

## Overmilking and Teat Condition

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Over the last few years there have been several articles published on the relationship of overmilking and teat condition. Overmilking occurs when the milking unit remains on the teat after milk flow has dropped below a predetermined amount, often in the 0.4 – 0.8 lb milk/minute rate. Presentations at past National Mastitis Council (NMC) annual meetings have discussed how teat condition can be improved by shortening the time the milking unit is attached. Recommendations have been given for adjusting the automatic milker detaching units so overmilking does not occur. Since overmilking continues to occur in many herds, the following material may be helpful to producers.

In scoring the effects of overmilking on teats, the duration of the overmilking time must be considered. The time period can be divided into short-term (single milking), medium-term (a few days or weeks), and long-term (more than several weeks) overmilking. Short and medium term overmilking usually results in an increased incidence of discolored teats, ringing at the base of the teats, and firm or hard teats. Long term overmilking often results in hyperkeratosis. Besides the duration of overmilking, the amount of time (minutes) that cows are overmilked at each milking is also a factor that affects teat condition.

At the 2004 NMC meeting there was again a presentation on overmilking and teat condition. Dr. Morten Dam Rasmussen, a researcher from Denmark, reported on studies that looked at overmilking (milk flow rate below 0.4 lb/minute) for 2 or 5 minutes on teat condition. Overmilking resulted in more teats that were discolored, an increased incidence of visible and palpable ringing at the base of the teats, and an increase in the number of teats that were firm or hard to the touch. There was also an effect from the type of liner used on the condition of the teats. Vacuum level and the amount of massage provided to teats during milking also affected the teat condition scores. The researchers stressed that producers should be sure they are using the correct type of liner for their milking system operation settings (i.e. vacuum level and massage duration) and herd teat characteristics (teat size). Improper liner type, a high vacuum level and inadequate teat massage can increase the effect of overmilking on teat condition.

Dr. Rasmussen offered two important suggestions for reducing the incidence of overmilking. The first is applicable when automatic milker detachers are used. He recommends producers increase the milk flow rate threshold for activating the milker detachers. Additionally, decreasing the delay time from when the threshold milk flow rate is reached until the vacuum level is turned off and the milking unit is removed is recommended. These procedures should result in better teat condition scores, faster milking times, and no loss in milk production. Producers should discuss making these changes with a knowledgeable consultant, and have the milking equipment supplier make any desired changes to the equipment settings.

The second suggestion Dr. Rasmussen offered was to be sure proper premilking teat preparation procedures are followed. Adjusted detacher settings, as mentioned in the first suggestion, are only going to be effective if milk flows continuously shortly after the milking unit is attached. Consequently, cows must be properly stimulated so the milk ejection response is fully evoked before attaching the milking unit. A review of the milking procedures being followed by the people who milk cows is an important part of adjusting detacher settings, and should be done by a knowledgeable consultant.

Overmilking can definitely have an adverse affect on the condition of teats, and damaged teats are more likely to lead to an increased incidence of udder infections. Producers should evaluate their milking equipment and milking practices, and make the changes needed to minimize or eliminate overmilking and the problems that can result from this practice. Consult with your veterinarian, milk handler fieldman, extension agent, or other knowledgeable consultant about this topic.