Personalized lifestyle approaches: from sports to medical diagnostics

Inter- and intra-individual variability has been often reported amongst elite athletes and patient groups, despite sharing similar physical characteristics, exercise training, performance assessment methods and nutritional dietary intake habits. Such differences can be detrimental to their response or effects of exercise or nutritional interventions, whether to enhance sports performance, or to prevent and treat lifestyle diseases such as diabetes and cardiovascular disease. It can also explain the differences in long term adherence to the prescribed changes in lifestyle. Adopting individualized exercise and nutritional models includes combining innovative screening and assessment methods for exercise physiological capacity (e.g. individualized metabolic exercise intensity), applying novel biological measurement techniques (e.g. applying an omics approach to detect nutraceutical effectiveness), and understanding of the behavioural lifestyle components. Exercise and nutritional interventions are most effective with such a personalized approach. Such approach helps to effectively detect clinically-meaningful differences, which makes the finest difference in effectiveness of treating a metabolic disease or even determining the margin of winning a sports medal. Advanced precision medicine and personalized lifestyle approaches combining both nutrition and exercise requires continuous development of novel assessment methods and requires a multi-progned approach. The future in this field is promising.

Biography
Ahmad Alkhatib is a leading expert in the field of personalized lifestyle, bio-nutraceuticals, public health and sports sciences. His current research focus is preventing and managing diabetes and associated chronic diseases using innovative lifestyle prevention. Over the past 20 years, he has led a distinguished career in UK involving top academic positions, developing new research and academic programs, and internationally, he transformed and led top sectors in epidemiology, public health, nutrition and sports science. He has over 100 publications in top scientific journals, including three books, most recently a best seller (“Sedentary Lifestyle”, 2016).

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