

A smiling woman with blonde hair is holding a brown dog. The woman is wearing a dark blue jacket. The dog is looking towards the right of the frame.

Donnington Grove

L A B O R A T O R Y

## CANINE PROGESTERONE FACT SHEET

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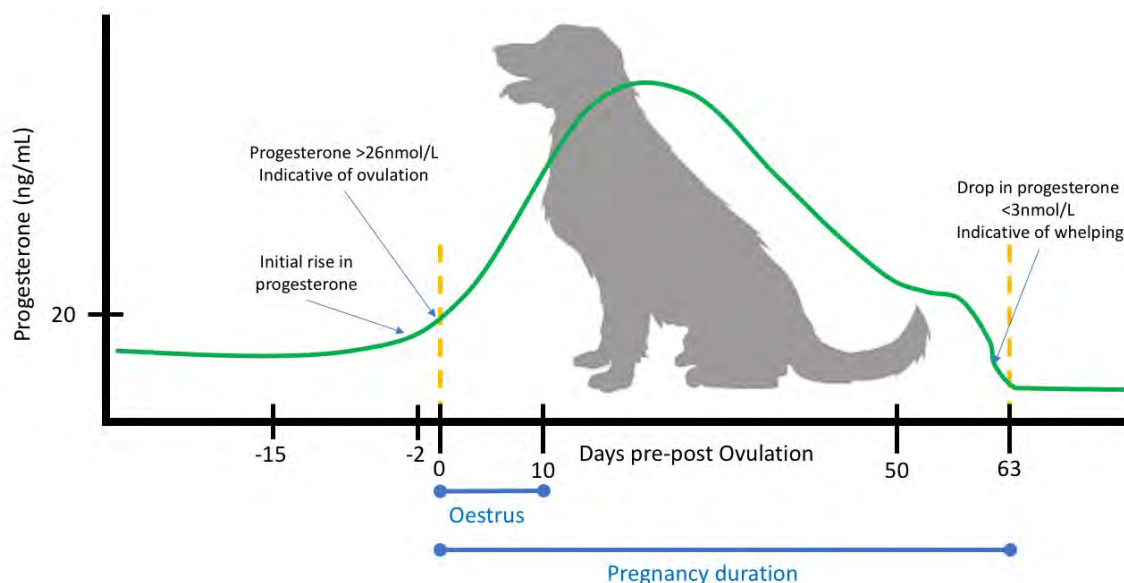
Progesterone is a steroid hormone that is important in female dog reproduction. With the right equipment, it can be easily and accurately measured and is informative in determining ovulation and parturition.

## Progesterone Testing for Determining Mating Time

The progesterone level can be measured in the serum extracted from blood. Bitches will ovulate at around 18 nmol/L. After ovulation, the oocytes (eggs) need to develop in the reproductive tract for a further 2 days before they can be fertilised. Once they have matured, they will be viable for another 2 days.

As progesterone levels start to rise in the blood, this indicates that the oestrus cycle is about to commence. Once the progesterone level starts to rise, as a rule-of-thumb, it doubles every 2 days. Our recommended testing and mating regime based on serum progesterone levels is:

- <3 nmol/L. Retest in 3-4 days.
- 3-6 nmol/L. Retest in 2-3 days.
- 6-16 nmol/L. Retest in 2 days.
- 16-20 nmol/L. Mate within 33-57 hours.
- 20-38 nmol/L. Mate within 9-33 hours.
- >30 nmol/L. Mate within 9 hours.



## Progesterone Testing to Determine Parturition

Occasionally, there are cases where it is important to be able to determine the physiological end of the pregnancy, e.g. if an intervention such as Caesarean Section might be necessary. Plasma progesterone levels drop to below 3 nmol/L 24 hours before parturition. The test can be repeated every day towards the end of gestation until the drop in progesterone is evident.

## Progesterone Testing for Other Conditions

Progesterone levels can be useful for other issues associated with the reproductive cycle such as silent heats (where there is no other evidence that the oestrus cycle has occurred), split heats (where there are two cycles closer together than normal

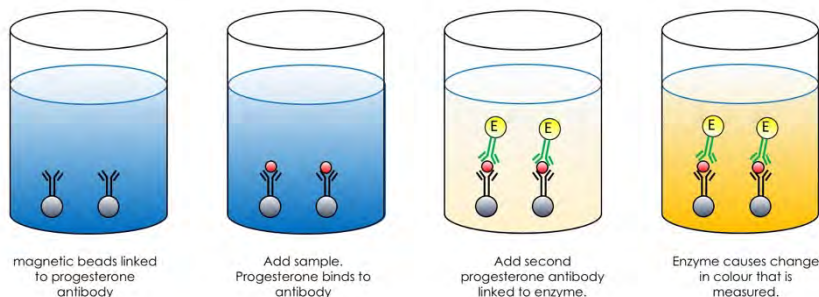
but only one of them results in ovulation) and conditions such as Hypoluteoidism, where insufficient progesterone is produced and can result in the reabsorption or abortion of puppies before the end of gestation.

## Laboratory Tests for Serum Progesterone

There are two main types of testing that can be used:

1. **Semi-quantitative.** These are easy-to-use kits that can be used at home, and do not require expensive machinery. The results produce a range into which the sample sits e.g. between 2.5 and 8 ng/mL. They can be convenient and cheap but they do not provide an accurate numerical result, which limits their usefulness.

2. **Quantitative.** These are laboratory-based tests that require sophisticated and expensive equipment but produce more precise results. This in turn enables more accurate predictions to be made.



## Our test

We offer the most sensitive and accurate test available: the quantitative immunoassay. We use an automated machine to process the samples - our Tosoh AIA 360 Immunoanalyser. This sophisticated yet compact machine offers accurate measurements in 20 minutes and can process 36 samples per hour. Our daily quality control tests ensure that the machine is always reporting accurate results.



## Allowing time for testing

We can normally return a result within an hour of receiving a blood sample in the laboratory though you should consider our lab closing times, and weekends or bank holidays. Given the predictable rise of progesterone and the time available after ovulation for mating to take place, this is not normally a problem.