

## **Abstract**

**Links:** Aerobic motion activity as it is offered in commercial aerobic classes is generally considered to be beneficial for the motion apparatus, and for one's overall health. Nevertheless, loud music accompanying the exercise can rather cause damage to one's health.

**Goals:** The main scope of my thesis is to measure the noise intensity in commercial aerobic classes and to verify whether the noise does not exceed the limits permitted by hygienic standards.

**Methods:** In my thesis I used a specific method for determination of the noise intensity in the aerobic class space. I opted for the noise level according to EPA standards ranging between 70 and 80 dB as the basic constant. The measurement itself took place after calibration in eleven measured spots in a fitness centre located in České Budějovice. The measured spots were established in the space according to the placement of the sound apparatus and the measurement itself took place in the height of the sound apparatus of a fitness centre client. The measured values were further processed into descriptive graphs and all outcomes were further processed using statistical methods in order to verify the measurement validity according to statistical significance.

**Results:** On the basis of the performed measurement, data processing and the following statistical evaluation is clear that the measured noise figures were according to EPA standards statistically significantly exceeded at the noise level of 70 dB. Likewise, some figures were exceeded for the noise level of 75 dB, although the statistical exceeding at the highest level of 80 dB was not verified.

**Key words:** aerobic exercise, noise, intensity, measurement, statistics