Master thesis "The effect of incentive spirometry and postural lability on activity of respiratory muscles" deals mainly with electromyographic activity of respiratory muscles while using incentive spirometry. In the first part the following aspects of breathing are covered: kinesiology, pattern, work, and the respiratory and postural function of respiratory muscles. The next section describes the main types of incentive spirometers and indications and contraindications of their usage. Furthermore, the thesis defines neurophysiological basics needed for electromyographic usage and the influence on its signal quality. The main part of the thesis deals with the issues of incentive spirometer usage and postural lability and the effects on activity of the respiratory muscles. The final section suggests recommendations regarding the suitable position for effective respiratory-postural function training using incentive spirometry.