

ABSTRACT

The thesis is focused on the comparison of functional examination of the patients lungs, before and after coronavirus disease 2019 (COVID-19), as well as on the comparison of physiological data for a individual person with measured values after the disease. The relationship between lung function and smoking, sex, age and time gap after COVID undergone was monitored. The screening was accomplished by spirometry in a pneumology surgery and the obtained data were processed in practical part of my thesis.

The theoretical part of the diploma thesis describes the respiratory system and lungs functional testing. In addition, infectious disease COVID-19 is described herein.

The aim of the thesis was to select suitable patients, who have suffered from the COVID-19 disease, but without other serious respiratory problems, make a measurements and statistically evaluate the correlation between the measured results.

The experiment involved 66 people aged between 21-94, of which 43 were men and 23 women. It has been shown a predominantly negative effect of COVID-19 in the values of the examined indicators in spirometric measurements, similarly, the impairment was seen more in men than in women. The role of younger age has been proven in the better results of spirometric measurements. However, the differences in results were very small and statistically insignificant. In contrast, the results were better for smokers. Longer elapsed measurement time after illness does not appear to be a factor for better values.

Key words: respiratory system, spirometry, respiratory parameters of lung, statistic and dynamics parameters, COVID-19