



**5<sup>th</sup> MEETING**

**5 December 2006, Room 136, Aviation House**

**125 Kingsway, London, WC2B 6NH**

**DRAFT MINUTES**

**Chairman:** Professor Ian MacDonald  
**Members:** Professor Andrew Prentice  
Professor Chris Riddoch  
Professor Marinos Elia  
Professor Joe Millward  
Dr Anita Thomas  
Ms Stella Walsh

**Secretariat:** Dr Alison Tedstone (FSA)  
Dr Peter Sanderson (DH)  
Dr Sheela Reedy (DH)  
Ms Emma Peacock (FSA)  
Ms Rachel Coomber (DH)

**Apologies:** Professor Alan Jackson  
Dr Anthony Williams  
Professor Christine Williams

**Chairs' introduction and welcome**

1. The Chair welcomed Members to the fifth meeting of the SACN Working Group on Energy Requirements.

**Minutes from previous meeting (3 April 2006) - SACNenergy/06/min01**

2. Members were invited to comment on the minutes of the previous meeting. The following changes were requested:
3. Paragraph 32 – add Action: Secretariat
4. Paragraph 37 – to improve clarity should be reworded as follows:  
*Members discussed that it had previously been suggested that the PAL in the UK was 1.4-1.5; however, the HSE and NDNS data reported it to be 1.6-1.7, which had been previously thought to be unachievable by the UK population. This PAL was also similar to the FAO/WHO PAL value of 1.75.*
5. Paragraph 38 – Members noted that this action was still pending.
6. The minutes were agreed as a correct record of the 4th meeting of the SACN Energy Requirements Working Group, pending the above changes.

**Action: Secretariat****Agenda Item 3****Measuring Physical Activity - Presentation by Professor Riddoch**

7. Professor Chris Riddoch gave a presentation on measuring physical activity. The presentation covered the following topics: introduction into measuring physical activity energy expenditure (PAEE), methods of measuring PAEE, Actigraph accelerometer, how to normalise PAEE and emerging methods for measuring PAEE.
8. Members noted that it was difficult to measure physical activity in the field as it was a complex issue that had many dimensions such as volume, frequency, intensity, time and type.
9. Members were informed of the different methods to measure PAEE, noting that doubly labelled water (DLW) was the most accurate method, however movement sensors were more extensively used in the field. It was noted that heart rate is less frequently used as a measure of PAEE and accelerometers were more accurate than heart rate monitors, as heart rate could be affected at very low activity levels, such as watching television.

10. Members questioned the difference between the use of the pedometer and accelerometer in measuring PAEE, noting that although a pedometer was a good motivational device it only collected movement i.e. how many steps, it did not detect intensity, whereas an accelerometer measured acceleration and deceleration. It was also noted that an accelerometer collected data minute by minute, which could be stored for up to three weeks.
11. Members noted that the Actigraph accelerometer was non intrusive and reasonably well tolerated, allowing good compliance in children. However it would need to be complemented by an activity diary, as swimming, cycling and walking up a hill could not be measured by the Actigraph.
12. Members were informed about the new method Actiheart, which combined measuring heart rate and movement. Actiheart was also waterproof and therefore could be used during swimming; however it had not yet been tested in the field for compliance.

#### **Agenda Item 4 – Doubly labelled water experiment**

13. Professor Andrew Prentice introduced the tabulated characteristics of the DLW studies carried out in the UK population and in countries of relevance to the UK. Members noted that the Working Group had to make a decision on what approach to take forward i.e. whether a factorial approach or a regression-based technique using DLW studies.
14. Members discussed the available DLW studies and the different approaches that were used in the FAO/WHO/UNU report and the IOM report noting that it was important to use the strongest evidence to produce a recommendation that was clear and could be used by policy makers.
15. Members agreed that the DLW data was the best data available and should be used, suggesting that at this time the mean DLW values for the different age groups should be collated rather than using the individual data values.
16. Members noted that Eric Ravussin from the USA was carrying out a similar task of pooling all the data on DLW experiments together. Members suggested it would be beneficial to contact Eric Ravussin to find out what his group were doing and whether any work could be interlinked

**Action: Secretariat**

**Agenda Item 5 – Draft report chapter - Introduction**

17. Members were invited to offer their comments/changes to the draft introduction to the report. It was noted that comments from Anthony Williams had been tabled at the meeting and would be incorporated into the draft chapter by the Secretariat.

**Action: Secretariat**

18. The following suggestions were made:

- Inclusion of a clear explanation in the background describing the dietary reference value
- Inclusion of a sentence in the background stating the difficulties and the recent technological advances in measuring physical activity
- Inclusion of a separate section on underweight after the section on obesity
- Insertion of other cancers into table.2 once the World Cancer Research Fund report was published in 2007
- Addition of a definition of physical activity in the physical activity section
- Inclusion of a section on energy expenditure after physical activity
- The genetics section could be cut down in detail
- Inclusion of a sentence in the ethnicity section stating that there was a lack of data
- Exclusion of alcohol from pharmacological agents

19. Members also suggested specific changes to the text.

**Action: Secretariat****Agenda Item 6 – Discussion of future work plan**

20. Members agreed that it would be useful for the outline of the report and a summary of what was agreed at this meeting to be sent to the Working Group prior to the next meeting.

**Action: Secretariat**

21. It was agreed that at the next meeting the Working Group would be presented with the mean DLW values for the different age groups and two further draft chapters for their comment.

**Action: Secretariat**

22. Members requested the analysis and information from Professor Tim Cole for the next meeting.

**Action: Secretariat**

23. Members noted that the Secretariat would organise dates for future Working Group meetings.

**Action: Secretariat**

24. The Chair closed the meeting and thanked the Members for attending. It was noted that the next meeting was scheduled for 24 April 2007 at Aviation House.