

Abstract

A human bone is a dynamic structure that changes tissue arrangement according to inner and outer stimuli. The outer stimuli include among others the mechanical, environmental, and climatic ones. The impact of mechanical stimuli on the bones shows already with natural activities such as walking and running through change in the shape of a transverse bone cross section. The changes in the bone cross section can be observed on bone findings of ancient populations. The cross section shape of the long bones of lower extremities changes from the Palaeolithic to Neolithic population in such a way that the circulation of transverse cross-section increases. The explanation of this trend lies in the change of subsistence strategies from the Palaeolithic to the Neolithic era. The subsistence economy of the Palaeolithic population demanded more movement in comparison to the Neolithic population that lived a more sedentary lifestyle. This trend might be challenged by few bone findings of the Neolithic population from the mountain regions (e.g. Liguria, Italy) whose transverse bone cross section are more of a elliptic shape. Those excavations are mostly situated in the mountain regions with a demanding terrain. The outcomes presented in this study suggest that terrain is one of the factors that affect the distribution of bone tissues.