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What effect does early social contact have on dairy calves' welfare?

New research in the Journal of Dairy Science® examines behavioral, performance, and health effects of early socialization among young calves

Philadelphia, August 24, 2021 – In addition to needs such as food, water, shelter, and medical care, social contact is an important aspect of welfare for animals, just as it is for humans. Yet early socialization of dairy calves is sometimes given lesser priority in the interest of physical health, with young calves housed individually to prevent the spread of contagious diseases such as those that cause diarrhea, or scours, a major source of calf mortality. In a new [study](#) appearing in the [Journal of Dairy Science®](#), scientists from the University of Florida Department of Animal Sciences investigated whether this individually housed tactic is justified and what unintended consequences it may have.

Given different practical considerations, dairy calves' age of introduction to social housing varies from farm to farm. Different ages of first socialization may affect behavioral development and responses to later social grouping. In this study, Holstein calves were housed either individually or in pairs during their first two weeks of life and then moved, first to groups of four and later to groups of eight, reflecting the dynamic conditions of many farms' housing systems. Throughout the study, researchers monitored the calves' ability to learn to feed independently from the teat bucket in early life, and then from the aut feeder. Calf health, feed intake, and weight gain were recorded, as well as activity and social interactions—with surprising results.

“We anticipated that calves reared with social contact in the first weeks would engage more with novel pen resources, have increased social interaction, and have increased lying time upon social grouping, compared with calves previously individually housed,” said lead investigator Emily Miller-Cushon, PhD,

University of Florida, Gainesville, FL, USA. However, the scientists found little difference in most of the measured outcomes between the differently socialized groups. The most important difference was consistently greater social resting time among initially pair-housed calves, suggesting greater overall comfort with pen-mates, even upon first introduction.



Caption: University of Florida researchers investigated the effects of individual or pair housing on Holstein calves' health and behavior (Credit: iStock.com/Vital Hil).

Miller-Cushon added that the results showed “minimal other effects on behavior and no detrimental effects on performance.” There was even a tendency for fewer days of diarrhea among calves housed in pairs after birth. Thus, the authors observed, “Although concern for calf health is often cited as reason to house calves individually, at least for a short period after birth, we found a tendency for reduced scours in pair-housed calves, providing evidence that social housing does not negatively affect, and may benefit, early-life calf health.”

Notes for editors

The article is “Effects of early social contact on dairy calf response to initial social grouping and regrouping,” by Emily E. Lindner, Katie N. Gingerich, and Emily K. Miller-Cushon (<https://doi.org/10.3168/jds.2021-20435>). It appears in the *Journal of Dairy Science*, volume 104, issue 9 (September 2021), published by FASS Inc. and [Elsevier](#).

Full text of the article is available to credentialed journalists upon request. Contact Eileen Leahy at +1 732 238 3628 or jdsmedia@elsevier.com to obtain copies. Journalists wishing to interview the authors should contact the corresponding author, Emily Miller-Cushon, University of Florida, Gainesville, at emillerc@ufl.edu.

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