Commentary on Viewpoint: Perspective on the future use of genomics in exercise prescription

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TO THE EDITOR: In the recent Viewpoint by Roth (5), the author speculates about the potential use of genomics in exercise prescription. Comparable reviews were currently published for weight loss treatment (1) and drug-based therapy of type 2 diabetes (4). Other than the growing number of papers related to the influence of genetic polymorphisms on physical performance and adaptation to exercise training (3), not much is known regarding the practical use of genetic markers in exercise treatment and training. If we review the impact of the recent publications and the controversy in the interpretation of the results from marker studies related to exercise phenotypes, we cannot foresee a practical use of these data in the next decade. The most important impact of the recent research is to explore and to identify physiological and biochemical pathways related to exercise (2). From the clinical point of view, the so called “scenarios 2 and 3” in the Viewpoint by Roth are of major interest. As the author mentioned, exercise prescription is the definite standard for lifestyle therapies, independent from the genetic responder status. But, given the fact that we could identify nonresponders or even negative responders to exercise therapy, we would have clear perspectives for the additional use of pharmacological strategies and we could avoid loosing time while waiting for the missing benefits from lifestyle changes in these individuals. The challenge for the regular doctor will be to discuss such results with patients and to motivate them to involve in regular exercise independent from their genetic profile.

REFERENCES