professor Alan Jackson
Members:	Professor Ian Macdonald Ms Stella Walsh Professor Joe Millward Professor Marinos Elia Professor Chris Riddoch
Secretariat:	Dr Alison Tedstone (FSA) Dr Peter Sanderson (FSA) Dr Sheela Reddy (DH) Ms Rachel Elsom (FSA) Ms Lynda Harrop (FSA) Mr Andrew James (FSA)

Chair's introduction and welcome

1. The Chair welcomed Members to the twelfth meeting of the SACN Working Group on Energy Requirements.
2. Apologies were received from Dr Anita Thomas, Dr Tony Williams and Professor Andrew Prentice and it was noted that there were no changes to the declarations of interest.
3. The Chair thanked Professor Joe Millward, Dr Robert Fraser and the Secretariat for their contributions to the papers for discussion.

Minutes from previous meeting (30 January 2009) - SACNenergy/098/min01

4. Members were invited to comment on the minutes of the previous Working Group meeting.

5. Members were informed that the new WHO growth standards for children aged 1 to 2 (noted in paragraph 27) are discussed in the appropriate place within the Working Group report.
6. The minutes were agreed as a reasonable record of the 11th meeting of the SACN Energy Requirements Working Group.

Agenda Item 3 – Dr Robert Fraser’s comments on the Energy Requirements Working Group draft report regarding pregnancy and lactation

7. The Chair invited comments from the Working Group on the paper provided by Dr Robert Fraser, Reader in Reproductive and Developmental Medicine at the University of Sheffield, and member of the Subgroup on Maternal and Child Nutrition.
8. The Chair stressed that the Working Group was charged with defining energy *reference* values and would not be making recommendations for energy requirements during pregnancy and lactation.
9. Members highlighted the large individual variation in energy expenditure during pregnancy. They further noted that current energy reference values for pregnancy and lactation assume that women will breastfeed for an extended period of time however this is not common practice in the UK.
10. Members discussed the evidence from body composition studies suggesting that there is a significant accumulation of fat during pregnancy.
11. Some researchers (for example, Prentice *et al*, 1996) believe that this accumulation is very variable and that this variation is a major feature of changes in body composition during pregnancy. They question whether this is a physiological attribute of pregnancy or rather a consequence of women’s inability to regulate energy consumption.
12. Members expressed concerns regarding this fat accumulation which may serve no particular physiological purpose. They noted that current recommendations for energy requirements during pregnancy and lactation may be contributing to increasing fat accumulation, and thereby rising obesity levels, as there is a general perception that pregnant women require additional energy.
13. Members noted that lactational performance is not adversely affected unless the mother is significantly underweight.
14. Members agreed that most of the energy costs of pregnancy appear to be provided from the mother through changes in maternal metabolism and dietary intake. There is little evidence that changes in energy intake in well-fed women do anything other than influence fat accumulation. Therefore, it may be advisable for recommendations for pregnant women to focus on the quality of the diet and ‘eating to appetite’.

15. Members commented that the factors determining energy deposition and partitioning during pregnancy are not well-defined. Furthermore, current evidence is from observational studies and the consequences of actively encouraging women to lower their energy intakes during pregnancy (as currently practiced in Japan) are not yet known. Members highlighted the need for particular caution in making recommendations for constraining weight gain in teenage pregnancy as it is thought that teenage girls need to gain an extra 4kg of fat during pregnancy to ensure they have a baby of healthy weight.
16. Members concluded that given the limited evidence-base, existing reference values for pregnancy and lactation are reasonable and should remain unchanged.
[DN: to confirm with Tony Williams]

Agenda Item 4 – PAL values in relation to children and adolescents

17. The Chair thanked Professor Joe Millward for his paper on physical activity level (PAL) values for children and adolescents, which had captured the key issues and provided clear conclusions.
18. Members discussed the approaches adopted by previous international committees for the FAO/WHO and DRI reports, compared to those employed by the SACN Working Group.
19. The Working Group was informed that the SACN Energy Report has used a database of mean total energy expenditure (TEE) values derived from doubly-labelled water (DLW) studies, including those described by Torun (2005). PAL values have been examined in two ways: 1) BMR values were calculated for all studies using the Henry equations for weight and height (or weight only if height data was not reported), and PAL values were calculated from TEE and estimated BMR; 2) mean PAL values throughout the age range were derived from the DLW TEE data for standard weight and age groups by identifying the regression equation for TEE as a function of weight or gender, predicting TEE for standard weights and then predicting BMR.
20. Statistical interrogation of the SACN dataset has found no evidence to support the use of different PAL values for boys and girls. Any differences in body composition (fat mass versus fat free mass) are accounted for in the equations for BMR or are not significant.
21. Members were informed that with regards to changes in PAL with age, the youngest children (≤ 3 years) tend to have lower PAL values than older children. Once children reach school age (5 years), physical activity changes and exhibits a wide range of levels, from the lowest level up to PAL values near the maximum.
22. Members noted the lack of calorimeter data for children, the difficulties in predicting TEE for them, and the difficulties in categorising children into groups of different activity levels. They recognised the limitations and insecurities of the available evidence and in particular the lack of data for adults aged 18-30 years.
23. Members discussed whether a single reference value for children aged 3-18 years

was appropriate. They noted that children aged between 3-10 years have lower levels of activity and assuming a higher PAL value would run the risk of overestimating energy requirements.

24. Members agreed that it would not be appropriate to have a single PAL value for children and that the Working Group Report should err on the side of caution by providing separate PAL values for children aged: 0-3 years, 3-10 years and 10-18 years. [DN: should this be 10-17 years?] The latter group should be differentiated from adults.

Agenda item 5 – SACN Energy Working Group draft report

25. The Chair informed Members that following discussions at the main SACN meeting in February, further redrafting and editing of the draft report was required.
26. Members noted that greater clarity and coherence was needed on how the available information had been developed and explanations on the methods used e.g. the factorial approach, should be added. The assumptions made throughout the process should also be clearly articulated in the main body of the report, rather than in the appendices.

Action: Secretariat

Chapter 3 - Introduction

27. Members noted that the insecurities in the data need to be stated in the Introduction.

Action: Secretariat

Chapter 4 - Approach used to derive energy dietary reference values

28. Members noted that the datasets used should be clearly stated. The different views of researchers in the field of establishing energy requirements also need to be articulated in this section.

Action: Secretariat

Chapter 5 – Energy requirements

29. Members discussed the presentation of the revised energy requirement values. Members agreed that the data should be tabulated for only one BMI classification (BMI 22.5) with a range (BMI 20-25) to capture the variability. Data should be further categorised by age and PAL groupings.

Action: Secretariat

30. Members noted that paragraph 120, in which physical activity and energy requirements in older people are discussed, required revision to ensure it was consistent with information presented elsewhere in the Report.

Chapter 6 – Summary and conclusions

31. Members agreed that the summary and conclusions should include recommendations on how the revised energy requirement values should be interpreted in practice. A list of the factors that will be affected by these revisions e.g. GDAs, should be included.
32. Members agreed that the public health context, emphasising the importance of being in energy balance and having an active lifestyle, should be added.

Further steps

33. Members were asked to hand their copies of the draft report to the Secretariat where they had made any comments on the chapters or appendices.
34. It was agreed that the Secretariat would contact the Members that were unable to attend the Working Group meeting and ask for their comments on the draft report.
35. It was agreed that further drafting issues would be conducted via correspondence and that the revised draft report would be circulated to Members for their comments before going out for public consultation.

Action: Secretariat

33. It was agreed that the Working Group would meet again in September/October 2009.

Action: Secretariat

34. The Chair thanked the Members for attending and closed the meeting.