



## SPECIAL ARTICLE

# Portuguese and Brazilian guidelines for the treatment of depression: exercise as medicine

Lara F. Carneiro,<sup>1,2</sup> Maria P. Mota,<sup>1</sup> Felipe Schuch,<sup>3,4</sup> Andrea Deslandes,<sup>5</sup>  
José Vasconcelos-Raposo<sup>6</sup>

<sup>1</sup>Centro de Investigação de Desporto, Saúde e Desenvolvimento Humano (CIDESD), Universidade de Trás-os-Montes e Alto Douro (UTAD), Vila Real, Portugal. <sup>2</sup>Grupo de Estudos e Pesquisas em Neurociência, Exercício, Saúde e Esporte (GENESEs), Universidade Estadual de Montes Claros (Unimontes), Montes Claros, MG, Brazil. <sup>3</sup>Centro Universitário La Salle, Canoas, RS, Brazil. <sup>4</sup>Hospital de Clínicas de Porto Alegre (HCPA), Porto Alegre, RS, Brazil. <sup>5</sup>Programa de Pós-Graduação em Ciências do Exercício e do Esporte, Universidade do Estado do Rio de Janeiro (UERJ), Rio de Janeiro, RJ, Brazil. <sup>6</sup>Instituto de Engenharia de Sistemas e Computadores, Tecnologia e Ciência (INESC TEC), Pólo UTAD, Vila Real, Portugal.

Depression is a psychiatric disorder and major contributor to the burden of disease worldwide. The strength of evidence of the benefits of exercise as a therapeutic intervention for patients with depression has expanded in the last 30 years. In fact, the available evidence indicates exercise can not only help manage depressive symptoms, but also effect significant improvements in other health outcomes. Clinical guidelines including such recommendations have been issued by different agencies, namely the UK National Institute for Health and Clinical Excellence (NICE), the American Psychiatric Association (APA), and the Royal Australian and New Zealand College of Psychiatrists (RANZCP). With increasing recognition of the benefits of exercise and shortcomings of healthcare systems, other countries, such as Sweden and Canada, have included exercise in their national guidelines for treating depression. Unfortunately, progress in incorporating exercise guidelines into clinical practice has been slow, and Portugal and Brazil reflect this reality. In this update, we reemphasize the importance of bridging this gap and integrating exercise into clinical practice guidelines as an essential component of depression treatment.

**Keywords:** Depression; treatment; exercise; guidelines

The Eurobarometer survey on mental health identified a high prevalence of antidepressant use in Portugal (15%, which is twice the European Union average).<sup>1</sup> According to Augusto,<sup>2</sup> the financial crisis and austerity that hit Portugal in 2011 tended to worsen the situation. In fact, there is general agreement in relation to the consequences of economic crises on mental health. Social-material vulnerability, indebtedness, unemployment/precarious employment, and poor working conditions have been reported as major risk factors for depression. Currently, this scenario tends to be worse in Brazil, considering the expected impact of the ongoing severe economic crisis on mental health. In Portugal, new cases of depression rose substantially, with men aged 55-64, women aged 45-54, and older adults (age > 75 years) of both genders being particularly affected.<sup>2</sup>

The escalating costs associated with use of antidepressants highlight the role played by complementary therapies, such as physical activity, as a potentially important contributor to treatment of depression. A recent

meta-analysis of randomized controlled trials (RCTs) strongly demonstrated that exercise is an effective treatment among people with depression.<sup>3</sup> Overall, the well-documented benefits in the scientific literature include a decrease in depressive symptoms and improvement in anthropometric measures, aerobic capacity, and quality of life.<sup>4-6</sup>

The role played by physical activity in mental health is taken into consideration in several clinical practice guidelines, such as those issued by the UK National Institute for Health and Clinical Excellence (NICE), the American Psychiatric Association (APA), and the Royal Australian and New Zealand College of Psychiatrists (RANZCP). Despite differences among them, these three guidelines suggest that physical activity should be used as a treatment option for alleviating symptoms in people with depression.

Portugal and Brazil have produced their own guidelines for depression treatment.<sup>7,8</sup> However, neither recommends physical activity as complementary therapy or as monotherapy. The purpose of this update article is to call attention to the necessity of including physical activity in Portuguese and Brazilian guidelines.

The evidence for exercise as an alternative treatment for depression has advanced considerably over the last 30 years.<sup>9</sup> Nevertheless, this breakthrough has yet to have any major impact on routine practice.

Correspondence: Lara Sofia Rodrigues de Sousa Fernandes Carneiro, Centro de Investigação de Desporto, Saúde e Desenvolvimento Humano (CIDESD), Universidade de Trás-os-Montes e Alto Douro (UTAD), Quinta dos Prados, 5000-801, Vila Real, Portugal. E-mail: larafcarneiro@gmail.com

Submitted Mar 10 2017, accepted May 09 2017, Sep 04 2017.

In a critical appraisal of a Cochrane systematic review and meta-analysis examining the effects of exercise on depression, Ekkekakis<sup>10</sup> reported that physicians do not recommend physical activity to their patients, attributing their decision to the perception that the supporting evidence base is insufficient. The author debunked this argument by demonstrating that, although systematic reviews and meta-analyses are commonly assumed to be structured, rigorous, and based on a uniform application of rules, they involve numerous decisions which lead to substantial potential for bias. Ekkekakis alerts to the necessity of assessing the influence of methodological decisions on the conclusions of systematic reviews and meta-analyses, as these choices can crucially alter the outcome.<sup>9</sup>

To the best of our knowledge, two RCTs<sup>4,5</sup> conducted in Portugal have investigated the effect of exercise as a treatment for depression; both found it effective as a complementary strategy.

Mota-Pereira et al.,<sup>4</sup> in a sample of treatment-resistant patients with major depressive disorder, found that no subjects in the control group (pharmacotherapy alone) exhibited clinical response or remission, while the intervention group (exercise + pharmacotherapy) presented a 21% clinical response rate and a 26% remission rate. Our study<sup>5</sup> has shown that exercise is an effective adjuvant to antidepressant medication for adults with depression (ICD-10 codes F32.1, F33.1, F34.1), decreasing their symptoms and increasing physical fitness.

In Brazil, one RCT demonstrated that adding exercise to the usual treatment of severely depressed inpatients significantly decreased their depressive symptoms and improved their physical and psychological quality of life.<sup>6</sup> The current body of evidence, with the contribution of these studies conducted in Portugal and Brazil, suggests that it is time to rethink, be pragmatic,<sup>9</sup> and consider adding physical activity and exercise to guidelines as treatment options. As reported by Hallgren et al.,<sup>11</sup> this slow integration could be related to the lack of consensus in relation to the optimal dose-response relationship and type of exercise. Therefore, it is crucial to clarify the optimal dose of physical activity. The number of studies in this area is increasing rapidly, and results are making clear the salutary effects of exercise for depression and other mental health diseases (e.g., psychoses, post-traumatic stress).<sup>12</sup>

Evidence has suggested the importance of exercise professionals (e.g., physical educators, physiotherapists, physiologists) as playing a crucial role in ensuring the efficacy of and adherence to exercise training in people with depression.<sup>13</sup> However, it is also essential to identify gaps in curricula and provide physical activity professionals with more knowledge and skills, aiming to maximize their expertise in addressing the needs of this population. As this is achieved, the credibility of exercise as a therapy in the mental health field is expected to increase.

Exercise is a feasible treatment for depression. To ensure that safe interventions are provided, trained professionals (e.g., physical educators) with expertise in exercise prescription as well as knowledge of psychopathology should be incorporated into mental health teams, as these professionals are in a unique position

to identify and recognize depressive symptomatology and secondary effects of psychotropic medication. Responding to the overwhelming scientific literature that demonstrates the benefits of exercise for patients with depression, it is essential that we bridge the gap and integrate exercise into clinical practice guidelines as a strategy for managing depressive symptoms.

## Acknowledgements

This work was supported by Fundação para a Ciência e Tecnologia (FCT) through a PhD grant (SFRH/BD/84988/2012) financed by Programa Operacional Potencial Humano (POPH), and subsidized by Fundo Social Europeu (FSE) and Ministério da Ciência, Tecnologia e Ensino Superior (MCTES).

## Disclosure

The authors report no conflicts of interest.

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