

Exercise training and yoga can improve lung function in adults with asthma

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Yoga and breathing control practices, in combination with aerobic training, are particularly key exercises for asthmatic people seeking to improve their lung function, a new peer-reviewed study suggests.

The research which is published today in the journal *Annals of Medicine* highlights the importance of integrating appropriate [exercise training](#) into asthma management plans.

The findings demonstrate just how effective specific types of [exercise](#) training can be to enhance [lung function](#) for those with adults, explains lead author Shuangtao Xing, an Associate Professor at the School of Physical Education at Henan Normal University in China.

"Breathing training combined with [aerobic training](#), and yoga training, appear to be particularly advantageous—offering potential avenues for effective treatment approaches," he states.

"Larger, well-designed randomized controlled trials are now needed to more accurately estimate the benefits of exercise training for individuals with asthma."

Asthma, a [chronic lung condition](#) that affects around 339 million people worldwide, causes symptoms such as coughing, wheezing, shortness of breath and chest tightness.

In the past, exercise was considered a potential risk factor for individuals with asthma, as it was believed to trigger or worsen acute asthma attacks. However, recent studies have revealed that exercise training can actually enhance respiratory function and exercise capacity in [adult patients](#). However, variations in the specific exercise interventions in existing randomized controlled trials (RCTs) have made it challenging to compare the effectiveness of different rehabilitation programs.

To address this issue, the current study conducting a network meta-analysis, which enables a simultaneous comparison of results from multiple treatments in a single analysis, to compare the effects of multiple types of exercise training on lung function in adults with

asthma.

The analysis included a total of 28 RCTs involving 2,155 people with asthma and examined the effects of breathing training, aerobic training, [relaxation training](#), yoga training, and breathing combined with aerobic training, on lung function.

All five types of exercise interventions demonstrated greater effectiveness in improving lung function measurements compared to the conventional rehabilitation control group. Specifically, the study found:

Breathing training, aerobic training, relaxation training, yoga training, and breathing combined with aerobic training, led to improvements in the levels of Forced Expiratory Volume in the first second (FEV1) levels and Peak Expiratory Flow (PEF).

Aerobic training, breathing training, yoga training and breathing combined with aerobic training, improved the level of Forced Vital Capacity (FVC).

Breathing training, aerobic training and yoga training improved the FEV1/FVC ratio.

Furthermore, the researchers applied a statistical technique to rank the effects of different exercise treatments against each other. Relaxation training showed the most significant effect on improving FEV1 levels, breathing combined with aerobic exercise had the most significant effect on improving FVC levels, and yoga training had the most significant effect on improving PEF levels.

"These findings should provide valuable insight for health care professionals prescribing exercise [training](#) for the management of adult asthma patients. However, it is essential to consider individual factors,

such as [family history](#), duration of the condition, and [environmental influences](#), when designing exercise rehabilitation programs. Tailoring interventions to individual physical and mental health conditions, with careful consideration of exercise intensity, frequency and duration, is important for optimizing treatment outcomes," says Xing.

The authors acknowledge certain limitations that could impact the broader extrapolation of these results—including inherent variability between the included studies and inconsistencies in exercise intensity and frequency details. Importantly, they highlight that the majority of patients in the study were under 60 years of age, so exercise interventions may yield different responses in older individuals.

More information: *Annals of Medicine* (2023). DOI: [10.1080/07853890.2023.2237031](https://doi.org/10.1080/07853890.2023.2237031) , www.tandfonline.com/doi/full/10.1080/07853890.2023.2237031

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