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Do rabbits need each other? Effects of single versus paired housing on rabbit body temperature and behaviour in a UK shelter

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Abstract

*In the wild, rabbits (*Oryctolagus cuniculus*) are social but territorial. Recent surveys suggest that over half of pet rabbits are housed singly. We aimed to compare welfare in single versus paired rabbits. We predicted singletons would show more abnormal or escape behaviour, greater stress responses to handling, and reduced body temperature (being unable to huddle with another individual when cold), but that pairs may show aggression. This study was conducted during winter at a rabbit-only rescue centre, and included 45 rabbits, comprising 15 housed singly and 15 pairs. Like most pet rabbits, they were housed either outdoors or in unheated outbuildings. Singletons were mostly in smaller enclosures than pairs. Home-pen observations (40 min) revealed bar-biting in 8/15 single rabbits compared with 0/30 of the paired ones. No other behavioural effects of social housing reached significance, and enclosure size showed no significant effects. Body temperature was significantly lower in singletons than pairs, with at least 0.5°C mean difference. On colder days, rabbits adopted compact postures more, and relaxed postures less frequently. After handling, pairs resumed normal behaviour significantly more quickly than singletons in the home-pen (3.0 [± 0.3] versus 8.3 [± 1.3] s, respectively). Aggression was never observed. The results indicate that social housing reduces bar-biting, aids thermoregulation, and may help buffer stress. Rabbit owners should be encouraged to meet the need for rabbits to be housed with an appropriate conspecific in a suitably large, sheltered enclosure.*

Keywords: *abnormal behaviour, animal welfare, rabbits, social buffering, social isolation, thermoregulation*