

Hearing Assessment of Free-Ranging Owls and Implications for Wildlife Rehabilitation: 31 Cases (2014–2023)

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Abstract: Owls, members of the avian order Strigiformes, are nocturnal birds of prey that are found worldwide except for Antarctica. Traumatized, free-ranging owls are commonly presented to veterinary hospitals and wildlife rehabilitation facilities with the goal of providing medical care and rehabilitation to enable release back into their natural habitat. Minimal guidelines exist for the release of wildlife, and whereas a need for functional vision is described in raptors, assessing and evaluating hearing is usually not mentioned. This can be problematic for nocturnal predators because hearing is the primary sense utilized by owls when hunting and navigating in their dark environment. The brainstem auditory evoked response (BAER) test is a minimally invasive, objective assessment of hearing commonly used in companion animals. To the authors' knowledge, routine or standardized BAER evaluation has not been reported in traumatized, free-ranging owls. In the following retrospective study, 31 free-ranging owls presented to the University of Georgia Veterinary Teaching Hospital for known or suspected trauma or being found in a debilitated state underwent BAER testing to assess for the presence of complete sensorineural hearing loss. Similar to assessment of hearing in companion animals, the BAER test was elicited using a broad click stimulus delivered at 85 dB nHL. In all owls, qualitative assessment and peak latency measurements of the BAER test reflected hearing ability. This study highlights the importance of hearing in nocturnal raptors, how BAER testing can aid in decision making regarding rehabilitation, and provides a foundation for further investigation of hearing loss in traumatized owls. We suggest that veterinarians working with free-ranging owls in a rehabilitation setting should consider BAER testing as part of routine diagnostic testing.