SUMMARY
Jnjury of anterior cruciat ligament (ACL) is frequent. ACL lesion has serious consequences on the knee joint biomechanics as well as neurophysiological changes. This study sum111arize the facts in the field of ACL lesion. in ter111s ofin jury, therapy and the return of a patient to daily life. The present research into anterior cruciate ligament (ACL) lesion has shown varying results. We investigated the electro111yographic (EMG) activity of fe111oral 111uscles (se111i111e111branosus 111.
(SEMI). biceps femoris m. (BF), vastus medialis 111. (VM), vastus lateralis m. (VL)) during specific physical activities (PA) in the closed kinetic chain (CKC). The main focus was on the protective pattern of femoral111uscles activity in knees with insufficient stability, due to ACL les ion. The study was based on theory as well as previous investigations of "the ha111string reflex".
16 patients with ACL lesion (6 men and 1 O women; mean age = 34 years, range = fro111 15 to 54) divided in 2 groups (with and without ACL reconstruction) participated in this study. The EMG activity of assessed femoral muscles was analysed during 3 specific activities: calm standing (CS), rythmic weight bearing (RWB), forward lunge (FL). The performance of PA were standardized by the use of the forceplate offered by NeuroCom® "Balance Master®"system software. The PEMG data were acquired through the use of the tele111yograph Telemyo 16 Noraxon, further recorded and processed with MYO 2.1 O.
Two non-parametric tests, the Wilcoxon 111atched pairs signed-ranks test, and the MannWhitney U test, were used to compare the EMG activity between a) injured and non-injured lower limb within one patient, b) injured lower limbs within groups of patients with and without ACL reconstruction.

Key words: the knee joint, ACL lesion, ACL reconstruction, electromyography, rehabilitation