



Exercise: depression

Intervention

Supervised group exercise for 30 to 40 minutes three times a week for a minimum of 9 weeks.

Any exercise is better than no exercise. However, more exercise sessions have a greater effect on mood than fewer sessions.

Better outcomes are associated with supervised group exercise rather than solo activity. A mixture of resistance and aerobic training has been shown to be more beneficial than aerobic activity only.

Exercise may be used as sole or supplementary therapy.

To address motivation and adherence, it may be beneficial to take a graded approach to exercise. See Tips and challenges below.

Indication

Regular exercise programs improve mood and activity level in people with mild to moderate depression.

Patients diagnosed with mild to moderate depression.

Used alone, exercise has been shown to have a moderate effect on reducing symptoms of depression. Based on a small number of trials, exercise may be as effective as psychological or pharmacological treatments.

Patients with subthreshold depression may also benefit from exercise therapy.

Precautions

Structured exercise programs are not recommended as a sole treatment for people with severe depression as their ability to participate may be affected by their reduced functioning and ability to complete everyday activities.

Patients taking antidepressant medications such as tricyclic antidepressants, which are associated with side effects such as orthostatic hypotension and sedation, may experience difficulty participating in exercise programs.

To prevent injury, ensure a gradual introduction to the exercise program.

Before commencing exercise, perform a cardiovascular risk assessment to ensure the patient is fit enough to undertake the program.

Contraindications

Exercise programs may be harmful for those with concurrent disorders (e.g. anorexia nervosa). Overtraining or fixation on exercise could have a negative impact on physical and mental health outcomes.

Adverse effects

Adverse events in those allocated to exercise interventions in trials were uncommon, with complaints mainly limited to muscle pain and non-heart-related chest pain.



Availability

In the community there are many options for exercise, such as active transport, walking for leisure and sports participation, as well as gym work, which is more similar to the research environment.

Many municipal sport and recreation facilities offer affordable exercise programs to the local community. Some gymnasiums and sports clubs have developed specific programs that aim to assist those suffering from mental illness.

Some GP practices have started their own walking or fitness group for patients.

Structured exercise programs are available through an exercise physiologist. A Medicare rebate is available for up to five individual consultations with an exercise physiologist for patients who have a chronic disease (e.g. depressive symptoms lasting 6 months or more).

See **Consumer Resources** below

Description

There are many theoretical reasons why exercise programs may improve depressive symptoms: diversion from negative thoughts, increased social contact, greater self-esteem through mastery of skills, as well as possible physiological benefits (e.g. increased concentration of endorphins and proteins such as brain derived neurotrophic factor [BDNF]; reduced cortisol concentration).

An example of structured exercise program is shown below.

Description	
Type	<p>A mixture of resistance and aerobic training has been shown to be more beneficial than aerobic activity only.</p> <p>For aerobic exercise, patients can use a treadmill, step machine, rowing machine or elliptical trainer.</p> <p>A typical resistance training regimen consists of upper body exercises (bench press, seated row, shoulder press, pull down), leg exercises (leg press, extension, flexion), abdominal crunches and back extensions. These exercises are done in 2–3 sets of 10 repetitions.</p>
Intensity	<p>Exercise of a moderate intensity is recommended, which should raise the heart rate to 55% to 70% of maximum heart rate.</p> <p>A good measure of moderate aerobic exercise is when the exerciser begins to get breathless but can still carry on a conversation.</p> <p>Going on a brisk walk, jog or bike ride produces moderate aerobic output.</p> <p>High-intensity resistance training appears more effective than low-intensity training. High-intensity training is considered 80% of maximum load and low-intensity training is 20% of maximum load.</p>
Duration and context	<p>30–40 minutes, three times a week for a minimum of 9 weeks.</p> <p>Although solo exercise is more flexible, supervised group exercise also offers social contact, external motivation and goal setting, which are beneficial to people suffering from depression.</p>



Tips and challenges

Motivation

One of the main challenges for patients with depression is motivation or experience with exercise to get started; it may help to encourage patients to begin with 2–3 sessions per week at lower intensity and gradually build up frequency, duration and intensity over time.

Adherence

To promote adherence to an exercise program, the type and variety of exercise should be individualised according to the patient's preferences and access to resources.

Exercise programs could be combined with motivational interviewing or other treatments such as cognitive behavioural therapy (CBT) and/or antidepressant therapy to provide additional support and motivation for the patient.

Grading

NHMRC Level 1 evidence.

References

Cooney G, Dwan K, Greig CA et al. Exercise for depression. Cochrane Database Syst Rev 2013;9:CD004366. doi: 10.1002/14651858.CD004366.pub6.

Stanton R, Reaburn P. Exercise and the treatment of depression: a review of the exercise program variables. J Sci Med Sport 2014;17(2):177–82.

Perraton LG, Kumar S, Machotka Z. Exercise parameters in the treatment of clinical depression: a systematic review of randomized controlled trials. J Eval Clin Pract 2010;16:597–604.

Consumer resources

To find an accredited exercise physiologist go to the Exercise and Sports Science Australia (ESSA) website and search by state, postcode and speciality. www.exerciseright.com.au/find-us/

Gyms with mental health programs are available (e.g. YMCA). www.ymcansw.org.au/what-we-do/community-programs/brightside

Heartmoves is a widely available exercise class for people with chronic disease, which is suitable for older patients. www.heartmoves.org.au/

Better Health Channel: Depression and exercise. www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/depression_and_exercise

Black Dog Institute: Exercise and depression www.blackdoginstitute.org.au/docs/ExerciseandDepression.pdf

Heart Foundation: Physical activity and depression www.heartfoundation.org.au/SiteCollectionDocuments/Physical-activity-and-depression.pdf

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