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## **Maternal behavior in horses**

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Mares quickly form a bond with their foals, probably within the first hour. They lick the foal usually beginning at the tail end, then the head and later the body of the foal. Licking behavior disappears within the first hours in most mares. Once the bond is formed the mare will let no other foal nurse and stays within a meter of the foal most of the time during the first week. The foal follows her when awake, but when he sleeps she stands over him. As the foal matures the distance the mare maintains from the foals get longer and she may graze as he sleeps. The bond of the mother to the foal gradually weakens as revealed by her response to separation from the foal. Weaning usually takes place shortly before the birth of the next foal. Some mares will attempt to steal foals and this can lead to injury of either the mares or the foal. Because of the strong and exclusive bond of most mares to their foal, foal rejection is especially abnormal. It occurs in some breeds more frequently than others, indicating a heritable component. Arabian mares reject 5% of their foals and other breeds reject less than 2%. There are three types of foal rejection- simple fear of the foal that can be quickly solved by holding the mare so the foal can suckle. The mare learns that nursing is pleasurable. This process usually takes only a few hours of holding the mare because foals suckle so frequently- about four times an hours. The second form of foal rejection is avoidance of tactile stimulation of the inguinal fold. When the foal attempts to suckle he usually strikes that skin fold and causes the mare to cow kick and move away. Desensitization to stimulation of the inguinal fold can solve this problem in a few hours. Treatment is more complex and longer for mares that are aggressive to the foal even when it does not touch them. This type of foal rejection can be treated with drugs that inhibit dopamine such as acepromazine-not the alpha adrenergic agent xylazine. Dopamine inhibits the pituitary hormone prolactin, a putative maternal hormone, which increases milk production. Blocking dopamine will increase prolactin. The mare should always have visual contact with the foal, but be restrained so she can not bite or kick the foal. A pole across the stall confining the mare against a wall is best. Maternal behavior can be induced in non-pregnant mares using injections of estrogen, progesterone, and the dopamine inhibitor sulpiride. Once lactation begins cervical stimulation can be used to elicit maternal behavior toward the next foal the mare sees.