

CLIENT INFORMATION:



Guidelines for Clients Considering Artificial Insemination

Artificial Insemination (AI) can be carried out using fresh, chilled or frozen semen. Fresh semen AI is usually carried out on the stallion stud and is not discussed further. AI using chilled semen can be carried out at home or at the surgery. For mares with foals at foot this avoids the stress of going away to stud and enables them to be at home at a time when their owners probably derive most pleasure from them. AI at home also avoids the risks associated with mares coming home in poor condition or with infectious diseases such as ringworm, strangles or viruses, which can be problems on even the smartest studs. Chilled AI should give as good or better chance of conceiving as natural covering in most mares and a better chance of conception in mares, typically older ones or ones that have had several foals, which suffer post covering uterine infections. The British Equine Veterinary Association has inspected and approved the Barn Equine Surgery as a centre for chilled and frozen AI.

Chilled Semen

Chilled semen is ideally first inseminated within 24 hours of collection and within 12 hours of ovulation. Daily examination of the reproductive tract is therefore required once the mare is well in season in order to forecast the expected time of ovulation and to enable the semen to be ordered from the stallion stud. We usually telephone the stud daily to let them know what is happening so that the request for semen does not come as a sudden surprise. The mare then needs to be inseminated and re-examined to ensure ovulation has occurred. AI therefore involves a higher degree of veterinary input and costs than natural service if comparable conception rates are to be achieved. Conception rates per cycle decline with age and in mares which have had multiple previous pregnancies. In a 20 year old mare which has had several foals a 30% chance of conception might be expected for each reproductive cycle whereas in 4 year old, healthy, first timers an 80% conception rate might be achieved.

Frozen Semen

Frozen semen can be ordered somewhat in advance and stored. This means that stallions from foreign countries and those away at competitions during the breeding season can be used. AI of frozen semen should be close to ovulation. Examinations are carried out 3 or 4 times daily when only one dose of semen is available.

Research at the Colorado State University Equine Reproduction Facility has identified a regime involving once daily scanning examinations that gives conception rates as good as those obtained with multiple examinations (Loomis, P.R. and Squires, E.L. (2005) Frozen semen management in equine breeding programs. *Theriogenology* **64**, 480-491.) This is less stressful for the mare and keeps veterinary costs down but ideally requires 2 insemination doses to be available.

It is recommended that mares to be inseminated with frozen semen are resident at the practice where repeated examinations can be carried out and liquid nitrogen, stocks and laboratory facilities are at hand. Frozen semen is not suitable for use where there is any doubt concerning the mare's fertility, as conception rates are

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generally lower than for chilled semen anyway. It is sensible to budget for 2 insemination cycles in order to have a good chance of achieving a conception.

Many stallions have semen that has severely reduced ability to achieve a conception when frozen and thawed. We therefore recommend that mare owners ensure that they are using a stallion with proven fertility with frozen semen irrespective of fertility with natural covering or fresh or chilled semen. Ideally conception rates per cycle to frozen semen should be available but for a variety of reasons this information may not be available.

Typical costs for Artificial Insemination Cycle

We offer a fixed price per oestrus cycle in order to help our clients plan their breeding budget. The fixed price is currently £241.51 plus VAT and covers everything that is normally required from the time the mare comes in season to the time she is inseminated with chilled or frozen semen where 2 doses are available. It includes:

1. Initial reproductive examination of the external genitalia, vagina, cervix, uterus and ovaries including an ultrasound assessment to confirm the stage of the reproductive cycle.
2. Obtaining a uterine swab to ensure a healthy uterus.
3. Examination of the swab in the practice laboratory.
4. Daily examinations to monitor follicle development and assess the correct time to inseminate.
5. Reproductive hormones (HCG or deslorelin) used once a maturing follicle is identified to help ensure the egg is released.
6. Preparation of the semen for insemination.
7. Insemination of the mare.
8. Microscopic examination of the semen to check motility.
9. Re-examination to ensure ovulation has occurred and that excess uterine fluid is not present.
10. Completion of relevant paperwork to enable the resulting foal to be registered.

The livery fee at the surgery is currently £17.74 per day plus VAT. AI can be carried out at your own premises and our normal fee (normally around £38 plus VAT depending in distance from surgery) is charged for each visit in these circumstances.

Please feel free to contact any of the directors at the surgery to discuss AI or other aspects of equine reproduction.