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Relationship between Air Pollution and College Students' Stamina

Hongmiao Chen¹, Jiacheng Feng²
1.HuaQiao University
2.TianJin University of Technology

Objective To find out whether the air quality in the long growing areas of adolescents affects their cardiorespiratory function through experiments.

Methods Through the classified statistics of the habitation of the students at H university, and the related statistics of the physical fitness test scores in the first and last year of college (men's 1000 meters run, the women's 800-meter run and vital capacity) and the average index of air pollution.

Results 1. There are positive correlation between pollution index of key cities all over the country and vital capacity of freshman in the region, but after four years living under a common environment, correlation of female lung capacity level and regional air pollution index disappears, while the correlation enhances of boys. 2. Senior students' vital capacity results are improved; 3. There is no obvious relation between the endurance performance of freshman and senior and regional pollution index.

Conclusions 1 Air pollution and lung capacity are positively correlated, more exercise can weaken the effect of atmospheric pollution on lung. 2 After four years of urban life where the atmospheric pollution index is low, lung function can get some improvement. 3 Superimposed effects of smoking and air pollution is more severe to the lungs, last longer and less reversible .