

## Detection of Arterial Hypertension in the Youngster by Use of Adiposity Markers

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Our study group on systemic arterial hypertension congratulates the authors of the article published in the *Arq Bras Cardiol* 2011; 96(6) referring to the detection of arterial hypertension in adolescents by the use of overall and abdominal adiposity markers<sup>1</sup>.

In our experience, we have observed that young and healthy individuals might have an increase in their blood

pressure levels due to weight gain, use of contraceptives, excessive use of alcohol and tobacco, stress, and sleep disorders, which, in general, are associated with increased heart rate<sup>2,3</sup>.

We ask the authors whether heart rate was measured at the moment blood pressure was taken, and about the sleep characteristics of that population.

### Keywords

Hypertension; adiposity; obesity, abdominal; adolescent.

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### Reply

We thank our colleagues for their interest in our study, as well as the comments regarding the article by Christofaro et al<sup>1</sup> recently published in *Arquivos Brasileiros de Cardiologia*.

The relationship between heart rate at rest and the markers of cardiovascular risk in pediatric populations has been the interest of several studies, including that of our group. We have recently identified that heart rate relates to blood pressure independently of body fat and other

factors<sup>2</sup>, suggesting that obese adolescents have a greater sympathetic activity at rest, which might be associated with blood pressure<sup>3</sup>. Thus, heart rate at rest seems to be an important indicator of cardiovascular risk among youngsters<sup>4</sup>, as well as some anthropometric indices. In the study by Christofaro et al<sup>1</sup>, heart rate at rest has not been obtained concomitantly with blood pressure measurement. Although the device used for blood pressure measurement provides those data, we do not know any study that has validated heart rate measurement by use of that device, and, cautiously we preferred not to collect those data.

The quality of sleep seems to be related to blood pressure<sup>5</sup>. In the present study, that variable was controlled indirectly, because prior to data collection the participants

were instructed to ingest neither caffeinated nor alcoholic beverages, to have a good night of sleep, and to avoid the practice of vigorous physical activity.

## References

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