INTRODUCTION

METHODS

SUBJECTS: Thirty postmenopausal women who were part of a larger cardiovascular study participated in this separate intervention. Subjects were evaluated after signing an institutionally approved informed consent. Average age of the group (mean ± sd) was 61.4 ± 8.6 years. None were taking hormone replacement therapy. Overall, the group was considered unresovled. The first concerns the magnitude of the BZ that is associated with the use of laser-Doppler imaging. The perfusion profile obtained with LDI incorporates far more information than the single point method and at present there is sparse data available on the magnitude of the BZ with this method. Secondly, it is unclear as to the extent to which the magnitude of the BZ depends on the magnitude of the blood perfusion present while the BZ determination is made. Thus the specific objective of the present study was to determine the magnitude of the LDI-BZ and its relationship to various blood perfusion levels which were altered via local skin contact heating of volar forearm skin.

METHODS (CONTINUED)

RESULTS

CONCLUSIONS

SBF HYPEREMIA

- BZ of LDI increases with heat-induced SBF hyperemia, but the increase is small relative to SBF changes that occur
- Thus, BZ’s confounding effect can be handled by subtraction of a single BZ value
- The BZ value to use may be obtained during or after hyperemia with small error when quantifying absolute hyperemic perfusion
- But, if hyperemic responses are evaluated relative to resting baseline, then the BZ of the resting state should be used to avoid substantial overestimation of the response.

RESTING SBF

For resting SBF in forearm skin, and other regions with low basal perfusion, a BZ adjustment to LDI perfusion data is fully indicated to compare groups or treatments if BZ values can not be made, or for clinical reasons should not be made, then detecting differences between groups is limited by the potentially substantial BZ confounding effect.

Dr. Mayrovitz welcomes comments and queries. He may be contacted at: mayrovitz@nova.edu

REFERENCES