

# HUMAN SKULL DIMENSIONS FROM ANTIQUE TO LATE MEDIEVAL IN CONTINENTAL CROATIA

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## INTRODUCTION

Human evolution, mixing of nations during population movements, diseases and dietary pattern can induce changes of bone and skull dimensions. Aim: to evaluate changes in skull dimensions during the period from antique (A) and early medieval (EM) to late medieval (LM) in a Croatian human skeletal sample.

## MATERIALS AND METHODS

Six standard cephalometric dimensions:

*Euryon-Euryon,*  
*Nasion-Prosthion,*  
*Nasion-Gnathion,*  
*Opisthocranium-Glabella,*  
*Gonion-Gonion* and  
*Zygion-Zygion*

were measured on 255 adult skulls from archaeological sites from continental Croatia: Osijek, Požega, Privlaka, Stari Jankovci, Štrbinci, Vinkovci, Zmajevac. *Figure 1, Table 1*

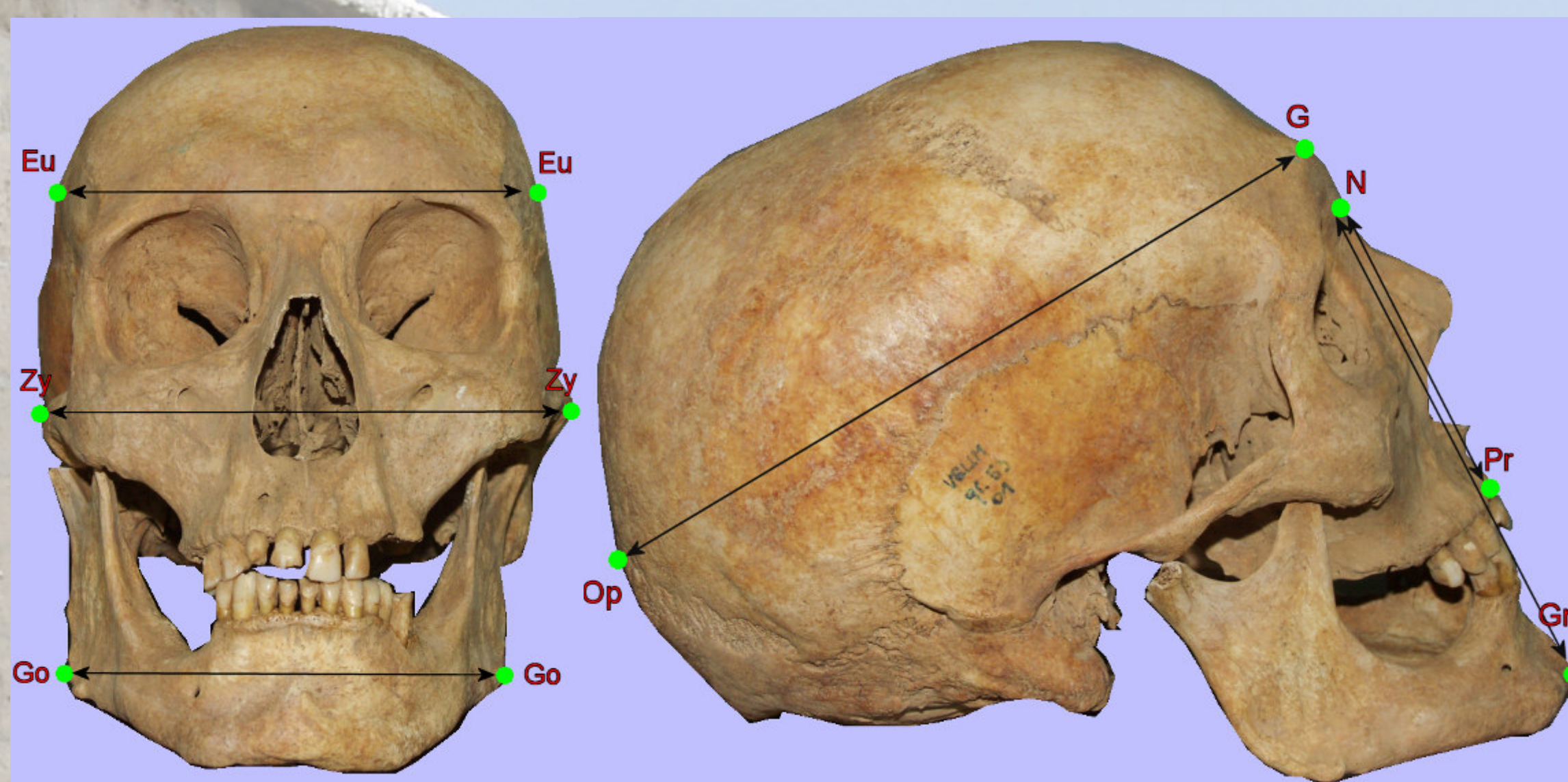


Figure 1. Cephalometric dimensions

## RESULTS

LM males showed statistically significant higher values of transverse (Euryon-Euryon: A 138.7±6.0 mm, EM 137.6±5.2 mm, LM 149.6±6.6 mm) and vertical (Nasion-Prosthion: A 68.0±2.0 mm, EM 70.5±4.0 mm, LM 71.8±4.4 mm and Nasion-Gnathion: A 107.5±15.4 mm, EM 117.9±6.0 mm, LM 120.1±10.1 mm) diameter of the skull. The mid-sagittal diameter (Opisthocranium-Glabella) was statistically significant lower in LM than in the A and EM sample (A 181.0±7.0 mm, EM 183.5±4.8 mm, LM 175.3±6.6 mm). LM females showed statistically significant higher values of transverse diameter of the skull (Euryon-Euryon: A 133.5±5.4 mm, EM 129.6±6.5 mm, LM 142.5±3.9 mm) and lower the mid-sagittal diameter (Opisthocranium-Glabella: A 178.9±5.4 mm, EM 178.9±6.8 mm, LM 168.7±6.0 mm). Males from the LM period showed significant lower values of Gonion-Gonion distance (A 107.5±7.1 mm, EM 103.1±6.2 mm, LM 101.6±6.8 mm). *Figure 2*

Figure 2 Differences in cephalometric dimensions

Table 1 Sample distribution

	ANTIQUÉ	EARLY MEDIEVAL	LATE MEDIEVAL	TOTAL
MALES	22	38	82	142
FEMALES	25	21	67	113
TOTAL	47	59	149	255

## CONCLUSION

Changes of skull dimensions can be explained by population movement during the wars in the late antique – early medieval transition period. In this period new nations from the northern parts of Europe came in the continental Croatia and mixed with native people from antique times. Lower values of Gonion-Gonion distance in LM sample could indicate changes in dietary pattern.

