ABSTRACT: Amylase is a starch-digesting enzyme produced by the pancreas and salivary glands in humans. Genes for the salivary isoenzyme (*AMY1*), located on chromosome 1p21.1, show remarkable variability in their copy numbers (CNV). Their count is positively correlated with the final amount of the produced enzyme. This variability could be the result of positive selection during human evolution, depending on the amount of starch consumed by various populations. Starch pre-digested by salivary α-amylase is absorbed more effectively, resulting in a greater gain of energy in later stages of the metabolizing process. Thus, it could have been one of the factors for rapid brain growth in humans and, significantly later, even for the agricultural transition. It could belong to a group of other known subsistence-based evolutionary changes in the human genome, such as those resulting in lactase persistence or slow acetylation of xenobiotics. Nowadays, the number of copies and the amount of produced α-amylase can influence the glucose level in the blood and insulin production after consumption, as well as the incidence of certain civilization diseases, such as obesity or type II diabetes. The influence of salivary α-amylase on the composition of the microbiome, cardiovascular diseases, and the pro-inflammatory profile remains uncertain. Further research could shed light on the conditions that contribute to the pathologies mentioned above and provide information for creating personalized diets based on the dietary habits of ancestral human populations.