Chronic use and cannabis administration result in attenuated brain activity in task-activated regions or activation of compensatory regions. Findings correlate partially with neuropsychological data, but generalization is limited by the lack of use of diagnostic criteria, appropriately paired neuropsychological testing or means to better quantify cannabis use and abstinence. We review the current empirical findings as they pertain to the structural and functional neuroimaging of cannabis use. and psychotic phenomena can also occur, including addiction.10, as well as putative theories of cannabis’s mechanisms of action on brain function. individuals experience decreased attention.. relaxation. To review recent studies on the effects of regular cannabis use regarding its effects on cognition, brain structure, and function in adults. METHODS: A systematic literature review was conducted by performing electronic searches in the PubMed, LILACS, and SciELO databases (2010-2016). The initial search identified 898 records. The structural neuroimaging studies show growing evidence of abnormalities in hippocampus volume and gray matter density of cannabis users relative to controls; however, morphological changes in other brain regions are more controversial. The functional neuroimaging studies suggest an altered pattern of brain activity associated with cannabis use. CONCLUSION In this study, the authors systematically reviewed structural and functional neuroimaging studies of cannabis use. Structural abnormalities generally have not been identified with chronic use. Regular users demonstrate reciprocal changes in brain activity globally and in cerebellar and frontal regions. Abstinence results in decreases, and administration results in increases correlating with subjective intoxication. Chronic use and cannabis administration result in attenuated brain activity in task-activated regions or activation of compensatory regions. Findings correlate partially with neuropathological changes.