

# Frozen Semen Inseminations: 80% Success Rate in a Local California Primary Care Animal Hospital

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*Frozen semen conception rates in controlled greyhound kennels and laboratories are often 60% and greater. A successful "walk in" situation where owners show up with their in- heat bitches is imperative to the canine frozen semen industry.*

## **Nespor-Pearson Animal Clinic**

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## **Progesterone Testing and Surgical Inseminations in Stress Reduced Environment**

In 2007, sixteen litters resulted from twenty surgical inseminations at Nespor-Pearson Animal Clinic in San Marcos, California. Four Great Dane bitches and 16 other breeds were inseminated. All bitches were presented for same day progesterone testing at the Canine Cryobank laboratory (see Progesterone Testing page 4) and at the appropriate time, a surgical appointment was made at the clinic. The frozen semen was from any source the bitch owner requested: semen from France, Sweden, ICSB, Synbiotics, Herds Merchant Semen Bank, CLONE, and Canine Cryobank were utilized. The amount of frozen semen used per insemination was determined by the facility providing the semen. Storage times of the frozen semen ranged from

one year to over ten years. Semen formats were pellets, 0.5 cc straws, and 0.25 cc straws. Some frozen semen was accompanied by semen analysis.

The bitches were not routinely reproductively screened by a veterinarian. Some owners may have taken their bitches to their veterinarians before making the decision to breed but such visits were not noted. It is a testament to our clients' level of dedication that all bitches were in perfect health for the surgical procedure.

### Importance of stress reduction

The dedication of the veterinarians, veterinary technicians and staff, the laboratory staff, and the bitch owners to minimize the stress of the bitch is probably the single most important factor to the success rate. Everyone's willingness to put themselves out a bit and be flexible in their routine has resulted in a conception rate that is above natural conception rates.

**Canine Cryobank's  
thaw procedure  
video available on  
YouTube.com**

To avoid stress, both on bitches and staff, surgical inseminations are scheduled at 7 a.m. when the clinic is still quiet and the staff fresh and relaxed. **No bitches are kept overnight.** Owners arrive with bitches a little before 7 a.m.

Bitches and owners are seen by the Doctors for presurgical evaluation, and within 10 minutes are prepared and anesthetized by a surgical team of two or three technicians and one surgeon, either Dr. Dorota Pearson or Dr. Tomas Nesor.

While the surgeon makes an incision, Carol Bardwick from Canine Cryobank thaws the frozen semen using the procedure the frozen semen company recommends for their semen and prepares the semen for the insemination. The thawed semen is inseminated into each horn of the uterus and massaged for 5 minutes.

From opening to closure, the procedure rarely takes more than 7 minutes and most of that time is taken up massaging the semen along the horns

and suturing the incision. The bitches are revived quickly from the anesthesia, awakening just as the final sutures are done.

The bitches are taken home as soon as ambulatory, again to avoid any stress of kenneling, clinic tension, and reduce possibility of contact with other patients at the clinic.

### **Conclusions: Optimistic Future for Frozen Semen Use in Non-Specialized Veterinary Clinics**

During the early growth years of the frozen semen industry, poor quality frozen semen was blamed for the poor conception rates. Indeed, surgical inseminations became popular because thawed semen from several companies failed to produce litters unless used surgically. Currently, we believe timing with reliable progesterone testing and stress free surgical inseminations influence the success of surgical frozen semen litters. Very few of our bitches are “kennel dogs”. Most are show dogs, hunting dogs, or performance dogs, each with strong bonds with the owners. They are very easily stressed when separated from the owner. To reduce stress on the bitch, the clinic’s staff works with quiet efficiency to have the bitch in and out of the clinic within 90 minutes.

The cooperative efforts of the laboratory staff to provide proper progesterone timing, careful thawing and handling of frozen semen, and quick, efficient surgical teams trying to minimize stress in the bitch has resulted in a very successful record for frozen canine semen without scrutinizing the frozen semen or reproductive health of the bitch.

# Progesterone Testing for Surgical Inseminations of Frozen Semen

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*Twenty one years ago we started progesterone testing bitches for timing of breeding.*

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Our laboratory uses an Enzyme Immune Assay kit of analytical laboratory quality, imported from Canada. The kit requires a spectrophotometer, laboratory quality pipettors, and printer for an investment of \$10,000. Two decades of experience employing the testing protocol makes Susan Wells, Laboratory Manager, very aware of any discrepancies in the test.

Consistency is important to any laboratory testing:

- ? Take reagents out of the refrigerator at the same time every day.
- ? Run four standards with each test run.
- ? Rinse the syringe with the same amount of heparin.
- ? Use the same amount of blood every time and centrifuge the blood immediately.
- ? Note a bitch's rise through her season and communicate any concerns, such as a stall in the rise, with owner.
- ? Visually note any peculiarities in the sample and/or results.

## **What is Progesterone?**

Progesterone is a hormone measurable in the blood of the estrus bitch. Progesterone rises after the luteinizing hormone peaks and continues to rise whether the bitch is bred or not, pregnant or not for the next 60 days or so. Therefore, it is a wonderful tool for the breeder to determine breeding dates. No more than three tests are usually needed for a normally cycling bitch.

In 2007, Canine Cryobank ran progesterone tests for the frozen semen surgical inseminations performed at the Pearson-Nespor Animal Hospital. Ideally, the bitches started testing approximately day 5, 6, or 7 of their cycle and continued periodic testing

until progesterone is equal to or greater than 9.0. We do not progesterone test each day due to our long experience and confidence in the test kits.

<b>2007</b>	<b>OWNER</b>	<b>BREED</b>	<b>PROG.</b>	<b>PREGNANT</b>	<b>SURGICAL AI DONE 7 A.M. AFTER, UNLESS NOTED</b>
JAN	BJELLAND	AM COCKER SPANIEL	9.0	0	
FEB	DOLLAR	BEAGLE	9.0	Y 5PUPS	
MAR	PATMON	APBT	10.0	Y	
MAR	GRENTZER	AUSSIE	10.5	Y	
APRIL	ADAMS	DOBE	12.5	0	4HOURS LATER
APRIL	JOHNSON	GREAT DANE	13.5	Y	6 HOURS POST
APRIL	SORENSEN	SCWT		Y	
JUNE	BYRNE	WHPGRIFFON	10.5	Y	
JUNE	JOLLEY	GREAT DANE	10.5	Y 10 PUPS	
JULY	THURMAN	GREAT DANE	12.0	Y	
JULY	ZARLIN	GREAT DANE	10.0	Y 12PUPS	
JULY	STEWART	WHIPPET	11.0	Y	
SEPT	MARLEY	WHPOINTR	10.0	0	
SEPT	BAGALOT	STD SCHNAUZER	10.0	Y	
SEPT	HAGMON	POODLE STD	9.8	Y	
SEPT	LIBS	MALINOIS	12.0	Y	
OCT	O CONNER	ENG SPR SPA	11.0	Y	
NOV	GUTHRIE	BORDER COLLIE	11.0	0	
OCT	KASSEIN	KERRY BLUE	9.0	Y	
DEC	WALKER	BASSET	8.0	Y	72 HOURS

It is very disconcerting for owners and veterinary staff trying to schedule the AI procedure when a bitch's progesterone levels appear to stall. The stall often occurs around 4-6 ng. The bitch must be tested until the progesterone starts its rise again. Successful conceptions have occurred after a prolonged rise but missed conceptions often occur in these bitches with all forms of breeding: natural, fresh, cooled and frozen semen.

**Possible Stressors  
Stalling Progesterone  
Rise:**

*Vaccination*

*Worming*

*Shipping stress*

*New kenneling stress*



Submitted by Carol Scott Bardwick

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