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Título artículo: A multidisciplinary approach to the evaluation of the effects of foraging on landfills on white stork nestlings

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RESUMEN: The use of landfills as foraging areas by white storks (*Ciconia ciconia*) is a recent well-known behaviour. While several studies have highlighted positive effects at a population level others suggest that the presence of pollutants, pathogens and the lower presence of antioxidants in the food could pose a health risk for individuals. The objective of this study was to evaluate potential effects of the use of landfills as a food resource on the physiology and health of white stork nestlings, by a multidisciplinary approach based on the analysis of nutritional status, body condition, blood parameters, oxidative stress balance and the presence of pathogens. Results showed better body condition in individuals associated with landfills compared to the ones feeding on natural resources, as well as better nutritional status, as indicated by higher levels of albumin, cholesterol, and triglycerides in plasma. As many pollutants have a pro-oxidant effect, we evaluated oxidative stress balance, with no differences in the indicators of damage except for methaemoglobin (metHb), significantly higher in nestlings associated with landfill-origin food. Regarding antioxidants, GSH was higher in nestlings associated with landfills, which may suggest a hormetic response induced potentially by the presence of pollutants in waste. Nestlings fed food from landfills also had a higher presence of *Escherichia coli* with a multiresistant phenotype to antibiotics. In conclusion, our results show that nestlings fed with a higher proportion of food from landfills present a better nutritional status and body condition than those fed with a higher proportion of natural diet, being the only indicators of negative effects of the use of this food resource the higher percentage of metHb in the peripheral blood and the presence of antibiotic-resistant *E. coli.*

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