The aim of the presented work is to investigate how the timing of project constraints can influence the creativity of the output in New Product Development (NPD) projects. When seeking to produce a creative output, is it beneficial to know all constraints when initiating a project, or will constraints introduced throughout a project potentially lead to a more creative output? While the relationship between constraints and creativity is fairly well studied, the question of how introducing constraints late in a project can influence creativity is still unanswered. A single factor, two level experiment was conducted, involving 12 teams of industrial designers from three different countries, each team working on two 30 minutes design tasks. In one condition all constraints were given at the start, and in the other one new radical constraint was added after 12 minutes. The output from all 24 tasks was assessed for creativity using the Consensual Assessment Technique (CAT), and a comparative within-subjects analysis found no significant different between the two conditions. Controlling for task and assessor a small but non-significant effect was found, in favor of the 'late constraint' condition. Thus, in the presented setup no negative impact of adding radically new constraints during a project was found, highlighting for managers that it is not crucial to a project’s creative output to have all constraints from the beginning.