Numerous studies have shown that static stretching decreases maximal muscular strength which is evaluated by isometric contraction. However, there are few studies about effects of static stretching on isokinetic torque production and especially there is only one study about the effect on eccentric contraction. Since not only concentric contraction but also eccentric contraction is performed in most sports, it is important to clarify effect of static stretching on both concentric and eccentric torque productions. PURPOSE: The purpose of this study was to investigate effect of static stretching on maximal voluntary concentric and eccentric isokinetic torque productions. METHODS: Seven healthy young men (age; 20±1 yr, height; 172.2±8.6 cm, weight; 64.9±5.2 kg, mean±SD) participated in this study. They completed four different conditions; non-stretching (CONcc) and static stretching (SScc) in concentric contraction, non-stretching (CONec) and static stretching (SSec) in eccentric contraction. For static stretching, the hamstrings of their dominant legs were stretched to the point where they perceived discomfort. During the static stretching, subjects held at the stretch position for 45s and repeated it five times with a 15s rest between the sets. Before and after each intervention, maximal voluntary concentric and/or eccentric isokinetic torques of knee flexion were recorded. The isokinetic torques were evaluated at 3 different velocities (60, 180 and 300° · s⁻¹) by Biodex system3. Three maximal muscle actions were recorded at each velocity and the highest torque at the velocity was used for analysis. Two minutes of rest were allowed between tests at the velocities. Range of motion of hip flexion (ROM) was also evaluated by Leighton flexometer immediately before and after each condition. The measurements were conducted for three times in each case and the highest value was used for analysis. RESULTS: ROM significantly increased after static stretching (P<0.05) [SScc: pre; 77±13°, post; 87±11°, SScc: pre; 76±14°, post; 86±14°]. Maximal voluntary concentric isokinetic torque was significantly decrease in only 60° s⁻¹ (P < 0.05) [SScc: 60° s⁻¹ : pre; 87.2±16.3 Nm, post; 77.5±16.4 Nm, 180° s⁻¹ : pre; 68.0±8.6 Nm, post; 66.9±9.6 Nm, 300° s⁻¹ : pre; 53.8±6.4 Nm, post; 52.9±4.0 Nm]. On the other hand, maximal voluntary eccentric isokinetic torques were not changed in all velocities [SSec: 60° s⁻¹ : pre; 131.6±15.9 Nm, post; 133.6±15.9 Nm, 180° s⁻¹ : pre; 145.4±27.8 Nm, post; 148.9±20.0 Nm, 300° s⁻¹ : pre; 151.5±24.2 Nm, post; 149.6±23.5 Nm]. CONCLUSIONS: Effect of static stretching on isokinetic torque production differs in muscle contraction type. Static stretching decreases concentric contraction torque at low velocity, however, static stretching does not affect on eccentric contraction torque.