Equine Artificial Insemination at Scarsdale Vets - what is involved?

Breeding from your favourite or a particularly talented mare is an exciting prospect. Equine artificial insemination is an increasingly popular option. The use of artificial insemination has many potential advantages over natural mating.

- It enables the use of semen from stallions that would not normally be available, such as from competing sports horse stallions or stallions from abroad, therefore increasing the range of stallions available
- There is reduced risk of physical injury to the mare and stallion
- The semen is evaluated at every collection and before it is inseminated, thereby allowing any potential fertility problems to be identified
- It allows breeding of difficult mares, for example who will not allow a stallion to cover them naturally, or have young foals at foot
- It also avoids the need for very long journeys for the mares, especially those with foals at foot

However, it is not a cheap alternative to natural cover due to the high degree of technical input involved. Some breed societies do not allow artificial insemination in their breed - notably the thoroughbred racing industry.

**Chilled Semen**

Semen is collected from the stallion, cooled and mixed with semen extender and transported in a container designed to keep it cool. Chilled semen needs to be inseminated into the mare within 24 hours of having been collected from the stallion. The semen needs to be ordered the day before it is needed and good conception rates can be achieved. The main disadvantage of chilled semen is that it is difficult to arrange delivery of chilled semen at the weekends and bank holidays. Unfortunately many mares seem to ovulate at these times! However often these logistical problems can be overcome

**Frozen Semen**

The semen can be stored at the practice, therefore it is ready to be used whenever the mare ovulates. However equine semen is very delicate and easily damaged by freezing and thawing. Certain stallions have semen that will not tolerate the freezing process and therefore it is important to use a stallion with proven fertility using frozen semen. On average the conception rates with frozen semen are around half that of fresh semen per reproductive cycle. It is not recommended for older (>16 year old) mares that have not previously had a foal.

Prior to embarking on an artificial insemination program, a pre breeding veterinary check is necessary. This will involve a general health check as low grade illnesses such as lameness, worm infestation or respiratory infections can lower the mare’s fertility.
The external reproductive tract will be checked, in some cases the mare's conformation may indicate that she will need stitches after insemination (Caslick’s procedure), to minimise contamination of the uterus and maximise her chances of becoming pregnant. A speculum examination of the vagina and cervix will be carried out and an ultrasound assessment of the uterus and ovaries.

Veterinary input with artificial insemination is greater due to the need to inseminate the mare close to the time of ovulation, in order to get the greatest success rate. Ovulation in the mare generally occurs approximately twenty four hours before the end of the season. The mare can be in season from three to eight days, therefore ultrasound scanning of the ovaries and uterus daily during the season is necessary to identify the optimum time for insemination. Once the mare has produced a follicle on the ovary of a particular size, she will usually be given a hormone to control when she will ovulate. Fresh, chilled and frozen semen is available. Highest pregnancy rates are generally achieved using fresh and chilled semen. After insemination the mare will be scanned in six to twelve hours. This is to ensure that the mare has ovulated (the egg has been released), and to check for the presence of post insemination fluid in the uterus.

Often older maiden (have not previously had a foal) mares are harder to get in foal, also older mares in general, as they have a tendency to develop a post insemination uterine infection after natural covering or artificial insemination. Due to the high level of veterinary attention after artificial insemination, it is possible to identify this problem and with prompt treatment (with uterine flushing and hormone treatment) it is possible to improve conception rates in these mares using artificial insemination techniques.

Following insemination the mare will have her first pregnancy scan between fourteen and sixteen days. This allows early identification of whether she is pregnant and also gives the best chance of identifying and dealing with any twin pregnancies. Further pregnancy scans will be carried out to check that the pregnancy is developing normally and the foetal heart beat can be seen.

If you require any further information about equine AI or the packages that we offer, please do not hesitate to contact Scarsdale Vets.