Treatment and prevention of the insulin resistance syndrome

To the Editor: It was with favourable interest that I read the recent articles on the treatment and prevention of the insulin resistance syndrome.1,2 I was appreciative of the fact that the authors acknowledged that an increase in voluntary human expenditure is essential in the treatment and prevention of the insulin resistance syndrome. However, the lack of accuracy and clarity of the physical activity guidelines promoted by the authors detracted from the quality of the articles. I fully appreciate the vast scope that they attempted to cover, but regretfully, they relied either on only three studies3–5 or the position statement of a single professional organisation6 specialised in areas other than exercise science and physical activity epidemiology, to provide physical activity guidelines. In fairness, it must be noted that the American College of Endocrinology position statement,7 although not referring to any authoritative physical activity guidelines, makes a strong case for physical activity and states emphatically in several places that adiposity and physical activity are powerful modulators of insulin action.

The 3.5 hours/week physical activity guideline promoted in the first article1 was probably derived from the Framingham study which found a reduction in the incidence of coronary heart disease for those who walked 8 hours/week, exercised moderately for 3.5 hours/week or exercised vigorously for 1.5 hours/week. Since then physical activity guidelines have advanced substantially and not surprisingly the 3.5 hours/week physical activity guideline falls into a no-man’s land; above the 150 minutes/week minimum of the American College of Sports Medicine/Centers for Disease Control and Prevention7 and below the minimum IASO guidelines8 of 315 and 420 minutes/week. Furthermore, the Framingham guidelines rely on increasing energy expenditure through exercise, while the new-generation guidelines recognise any bodily movement produced by skeletal muscle (occupation, chores, commuting, leisure, exercise, etc.) which raises the metabolic rate sufficiently to be protective.

In conclusion, there are evidenced-based physical activity guidelines11–13 and a host of excellent resources from which to draw.14–22 Contributors to JEMDSA are encouraged to draw on the excellence and depth of research in the field of exercise science and physical activity epidemiology, and to promote physical activity guidelines that are accurate, specific, authoritative, and current.

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15. Blain SN, Crofford JL. Exercise, the metabolic syndrome, and physical activity epidemiology, and to promote physical activity

Dr Maritz replies: Mr Ian Cook has done me an honour by reading and commenting on my brief review

15. Blain SN, Crofford JL. Exercise, the metabolic syndrome, and physical activity epidemiology, and to promote physical activity
of insulin resistance and vascular disease. Of course he is correct in all his comments, particularly when he alludes to the vast scope of the topic. No review of the physical activity guidelines nor resume of exercise science and physical activity epidemiology was intended – a lengthy topic in itself. Indeed, the same criticism could be made of the omission of many other guidelines pertaining to the insulin resistance syndrome.

Mr Cook has enhanced the value of my article with his critique and references, for which I am grateful. Perhaps he would consider writing a South African perspective on the value of an increase in energy expenditure in the management of the insulin resistance syndrome and how this pertains to our diverse ethnic mix, with varied customs and beliefs. This would undoubtedly have a tremendous impact on how we manage this ever-growing health risk and add to our collective knowledge to a much greater degree than a short, and in itself incomplete, letter to the Editor.