Author's response to reviews

Title: Increases in summer serum 25-hydroxyvitamin D (25OHD) concentrations in elderly subjects in Sao Paulo, Brazil vary with age, gender and ethnicity

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Author's response to reviews: see over
Dear reviewer

Denise von Muhlen:

We would like to thank you for your interest and comments. Below you will find our response to each item:

1) These items have been included in the discussion section
2) Suggestion accepted and modified in the manuscript
3) The original study design included the evaluation of 25OHD in a group composed of young individuals and another representing the elderly. Due to problems for importing the kits for 25OHD measuring, data analysis was delayed. Because of the quantity of data, we first analyzed the young group and this was published in 2007 (Maeda SS, Kunii IS, Hayashi LF, Lazaretti-Castro M. The effect of the Sun exposure on 25 hydroxyvitamin D concentrations in young health subjects living in the city of São Paulo, Brazil. *Braz J Med Biol Res* 2007,40:1653-1659). After this study, we started the evaluation of the other group and we are now comparing these two groups.
4) The minimum and maximum summer temperature in the city of São Paulo are 18° and 30° Celsius and during winter are 10° and 21° Celsius. In our country it is common for the elderly to wear heavier clothes both during winter and summer.
5) Due to the fast degradation of PTH, sample collection for its measurement was performed using refrigerated tubes for better preservation. These same aliquots were used for CTX and OC measurement.
6) Suggestion accepted and modified in the manuscript
7) Some patients had diabetes, hypertension and thyroid diseases. In order to be included in the physical activity program they had to have the consent from their clinician, meaning these conditions should be under control.
8) The classification was obtained from data found in the questionnaire where ethnicity was questioned (modified in the manuscript). All participants were also visually inspected.
9) Results section
9.1) Data regarding the number of participants that ingested more or less than 500 mg was inserted in the results section. They were initially separated into
three categories: less than 500 mg, between 500 and 1,000 mg and more than 1,000 mg. Only eight individuals reported ingestion to be above 1,000 mg. Not to create too many subcategories decreasing statistical significance we decided to subdivide the participants in only two groups.

9.2) The sunscreens used had a sun protection factor between 20 and 50 (included in the text) and were mainly used on the face and hands. We do not have more detailed information about its use during winter (this has been included in the discussion section as a limitation in this study).

9.3) Suggestion accepted and modified in the manuscript

9.4) The description is not correct. Both groups representing whites and natives presented lower PTH values during summer when compared to winter time. This has been corrected in the manuscript to make it clearer to the reader.

9.5) The paragraph was rewritten and the number of individuals was added.

10) Modifications were made in this section.

São Paulo, April 5th, 2010

Sincerely,

Sergio Setsuo Maeda, M.D.
Marise Lazaretti Castro, M.D., Ph.D.

Dear Reviewer:
Alfredo Scillitani

We would like to thank you for your interest and comments. Below you will find our response to each item:
1) we decided to keep the individuals who made use of vitamin D supplements in the sample because the steroid quantity was very low (200-400 IU) and in the comparative analysis between the groups who used the supplement or not we did not find any significant difference for 25OHD (p=0.493). We concluded that the administered dose is not enough to elevate vitamin D. A paragraph discussing this was added to the discussion. The use of sunscreen is discussed in paragraph 6 of the results section and paragraph 3 of the discussion section.

2) mistake detected and corrected in the manuscript.

São Paulo, April 5th, 2010

Sincerely,

Sergio Setsuo Maeda, M.D.
Marise Lazaretti Castro, M.D., Ph.D.