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Exercise for the treatment of depression

Even low intensity activities such as walking or yoga are beneficial

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According to the World Health Organization, more than 300 million people worldwide have depression.[1] When individuals recover from a major depressive episode, they have a high probability of relapse, and in some cases a tendency towards chronicity.[2] Depression results in a considerable deterioration in quality of life for affected individuals and their families.[3] Globally, more than 700 000 people die by suicide each year,[1] and mortality from other physical illnesses such as diabetes, heart diseases, and cancer increases by 50% when those affected have depression.[4] Individuals with depression can face difficulties finding employment, and among those who are employed, depression is associated with reduced productivity, higher rates of absenteeism, and an increased risk of job loss.[5] All this emotional, quality of life, work related, and economic impact affects individuals and their families, as well as the efficiency of health services, businesses, and society in general. Moreover, this effect increased from 1990 to 2019,[3] and during the covid-19 pandemic the prevalence of depressive disorders increased by almost 28%.[6]

Reasonably effective psychological and drug treatments are available,[7] and in recent years, research has shown that exercise is also effective.[8] Important questions remain, however, about the role of exercise in the treatment of depression, including what type of exercise works best, at what intensity and frequency, in what format (individual or group), and for which patient.

In a linked paper, Noetel and colleagues (doi:10.1136/bmj-2023-075847) report a network meta-analysis of randomised controlled trials that answers some of these questions.[9] Walking or jogging, yoga, and strength training appeared to be more effective than other types of exercises. Overall, a dose-response association was found between exercise intensity and greater effectiveness, but even low intensity exercises such as walking and yoga conferred meaningful benefit. Conversely, the authors found no association between the effectiveness of exercise and the severity of depression at baseline. In general, group exercise was not more effective than individual exercise, except for yoga. Strength training and the combination of aerobic and strength exercises were more effective for individuals than groups. The effect size of exercise was comparable to that of cognitive behavioural therapy, but the quality of evidence supporting such therapy was higher. The effect of exercise appeared superior to antidepressants, although when exercise was combined with antidepressants, the effect of the drugs improved.

Noetel and colleagues' network meta-analysis included 218 randomised controlled trials in a total of 14 170 participants from across multiple countries—although African countries were underrepresented. Other limitations were the low quality of evidence and the almost total absence of randomised controlled trials with long term follow-up (one year or more).

Primary care clinicians can now recommend exercise, psychotherapy, or antidepressants as standalone alternatives for adults with mild or moderate depression. The final choice depends on patient preference and other considerations, including any barriers to access. Clinicians and patients should also take into account the benefits of exercise in preventing or treating chronic conditions such as type 2 diabetes, overweight and obesity, cardiovascular disease, cancer, and cognitive impairment. Notably, physical exercise has also been shown to help prevent depression.[10] For adults with severe or treatment resistant depression, the available evidence currently favours combined psychological and drug treatment.[7]

Taking regular exercise can be challenging for people with depression, as they often experience symptoms of fatigue, low energy, and poor motivation. Most of the randomised controlled trials included in this new network meta-analysis were conducted in a highly simulated and standardised context. Therefore, implementation studies (pragmatic randomised controlled trials and observational studies) are needed to evaluate physical activity programmes for people with depression using real world data. Many people have no access to exercise facilities, or they live in neighbourhoods where it is unsafe to walk or jog.

Health services and local and national administrations should provide enough resources to make individualised and supervised exercise programmes accessible to the entire population. For example, the European Union, through the NextGenerationEU funds, has committed to promoting exercise across member states.[11] Using these funds and own funds, the Spanish government and the regional government of Andalusia in Spain have recently launched a programme prescribing personalised physical exercise programmes supervised by sports professionals in coordination with primary care. This programme encourages the participation of citizens and promotes exercise by recommending health assets in the neighbourhoods where citizens live.[12]

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