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## The small but healthy hypothesis: Evidence of skeletal stress and adaptation in Himera, Sicily

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The small but healthy hypothesis: Evidence of skeletal stress and adaptation in Himera, Sicily

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Physical anthropologists are interested in the concept of health in skeletal populations because it helps interpret past human behavior and biological adaptations. Since health is difficult to assess, we use markers of physiological stress in skeletal remains as a proxy for health. Generally, skeletons with more markers of physiological stress (paleopathology) and shorter stature (stunted individuals) are interpreted as being less “healthy.” However, some argue that being shorter does not automatically imply poor health. This study will test the “small but healthy” hypothesis by analyzing a sample size of 14 individuals from Himera, Sicily (six females and eight males) that were measured for height and also observed for various pathologies including cribra orbitalia, porotic hyperostosis, periostitis, and linear enamel hypoplasia. All individuals, regardless of whether they were tall or short, showed evidence of at least one skeletal pathology. No clear differences were observed in skeletal pathology between tall and short individuals. The “small but healthy” hypothesis encourages researchers to look at short stature as a potential adaptation to environmental stressors. Shorter stature could mean that the individual would need less fuel to survive and the “small but healthy” hypothesis suggests that in areas with limited resources, an individual might be shorter to allow for a better chance of survival. We did not observe any statistically significant differences in level of skeletal pathology between tall and short individuals. Although this appears to support the small but healthy hypothesis, a larger sample size is needed to truly test this hypothesis.