Reviewer's report

Title: Thermography and Thermoregulation of the face

Version: 1 Date: 25 April 2006

Reviewer: Michel B Ducharme

Reviewer's report:

General

-----------------------------------------------------------------------------------

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
Title: Thermography and thermoregulation in the face
Authors: Rustemeyer et al.

The objective of the study was to provide reference values of facial skin temperature for healthy subjects over a period of 24 hours and following the application of a cold stimulus.

A- Major Compulsory Revisions

1. p. 6, Results
Data are being presented for only 8 facial sites. How those particular sites were selected and why collecting the data from 32 sites if the data from only 8 sites are being presented?

2. p. 7, Discussion
Discuss the temperature difference for the various sites on the face: which site(s) present(s) the highest temperature, or the lowest temperature? Is it consistent over time? Is there an effect of age on the temperature distribution and absolute values?

-----------------------------------------------------------------------------------

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. p. 3, Background
Clarify what is the meaning of “skin heat” in “pattern of skin heat” and “distribution of skin heat”?

2. p. 4, Methods
Provide the age average for both genders and indicate if there is a significant difference between them.

3. p. 4, Methods
Was there any subject on hormonal treatment or on contraceptive pill during the study?

4. p. 4, Methods
Were a history of facial cold injury and facial sunburn criteria for exclusion?

5. p. 5, Methods
The method used for the skin temperature measurement would need a more detail description (describe the principle of measurement, size of probes, time response, how they were attached to the skin).

6. p. 5, Methods
Indicate how the subjects were dressed for the study. Was the dressing consistent among subjects?

7. p. 5, Methods
An adjustment period of 15 min is very short. This may not be sufficient to stabilize the skin temperature, particularly if the posture was changed. Provide evidence that steady-state was achieved before taking the measurements.
8. p. 5, Methods
What technology and method was used to measure the core body temperature at the bend of the elbow? Provide a reference validating the use of this site as an index of core temperature.

9. p. 5, Methods
Explain what the subjects were doing when not taking measurements (ex. at 2 a.m.)?

10. p.5, Methods
The device has an accuracy of ± 0.1°C. Is it the accuracy specified by the manufacturer? Was it verified by calibration?

11. p. 5, Methods
Provide a reference showing that the technique used to trigger a cold stimulus is effective.

12. p. 6, Results
No data is being presented on the index of core temperature. Why was it measured?

13. p. 15
Put this information in a table format.

14 p. 16, Figure 3
The figure presents temperature changes. Indicate the reference values used. On figure 3, remove the text on top of the figure (Temp in °C). Provide description for the y axis [Change in skin temperature (°C)]. Provide the facial site number on the x axis and explain the abbreviations. Indicate where is the mean for N.V2 site? The horizontal line at the 0 value should pass behind the symbol boxes to eliminate confusion with the mean.

15 p. 16, figure 4
Replace body surface with facial skin. See comments above for figure 3 and apply to figure 4. In addition, provide a legend with distinct pattern for measurements at both times.

16. Figure 5
See comments above for figure 3 and apply to figure 5.

Discretionary Revisions (which the author can choose to ignore)

C- Discretionary Revisions

1. p. 4 Methods
Provide basic anthropometric characteristics of the subjects (weight, height, %body fat) if possible.

2. p. 4, Methods
Indicate how many right and left-handed you had in your study.

What next?: Accept after minor essential revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable