In this paper we give solutions to the Hamburger moment problems with missing entries. The problem of completing a partially positive sequence to the Hamburger moment sequence in several variables is considered. The main result is a characterization of the Hamburger moment completable patterns in several variables, namely specified entries with certain patterns guarantee the existence of a Hamburger moment completion of a partially positive sequence. Moreover, conditions are given to complete certain patterns when these patterns are not completable. (Received September 04, 2014)