New information in a sentence is expressed by prosodic prominence in many languages. However, the reverse is less obvious: given information and the lack of emphasis do not necessarily go hand in hand. This is especially true of languages that are not flexible with respect to their sentence-internal accentuation patterns, i.e. in which a nucleus shift is not (always) possible. Based on predictions in the literature, we investigated whether deaccentuation is obligatory in Hungarian in certain sentence positions. A production and a perception experiment, the latter based on naturalness judgements, showed that the deaccentuation of the verb is obligatory if a focus other than the verb is present in the sentence. Sentence-initial content words were always accented, no matter whether they expressed given information or not, and mismatching patterns did not elicit low naturalness scores in the perception experiment. Our results show that Hungarian utilises deaccentuation in a different way from Indo-European languages: it serves as an expression of logical structure rather than of information structure.