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## On the Rehabilitation after the Knee Injury with CYBEX MACHINE

## By Katsuhide Ando\*

Proper rehabilitation program is required if we are to anticipate prompt comeback to normal activity or physical activity after undergoing a knee injury or surgery. Referring to such case, we have attempted rehabilitation with reference to score obtained from the CYBEX MACHINE on injury cases for 17 non-athlete adults and 12 sport athletes. The following can be said of these 29 total injury occurrences which can be categorized under each individual situations.

(1) Regarding M.C.L. injuries, progressive rehabilitation program can be put to practice after surgery followed by six weeks of cast fixation. After one to two weeks since the removal of the cast, a 110° flexion of the knee can be accomplished. And 75% recovery, the rate that is said to be required for engaging in normal activity, will be acquired in approximately 4 weeks. This rate is required in order to participate in sports. But for sports that requires 100% full-recovery, a rehabilitation program must be carried out for another 10 weeks or more.

(2) For A.C.L. injuries, it takes 12 weeks for the knee to acquire ROM level and knee flexion of 110°. We have undergone a careful rehabilitation program so to avoid damaging the same area during this cautious A.C.L. after-treatment. During the beginning stage of A.C.L. rehabilitation program, main focus was put to reinforcing the flexing function of the hamstrings then reinforcement of the quadriseps was gradually added. From the importance of this area of the body, we ended the rehabilitation program after acquiring 13 to 18 weeks to reach the 90% recovery level.

(3) M.M. that can be operated with Arthoscopy, prompt rehabilitation program

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may be started since the ROM level is extremely low both before and after. 80% recovery was observed 7.9 weeks later.

(4) Injuries with complications especially A.C.L. including former injuries, we must keep this in mind and a rehabilitation program should be started. Otherwise, there is the possibility it may lead to further injuries during the after-treatment phase.

(5) When observing the recovery speed of the quadriceps and the hamstring with the CYBEX test, the hamstring showed quicker recovery but if the rehabilitation program is discontinued for some reason, the decrease of its function is much more significant than the quadriceps.

(6) 17 injury cases out of the 29 had been on non-athlete adults. Welsh has defined that 75% recovery rate is required for a patient to resume normal activity but for recreational sports aimed for this group category, the recovery rate of 90% is suggested. This is the same recovery rate required for sports athletes.