

YOU ARE WHAT YOU EAT: STATUS AND ORAL HEALTH IN A MEDIEVAL DANISH  
POPULATION WITH A COMPARISON OF COMMON DENTAL WEAR METHODS

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**Abstract**

In Medieval Europe, socioeconomic status was an influencing factor affecting an individual's life—what resources they had access to, their diet, where they lived, etc.—as well as their death—specifically, where they could be buried. Church burials were highly sought after by the laity, but only obtainable for those of high socioeconomic status, who could afford the associated fees. Individuals from the low socioeconomic status were confined to the common cemetery, often located to the north of the church.

In this study, I conducted an intra-population analysis on 164 skeletons from the Danish Cistercian site of the Øm Kloster monastery—37 individuals from the monastic church, 127 from the northern, common cemetery. Previous work demonstrated that there was an isotopic difference between the two groups, confirming the differences in their socioeconomic status and diet. I examined the mandibular right molars for wear primarily using the methods of Scott (1979) to test for differences in dental wear between the two status groups as the result of dietary differences. Additionally, I recorded observances of dental calculus, caries, abscesses, linear enamel hypoplasia (LEH), and periodontitis to test for differences in health between the two groups. Finally, I used a subset of the data (21 from the church, 40 from the cemetery) to make a comparison between the qualitative methods of Scott (1979), Murphy (1959), and Molnar (1971), and the quantitative method of photographic area analysis.

I anticipated that there would be a significant difference in dental wear and health between the two groups as the result of the dietary differences between the two groups. There was no significant difference in the dental wear between the two groups; however, there was a significant difference in the number of pathological counts between the two groups, and a higher percentage of occurrences of LEH in the lower status group. This suggests that access to resources did affect the overall health of an individual based on socioeconomic status, and would be interesting to study in further detail. Finally, although photographic analysis was the most precise method, I found no significant difference in the results from the different methods of wear analysis. I calibrated Scott's (1979) method to score for dentine exposure as opposed to enamel wear. These results, when calculated as a percentage, matched with the photographic area analysis 95.08% of the time (where a match was within 15% difference). This calibrated method allowed for a more direct comparison of scores between molars within an individual, between individuals, within a population, and between populations.

## Works Cited

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