

Fact Sheet

Embryo Transfer (ET)

What is Embryo Transfer?

Embryo transfer (ET) is a popular method of breeding from high quality sport horse mares while allowing them to continue their competitive careers or achieve more than one foal from a mare per year.

The process involves breeding a (donor) mare to a stallion and then transferring the resulting embryo into a reproductively competent (recipient) mare, which carries the foal to term and nurses it until weaning.



What are the advantages of Embryo Transfer?

- The main advantage of ET is that it enables owners to breed from superior sports horse mares while allowing the mares to continue their competitive careers
- Using ET, it is possible to produce more than one foal from a donor mare during the course of a single breeding season
- Some mares are unable to of maintaining a pregnancy themselves, or produce inferior foals due to age-related endometrial degeneration. In these cases, an embryo can be recovered and transferred to a younger recipient mare with a healthy uterus

Recipient mares

Potential recipient mares require a full gynaecological examination to ensure they are suitable for the job and must have their oestrus cycle synchronised with the donor mare. To maximise the chance of synchronising the reproductive cycles of the donor mare and recipient mares, it is best to have at least 3 potential recipient mares available, although it can be done with fewer. Ideally, recipients should be proven young broodmares (4-12 years old), of known high fertility and of a similar size to the donor mare.

Transferring an embryo to a mare smaller than the genetic mother can result in a smaller foal being born. It is also important that recipient mares have a good temperament and are good mothers.

Synchronisation of the donor and recipient

- This involves regular ultrasound scanning and the use of hormone injections or implants
- The aim is to get the recipient mare to ovulate either at the same time as the donor mare or up to 3 days afterwards
- Correct synchronisation of the recipient is very important as it ensures that the uterus receiving the embryo will be at an equivalent stage to the one from which it has been removed



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Insemination of donor mares

It is best to use fresh or chilled semen from a stallion of known high fertility. Frozen semen can be used, but this may yield a lower embryo recovery rate. It is important that your vet scans the donor mare daily after insemination to accurately determine the day of ovulation.



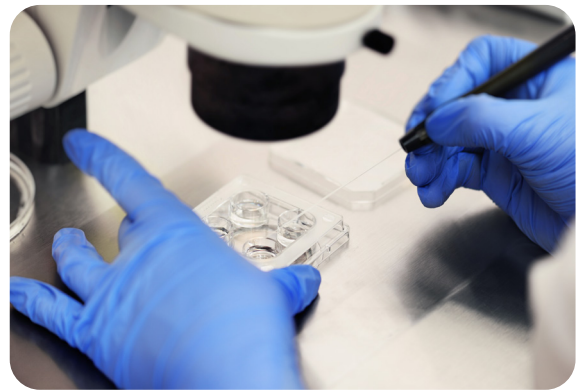
Flushing and transferring the embryo

Recovering the embryo from your mare is a simple, non-surgical, painless process that is carried out between 6-8 days after ovulation.

Embryo recovery involves flushing your mare's uterus with a special medium that is then drained through an embryo filter. The embryo is isolated using a microscope before being "washed" and then immediately transferred into the recipient mare using a catheter inserted through the cervix.

Embryo recovery rates are equivalent to conception rates and are, therefore, dependent upon the age and inherent fertility of the mare and stallion.

The recipient mare should be scanned approximately 7-9 days later to ascertain if she is pregnant. If she is, further scans at 28 and 45 days following ovulation should then be performed to ensure that the pregnancy is healthy and developing normally.



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This factsheet was created by the VetPartners Equine Team, with assistance from our Marketing Team and Veterinary Regulatory Advisors.

For further information, please contact your local VetPartners Equine Veterinary Practice on:

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