

Physical Activity and Depression/Anxiety

Benefits for Depression/Anxiety

Participation in physical activity can have lasting health benefits for both men and women. There is increasing evidence that the benefits occur relatively soon after the adoption of an active lifestyle and are likely to occur at whatever age physical activity is commenced. Physical activity can contribute both to the **prevention** and **treatment** of depression and anxiety.

- Regular physical activity lead to **17-28% reduced risk** of developing depression in men in a 20 year follow up study¹. People who reported **no physical activity** were more likely to have depressive symptoms compared with people who exercised regularly².
- Regular **aerobic and strength training** activities of light or moderate intensity can lead up to 50% reduction in symptoms of **depression** and **anxiety** in the acute treatment phase, especially for women and older people³.
- Physical activity can be as **effective** as pharmacological treatments (such as sertraline) in the management of mild to moderate depression in older people⁴.
- Exercise can lift mood, aid uninterrupted sleep, increase energy, decrease fatigue and lead to an enhanced sense of wellbeing in the general population⁵.

Summary of Physical Activity Guidelines for Australians

The Australian Physical Activity Guidelines emphasise the importance of incorporating physical activity into usual activities of daily living, as well as increases in leisure time activities. The Guidelines are summarised as:

- *Think of movement as an opportunity and not an inconvenience*
- *Be active everyday, in as many ways as possible*
- *Put together at least 30 minutes of moderate-intensity activity on most, preferably all, days*
- *If you can, also enjoy some regular vigorous exercise for extra health and fitness*

Definitions

Moderate activity will cause a slight, but noticeable increase in breathing and heart rate, and may cause light sweating.

Vigorous activity will cause hard breathing (or puffing and panting).

Strength training is an activity that employs either weights or the body's own weight to increase muscle strength and size.

Target Groups

Maximum health benefits are achieved when people move from **sedentary** to **moderate** levels of activity. Physical activity can be effective in prevention and management of depression and anxiety and be applicable to all population groups at risk of these conditions.

Up to **27%** of encounters in general practice are with people who experienced a depressive episode in the previous 12 months⁶. This is higher for females than males.

People with **mild to moderate** depression or anxiety can benefit most from participation in physical activity. Australian research has also identified '**at risk**' population groups that are less likely to be physically active. These include: people with obesity, women with children, older adults (particularly those in their 40's and 50's), the less educated and those from cultural and linguistically diverse communities.

Safe Practice

To minimise complications during physical activity, specific advice should include: warm up and cool down, proper footwear, avoid activity in extreme temperatures, maintain adequate fluid intake, and avoid strenuous activity during times of acute illness.

Whilst exercise can play an important role in assisting people with depression and anxiety (and in the prevention of depression), it is important to note that there are a number of other treatments proven to be very effective for treating depression and anxiety. In particular, psychological and pharmacological treatments are highly effective. Treatments vary from person to person, the key is to find a suitable treatment plan for the individual patient.

Want to be active?



The Role of GPs in Promoting Physical Activity

General practice is an important setting for promoting physical activity as GPs are a key source of contact for a large proportion of the community. GPs are well placed to take a leadership role in public education about the benefits of physical activity, and commit to monitoring physical activity and overweight and obesity levels in the general population. Additionally, community respondents to an Australian survey believe that exercise was highly likely to be helpful in the treatment of depression⁷.

There are four international reviews of physical activity interventions delivered through general practice in the literature to date. These reviews detail 17 studies and conclude that brief interventions involving verbal advice supplemented by written information can lead to modest (about 10%) short term increases in physical activity participation.

The Active Script Program provides a systematic approach for GPs to deliver this advice to patients at risk. The resources of the program assist the GP to integrate physical activity promotion into their routine practice. The crucial steps in the program are:

1. Assess the patient's current activity level and concurrent risk factors
2. Ensure the patient does not have any contraindications to increased activity (see below)
3. Ask about patient's interest and history of activity, as well as current barriers to participation. Provide brief advice about the benefits of physical activity, addressing some of the barriers identified
4. Arrange referral to appropriate community providers of activity and follow up to check on progress
5. Provide individualised written prescription for activity and supporting written information for the patient

The promotion of physical activity needs to be also considered in the context of the environments in which it takes place. Policy and practice related to urban planning, transport and related environmental issues must also be addressed in population health interventions to change community's behaviour.

Absolute Contraindications to Exercise

- Unstable angina pectoris
- Recent significant changes in resting ECG
- Uncontrolled cardiac arrhythmias
- Uncontrolled symptomatic heart failure
- Severe symptomatic aortic stenosis
- Suspected or known dissecting aneurysm
- Acute myocarditis or pericarditis
- Acute thrombophlebitis or intracardiac thrombi
- Acute pulmonary embolus or pulmonary infarction
- Untreated high risk proliferative retinopathy
- Recent significant retinal haemorrhage
- Acute or inadequately controlled renal failure
- Acute infections

Relative Contraindications to Exercise

In some instances, these individuals can be exercised with caution and/or using low-level end points, especially if they are asymptomatic at rest, if the benefits outweigh the risks of exercise.

- Fasting blood glucose >16.7 mmol/L or >13.9 mmol/L with urinary ketone bodies
- Uncontrolled hypertension
- Severe autonomic neuropathy with exertional hypotension
- Moderate stenotic valvular heart disease
- Hypertrophic cardiomyopathy and other forms of outflow tract obstruction
- Tachyarrhythmias or bradyarrhythmias
- High-degree atrioventricular block
- Ventricular aneurysm
- Electrolyte abnormalities (eg. hypokalemia)
- Uncontrolled metabolic disease (eg. thyrotoxicosis)
- Chronic infectious disease (eg. hepatitis, AIDS)
- Neuromuscular, musculoskeletal, rheumatoid disorders that are exacerbated by exercise
- Complicated pregnancy

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¹ Paffenbarger, RS. et al. (1994) Physical activity and personal characteristics associated with depression and suicide in American college men. *Acta Psychiatr. Scan.* 377:16-22.

² Weyerer S. (1992) Physical inactivity and depression in the community. Evidence from the Upper Bavarian Field Study. *Int J Sports Med* 13:492-496.

³ Dunn, A. et al. (2001) Physical activity dose-response effects on outcomes of depression and anxiety. *Med Sci & Sport*, 33(6):S587-597

⁴ Babyak, M.J. et al. (2000) Exercise treatment for major depression: maintenance of therapeutic benefits at 10 months. *Psychosom Med* 62:633-638.

⁵ Bauman, A. et al. (2002). Getting Australia active: towards better practice for the promotion of physical activity. National Public Health Partnership. Melbourne, Australia

⁶ Sayer, GP. et al. (2000) Measures of health and health care delivery in general practice in Australia. Supplementary analysis of nominated data 1998-99. AIHW cat no. GEP 3.

⁷ Highet, N. et al. (2002) Monitoring awareness of and attitudes to depression in Australia. *MJA*; 176:S63-S68.