

Artificial Insemination

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The actual process of artificial insemination in a mare is not complicated, and can be learned very rapidly. Unlike artificial insemination in cattle, which involves guiding the insemination pipette through the cervix via manipulation per rectum, equine AI is carried out completely vaginally. The equine rectum is not as durable as a bovine's, and it is for this reason that rectal palpation by the lay person is not encouraged by most veterinarians and teaching facilities. Insemination per vagina does mean that probably the most important part of the process is the preparation, during which the perineal area is cleansed as for surgery, most commonly using an iodine preparation such as "Betadine".

The mare is preferably secured in breeding stocks, and her tail is wrapped and deflected to one side where it should remain throughout the whole insemination process to avoid contamination of the scrubbed area (figure 1). The perineal area is scrubbed using a surgical preparation scrub, starting centrally, and working outwards. Once the outer (unscrubbed) section is reached, the disposable paper towel or cotton is discarded, and a new piece used to return to the center to scrub outwards again. The final scrub should involve a little greater pressure to remove any surplus surface scrub liquid remaining, so that it may not be carried into the vagina during AI.

Once the mare is prepared, the semen is removed from the shipping container and the insemination sample is slowly drawn through the insemination pipette into the syringe. As elsewhere with the process, sterility is important here too. Note that nobody is touching the pipette, which once the syringe is filled will be placed back into its sterile packaging until it is later introduced into the mare's uterus to inseminate.

Using a sterile lubricated gloved arm (the glove having been reversed to ensure maximum cleanliness), the inseminator will introduce his arm into the mare's vagina, palpate the cervix, which should be found on the bottom (ventral) surface of the head-ward (cranial) portion of the vagina. The closer the mare is to ovulation, the more relaxed the cervix becomes. In the center of the cervix will be found a small depression, which is the opening to the uterus. One of the most apt descriptions of a cervix is that it is like a "small volcano" in shape. The inseminator will gently introduce the index finger through this depression, and then using the finger as a guide, slide the insemination pipette along it and into the uterus. It is important not to force the pipette at any point, as internal damage may occur if that is done.

The gloved thumb is placed over the end of the pipette prior to its introduction into the vagina. This protects it from picking up any contaminants which may subsequently be inseminated into the uterus along with the semen.

With the pipette introduced into the uterus as far as possible without any resistance, the plunger of the syringe is slowly depressed, introducing the semen. Before removal of the pipette, the syringe may be unhooked and rehooked so that 2 cc of air may be introduced behind the semen in order to clear the pipette of the remaining semen. It is important that excess air is not introduced into the uterus, and a very small portion of the semen should remain at the very end of the pipette when it is removed from the uterus. The arm should then be slowly withdrawn from the vagina.

*For more information visit: www.equine-reproduction.com;
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