

## **Abstract**

This Research thesis is focused on the influence of body position on the function of pelvic floor muscles (PFM). Anatomical structures, kinesiology and neurophysiology of the PFM are described in the theoretical part of this thesis. It also discusses the methodology used for objective evaluation of the PFM. For the practical part of this thesis, 30 healthy subjects (aged 20 - 30 years, 15 male, 15 female) were chosen via a questionnaire. The subjects were examined via the method of anorectal manometry. The goal of the examination was to measure the distribution of a) resting pressure in the anal canal in selected positions, b) pressure during voluntary maximal contraction of PFM and sphincters in selected positions, c) pressure during 20 seconds of voluntary contraction. Selected positions are: lying on the back; lying on the back with legs elevated and held in “three flexion”; kneeling on all fours with palm support; kneeling on all fours with elbow support; squatting, and standing.

Results: a) The resting pressure is influenced by the body position. Highest resting pressure was observed in squatting and standing positions, lowest resting pressure was measured on subjects while kneeling on all fours with elbow support. No significant difference was observed between male and female subjects in respect to the resting pressure. b) The pressure during maximal voluntary contraction differed significantly ( $P < 0,05$ ) only in lying on the back with legs elevated and held in “three flexion”, where the pressure was the lowest. A difference between male and female subjects was observed, where the pressure during maximal contraction was significantly ( $P < 0,05$ ) higher in males. c) The same results were measured for 20 seconds lasting voluntary contraction.