

# Are Your Cows Getting Enough Sleep Each Night?



By Donna M. Amaral-Phillips

Rest, along with sleep, is important not only for us, but also dairy cows. Dairy cows place a priority on this activity over others, such as feeding times. When cows get an inadequate amount of rest, performance and animal welfare can be negatively impacted. Here are some interesting facts that can help to better manage your cows' time—their most valuable resource—and for those using activity monitors, to better interpret your cows' behavior.

- Cows spend an average of 10 to 12 hours daily lying down in tiestalls and freestalls. On bedded packs or pasture, lying time is reduced to an average of 9 hours daily. The majority of lying time occurs overnight.
- A large variation exists in lying times for individual cows with a range of 6 to 16 hours daily.
- Cows average 9 to 11 lying bouts per day with the average bout lasting 60 to 99 minutes.
- When time budgets are disturbed, cows will prioritize their available time to lie down over time spent feeding.
- When stocking density is above 1.2 (overstocked by 20%), lying times are reduced.
- Lying environment impacts lying times. Lying times are shortest on bare concrete and increase with addition of bedding in both tiestalls and freestalls. In tiestalls, lying times were increased by 3 min/day for each 2 lbs of wood shavings added to the stalls. Lying times were 0.8 hrs/day higher in herds using deep bedding versus those not deep bedded (includes mats, mattresses etc.). Cows avoid wet bedding in stalls and if forced to lie on wet surfaces reduce their lying times. Lying times also decrease when ambient temperatures increase.
- Cows with mastitis lie down less whereas cows that are lame lie down more.
- Cows sleep for about 4 hours daily of which less than 1 hour is rapid eye movement (REM) sleep. Typical sleep cycle consists of 1 non-rapid eye movement (NREM) bout lasting 5-8 minutes and 1 REM bout of 3-4 minutes followed by the cow waking up. Greater proportion of sleep occurs overnight.
- More rumination occurs during nighttime hours with the time spent ruminating or chewing their cud dependent on the composition of the diet. When cows are restricted from lying down experimentally, cows ruminate while standing.

Source: Tucker and others. 2021. JDS.

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