© 2018 Universities Federation for Animal Welfare
The Old School, Brewhouse Hill, Wheathampstead,
Hertfordshire AL4 8AN, UK
www.ufaw.org.uk

Animal Welfare 2018, 27: 327-341
ISSN 0962-7286
doi: 10.7120/09627286.27.4.327

*Refinements to captive chimpanzee (*Pan troglodytes*) care: a self-medication paradigm*

SJ Neal Webb[*†‡], *J Hau*[‡] *and SJ Schapiro*[†‡]

[†] The University of Texas MD Anderson Cancer Center, Michale E Keeling Center for Comparative Medicine and Research, 650 Cool Water Drive, Bastrop, TX 78602, USA
[†] Department of Experimental Medicine, University of Copenhagen, Faculty of Health Sciences and University Hospital, 3B Blegdamsvej, DK-2200 Copenhagen, Denmark
* Contact for correspondence and requests for reprints: sjneal@mdanderson.org

Abstract

*In an effort to enhance welfare, behavioural management continually refines methods of non-human primate (NHP) care. Chimpanzees (*Pan troglodytes*) are one of the most cognitively complex captive NHPs and they have been observed to self-medicate in the wild. The population of captive chimpanzees in the US is aged (due to a breeding moratorium instituted in 1998) and will progressively require more medical care as they get older. To functionally simulate natural self-medication behaviour, provide chimpanzees with the opportunity to voluntarily participate in their own healthcare, and open new avenues of communication between caregivers and chimpanzees, we used a medication choice paradigm that allowed chimpanzees to choose their daily arthritis medication. We provided four arthritic, mobility-impaired chimpanzees with meloxicam or ibuprofen in blue or green Gatorade® to establish associations between the coloured drinks and the effects of the medications. We subsequently gave each chimpanzee a choice between the two medications. Behaviour was recorded using 15-min focal animal observations. Mobility was assessed using interactive mobility tests and a caregiver-rating system. One chimpanzee showed a medication preference (ibuprofen over meloxicam). The chimpanzees exhibited no significant behavioural or mobility differences over time, suggesting that ibuprofen and meloxicam may not differ significantly in their ability to alleviate arthritic symptoms. Whether or not the chimpanzees show a medication preference, the opportunity to make meaningful choices and the functional simulation of a complex behaviour, self-medication, is present when using this medication choice technique. Furthermore, the paradigm itself could have potential applications for additional medication options and treatment regimens.*

Keywords: *animal welfare, behavioural management, captivity, chimpanzees, choice, voluntary participation*