



Importance of multidisciplinary in physical exercise prescription

Importância da Multidisciplinaridade na prescrição do exercício físico

Marvyn de Santana do Sacramento^{1,2,3},  Victor Barbosa dos Santos^{1,3},
Jefferson Petto^{1,2,3,4,5} 

1. ACTUS CORDIOS Reabilitação Cardiovascular, Respiratória e Metabólica, Salvador, BA, Brazil.
2. Centro Universitário Social da Bahia, Salvador, BA, Brazil.
3. Faculdade do Centro Oeste Paulista, Bauru, SP, Brazil.
4. Faculdade Adventista da Bahia, Capoeiruçu, BA, Brazil.
5. Escola Bahiana de Medicina e Saúde Pública, Salvador, BA, Brazil.

Physical exercise (PE) is an instrument for health promotion that has the following outcomes: improvements in functional capacity, prevention and correction of pathological problems, improvements in body perception, quality of life and others. However, achieving these benefits involves knowledge about multiple aspects, often not addressed in the training of professionals who work with body movement [1].

Having knowledge about the nuances of PE is a key item for the correct prescription, but the contribution of other areas define the level of assertiveness of the therapy. If we think about the metabolic rehabilitation process, for example, the patient with central obesity, Type 2 Diabetes Mellitus (T2DM) and Dyslipidemia has great chances of benefiting from PE. However, the performance of a multidisciplinary follow-up would allow a broader coverage of the clinical aspects of this patient, adding information about the nutritional, endocrine and psychological condition [1].

Thinking about the nutritional aspect, one of the elements that could influence the outcome of PE is the orientation towards a diet based on nutrients capable of combating installed diseases or replacing missing substances. Following this line, one of the possible guidelines would be the consumption of phytosterol, whose supplementation in 2g/day has been pointed out as capable of reducing up to 15% of low-density lipoproteins (LDL). In addition to reducing an independent risk factor for atherosclerotic disease, other precautions can be taken to control oxidative stress and reduce fat mass [2].

When considering T2DM as the underlying disease in this case and its extensive connection with pancreatic and metabolic endocrine function, we need to pay attention to the follow-up with the specialist doctor. The decisions made by this professional make it possible to maintain biochemical variables at an optimal level, with the addition or reduction of drugs for glycemic control and lipid profile. However, the pharmacological therapeutic window must be understood by the movement professional, in order to avoid complications such

as hypoglycemia during or after physical exercise. Second, we emphasize that decision making in a team is not exempt from adjustments for any professional, and can be constantly modified depending on the patient's development. Still on exercise and blood glucose, it is able to increase glucose uptake, mediated by the translocation of glucose transporters (GLUT-4) from sarcoplasm to sarcolemma [3]. Thus, the application of new doses of hypoglycemic medication amplifies this effect, so why not discuss the times of application, dosages, change of drugs or perhaps its complete removal?

Not far from this reality, the patient of the hypothetical case can still evade the rehabilitation program due to the lack of family support or previous traumas related to motor practice. In this scenario, the permanence of this patient depends almost exclusively on the accompaniment of the psychologist. The study by Turner *et al.* [4] regarding the opinion of patients and nurses on the participation of these professionals in the scope of cardiac rehabilitation, shows a favorable position for their permanence. However, this is not the reality in the care systems, and they are "justified" by the cost and reduced time in hospitals.

This connection between the different professions makes it possible to discuss the real needs for medications, exercise dosages, nutritional and psychological deficiencies, which decreases the treatment time, risks of complications and abandoning interventions, respectively [5]. Therefore, this should be based on specialized service systems. We understand that administrative factors may imply the smooth functioning of this system and even make it more costly, but, considering all the implications of a poorly structured program, wouldn't an effort in this direction be the best option? Be it by implementation or professional indication.

In addition, the secret to good professional performance is not in having full knowledge and qualification to work in different areas of health, but in the ability to identify situations where joint therapy significantly benefits the life of each patient.

References

1. Soukup T, Lamb BW, Arora S, Darzi A, Sevdalis N, Green JS. Successful strategies in implementing a multidisciplinary team working in the care of patients with cancer: an overview and synthesis of the available literature. *J Multidiscip Healthc.* 2018;11:49-61. <https://doi.org/10.2147/JMDH.S117945>.
2. Berge KE, Tian H, Graf GA, Yu L, Grishin NV, Schultz J et al. Accumulation of dietary cholesterol in sitosterolemia caused by mutations in adjacent ABC transporters. *Science* 2000;290(5497):1771-5. <https://doi.org/10.1126/science.290.5497.1771>
3. Vancea DMD, Vancea JN, Pires MIF, Reis MA, Moura RB, Dib AS. Efeito da frequência do exercício físico no controle glicêmico e composição corporal de diabéticos tipo 2. *Arq Bras Cardiol* 2009;92(1):23:30. <https://doi.org/10.1590/S0066-782X2009000100005>
4. Turner KM, Winder R, Campbell JL, Richards DA, Gandhi M, Dickens CM et al. *BMJ Open* 2017;7:e017510. <https://doi.org/10.1136/bmjopen-2017-017510>
5. Rosell L, Alexandersson N, Hagberg O, Nilbert M. Benefits, barriers and opinions on multidisciplinary team meetings: a survey in Swedish cancer care. *BMC Health Serv Res* 2018;18:249. <https://doi.org/10.1186/s12913-018-2990-4>