

The impact of providing periodic exercise on the welfare of stall-housed gestating sows

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Background: The 2014 Code of Practice for the Care and Handling of Pigs proposed the operation of existing stall barns after 2024 if bred sows are given opportunities for a greater freedom of movement, and currently this proposition is under revision. The objective of this study was to determine whether providing periodic exercise to gestating stall-housed sows influenced sow welfare. The focus of this abstract is on welfare evaluation through measures of sow behaviour and piglet stress response. Sows were randomly assigned to one of three gestation treatments (n=60 per group): stall-housed (Control: C), stall-housed and exercised (Exercise: E – 10 min of walking once per week), and group-housed (Group: G). Sow behaviour was recorded in early (week 2), mid (week 10) and late (week 15) gestation, on the days of exercise. Postures (lying, standing, sitting) were recorded every 10 minutes for 2 hrs before exercise (AM) and for 1.5 hrs post exercise (PM). Sows were live scored for stereotypies at 2-minute intervals for 1 hr in AM and PM. Female piglets (n=168 from 17 C sows, 20 E sows and 20 G sows) underwent two standardised stress tests on day 19-22 after birth, to evaluate the effects of gestation treatments on prenatal stress.

Results: In AM, G sows lay 27% more and sat 33% less, than C and E sows, which did not differ ($P<0.05$). In PM, E sows sat more than C and G sows, and C sows sat twice as much as G sows ($P<0.05$). Stereotypies: in early gestation, G sows performed 20% fewer stereotypies than E sows, with C sows being intermediate ($P<0.05$). In mid gestation, G sows performed 33% fewer stereotypies than C and E sows, which did not differ ($P<0.05$). Piglet testing: C piglets responded to a novelty test with 27% higher activity than E and G piglets, which did not differ ($P<0.05$).

Discussion: Periodic exercise did not improve sow comfort (as indicated by postures) and did not reduce the stress coping response (as indicated by performance of stereotypies), in comparison to stall housing throughout gestation. Sows in group housing demonstrated behaviours indicative of greater comfort and reduced stress. Piglet responses indicate that the lack of sow access to greater freedom of movement in stall-housed sows resulted in a more proactive stress response in offspring.

Conclusions: Providing periodic exercise for 10 mins once per week does not produce measurable benefits for sow welfare, but does influence the stress coping response in offspring.

Take home message: Periodic exercising is not advisable, given the low returns for sow welfare, and converting to group housing is a preferable option for providing a greater freedom of movement.

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