**The human brain is malleable – it learns and adapts. Numerous research studies have focused on the impact of action video games on the brain by measuring cognitive abilities, such as perception, attention and reaction time. An international team of psychologists, led by the University of Geneva (UNIGE), Switzerland, has assembled data from the last fifteen years to quantify how action video games impact cognition. The research has resulted in two meta-analyses, published in the journal Psychological Bulletin, which reveal a significant improvement in the cognitive abilities of gamers.**

The psychologists proceeded to analyze intervention studies as part of the second meta-analysis. 2,883 people (men and women) who played for a maximum of one hour a week were first tested for their cognitive abilities and then randomly divided into two groups: one played action games (war or shooter games), the other played control games (SIMS, Puzzle, Tetris). Both groups played for at least 8 hours over a week and up to 50 hours over 12 weeks. At the end of the training, participants underwent cognitive testing to measure any changes in their cognitive abilities. “The aim was to find out whether the effects of action gaming on the brain are causal,” continues Bavelier, adding: “That’s why these intervention studies always compare and contrast a group that is obliged to play an action game with one obliged to play a video control game, where the mechanics are very different. This active control group ensures that the effects resulting from playing action games really do result from the nature of this kind of game. In other words, they are not due to being part of a group that is asked to undertake an engrossing task or that is the centre of scientific attention (placebo effect).”

The results were beyond dispute: individuals playing action videos increased their cognition more than those playing the control games with the difference in cognitive abilities between these two training groups being of one-third of a standard deviation. “The research, which was carried out over several years all over the world, proves the real effects of action video games on the brain and paves the way for using action video games to expand cognitive abilities,” argues Bediou.