In this talk we will present the results of fieldwork on all possible combinations of one and two pronominal enclitics after imperative and infinitive forms in dialects of Balearic Catalan (Formentera, Mallorca and Menorca). In these dialects pronominal enclitics trigger stress shift. We will show that in Formentera Catalan stress shifts to the last syllable of the verbal stem in the presence of one pronominal enclitic and to the first pronominal enclitic in combinations of two enclitics. In Mallorca and Menorca Catalan stress shifts to the last syllable of the whole verb-enclitic sequence although in Menorca Catalan stress is sometimes penultimate due to stress uniformity within inflectional paradigms. We will argue that pronominal enclitic-triggered stress shift always optimizes the metrical structure of the whole verb-enclitic sequence according to language-particular preferences. Consequently, we will support the claim that in all these cases stress shift is a strictly phonological phenomenon and that it cannot be deduced from the morphosyntactic properties of postverbal clitics (contra Ordóñez and Repetti 2006, 2014, who restrict final stress to those varieties in which the order dative-accusative is inverted in combinations of two enclitics). Actually, we will show that in Menorca Catalan stress is final although the order of enclitics is the unmarked order dative-accusative. Couched within the formalism of Optimality Theory, we will make use of anti-alignment constraints and catalexis following Meinschaefer’s (ms.) analysis of stress in Spanish. After the pivotal study of Peperkamp (1997) on stress and pronominal enclitics in Italo-Romance, with this study we hope to contribute to a better understanding of the phonology of cliticization in Romance. We also hope that the empirical side of this study will be of interest to those linguists working on the morphosyntactic properties of pronominal clitics in general and in Romance in particular.