COCHRANE CORNER

Exercise Therapy for Schizophrenia

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Background
The health benefits of physical activity and exercise are well documented, and these effects could help people with schizophrenia.

Objectives
To determine the mental health effects of exercise/physical activity programs for people with schizophrenia or schizophrenia-like illnesses.

Search Methods
We searched the Cochrane Schizophrenia Group Trials Register (December 2008), which is based on regular searches of CINAHL, EMBASE, MEDLINE, and PsycINFO. We also inspected references within relevant papers.

Selection Criteria
We included all randomized controlled trials comparing any intervention where physical activity or exercise was considered to be the main or active ingredient with standard care or other treatments for people with schizophrenia or schizophrenia-like illnesses.

Data Collection and Analysis
We independently inspected citations and abstracts, ordered papers, quality assessed, and data extracted. For binary outcomes, we calculated a fixed-effect risk ratio and its 95% CI. Where possible, the weighted number needed to treat/harm statistic (NNT/H) and its 95% CI was also calculated. For continuous outcomes, endpoint data were preferred to change data. We synthesized nonskewed data from valid scales using a weighted mean difference.

Results
Three randomized controlled trials met the inclusion criteria. Trials assessed the effects of exercise on physical and mental health. Overall numbers leaving the trials were similar. Two trials compared exercise with standard care and both found exercise to significantly improve negative symptoms of mental state (Mental Health Inventory Depression: 1 RCT, n = 10, Mean Difference [MD] 17.50 CI 6.70–28.30, Positive and Negative Syndrome Scale [PANSS] negative: 1 RCT, n = 10, MD 8.50 CI 11.11 to –5.89; figure 1). No absolute effects were found for positive symptoms of mental state. Physical health improved significantly in the exercise group compared with those in standard care (1 RCT, n = 13, MD 79.50 CI 33.82–125.18; figure 2), but no effect on peoples' weight/BMI was apparent. One study compared exercise with yoga and found that yoga had a better outcome for mental state (PANSS total: 1 RCT, n = 41, MD 14.95 CI 2.60–27.30). The same trial also found that those in the yoga group had significantly better quality of life scores (World Health Organization Quality of Life

![Fig. 1. Comparison 1: Exercise vs Standard Care; Outcome: Mental state PANSS Negative endpoint score (low score = good).](https://example.com/Fig1.png)
physical: 1 RCT, \( n = 41 \), MD \(-9.22\) CI \(-18.86\) to \(0.42\). Adverse effects (Abnormal Voluntary Movements Scale total scores) were, however, similar.

**Authors’ Conclusions**

Although studies included in this review are small and used various measures of physical and mental health, results indicated that regular exercise programs are possible in this population and that they can have healthful effects on both the physical and mental health and well-being of individuals with schizophrenia. Larger randomized studies are required before any definitive conclusions can be drawn.

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