

Activity and enrichment use in disabled Asiatic black bears (*Ursus thibetanus*) rescued from bile farms

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Abstract

Physical disability has the potential to impede the use of environmental enrichments in rehabilitation programmes. We therefore compared the behaviour of 63 disabled and non-disabled socially housed adult Asiatic black bears rescued from bile farms for 103 observation hours. Amputees were less active than non-amputees, spent less time standing, travelled less between different areas of their outdoor enclosure, and showed less frequent stereotypic behaviour. Blind bears also showed low levels of activity and stereotypic behaviour. Blind bears and male amputees spent less time than non-disabled bears eating food dispersed throughout the enclosure as a foraging enrichment. It is unclear whether their infrequent eating is due to impaired foraging, or to lower energy demands arising from lower activity levels. Blind bears tended to manipulate feeders and other enrichment objects less than sighted bears. Disabled bears did not show any signs of impaired social interactions, and were not competitively displaced from resources by other bears more often than non-disabled bears. Thus, disabled bears rescued from bile farms show deficits in overall activity, with amputees also travelling less around their enclosures and blind bears potentially compromised in some forms of enrichment use. However, it is apparent that they adapt well to the presence of social companions. Several disabled bears also showed a degree of novel behaviour, seemingly compensating for disabilities, suggesting possible avenues for enrichments targeted specifically at these bears. The data also suggest specific hypotheses to test in longitudinal studies of rehabilitation.

Keywords: animal welfare, Asiatic black bear, blindness, environmental enrichment, limb amputation, physical disability