

Assessment of respiratory function at rest and after exercise in children, adolescents and adults living in areas with high air pollution

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Status	RECRUITING
Sponsor	Academy of Physical Education in Katowice
Enrollment	200 participants

Plain Language Summary

Air pollution is known to affect our lungs, but researchers are still learning exactly how it changes the way we breathe — especially in people who grow up or live in highly polluted areas. This study is measuring lung function in children, teenagers, and adults aged 10 to 40 who live in areas with poor air quality. Tests include breathing assessments and an exercise component to see how the lungs perform under physical stress.

The study also involves a six-week breathing exercise program called inspiratory muscle training, which strengthens the muscles you use when you inhale. Researchers want to know whether this kind of training can improve respiratory efficiency in people whose lungs may have been affected by long-term pollution exposure.

You may be eligible if you are aged 10 to 40, live in a high air pollution area, do not smoke, and have no history of chronic breathing, heart, or neurological conditions. This research could lead to better preventive and rehabilitation strategies for communities living with poor air quality — particularly relevant as pollution-related health impacts become a growing global concern.

Key Eligibility Criteria

Inclusion (1)

- Healthy children, adolescents, and adults aged 10 to 40 years, non-smokers, living in areas with high air pollution. No history of chronic respiratory, cardiovascular, or neurological disease. All participants (and in case of minors, their legal guardians) provided written informed consent.

Exclusion (1)

- History of chronic respiratory disease (eg, asthma, COPD), cardiovascular or neurological disorders, previous thoracic surgery, current smoking, acute respiratory infection within the last 4 weeks, or inability to perform breathing exercises or spirometry reliably.

Locations (1 total)

Poland