

Pregnancy Testing in the Dog

Is there a blood test to detect pregnancy in the bitch?

A blood test is now available that detects pregnancy in the bitch by measuring levels of a hormone called *relaxin*. This hormone is produced by the developing placenta following implantation of the embryo, and can be detected in the blood in most bitches as early as 22-27 days post breeding. The level of relaxin remains elevated throughout gestation, and declines rapidly following the end of the pregnancy.

Can the relaxin test tell the difference between pregnancy and pseudopregnancy?

Sometimes a trick of nature causes a bitch to exhibit some or all of the physical and behavioral changes of pregnancy, even though she is not pregnant. This is a condition called pseudopregnancy (pseudo = false), and when it occurs, signs are usually seen in the two months after the end of the heat period.

During pseudopregnancy, there is no actual placental development, and thus no relaxin production. Since there are no detectable levels of relaxin at any time in the pseudopregnant bitch, the relaxin test can reliably tell the difference between pregnancy and pseudopregnancy.



Does a single negative relaxin test mean a bitch is not pregnant?

Any negative result may indicate that a bitch is not pregnant. However, if the test is performed very early in pregnancy, before the placenta is sufficiently developed, then the level of relaxin will be too low to be detected and the test will fail to indicate pregnancy. A bitch that is negative for relaxin on the initial test, performed at 22-27 days post breeding, should be tested again 1 week later to confirm the negative results. Repeat testing is especially important in the early stages of pregnancy or if the breeding dates are not known.

In most situations, two consecutive negative relaxin tests one week apart, confirms that a bitch is not pregnant. However, in rare situations, a third test may be warranted, especially if breeding occurred very early in the heat period. There is also evidence that breed, size of the bitch, and litter size may influence levels of relaxin.

Does a positive relaxin test mean a bitch is pregnant?

A positive relaxin test indicates that a bitch is pregnant at the time of the test i.e. that implantation of an embryo has taken place and that a placenta is developing.

Does a positive relaxin test mean that live puppies will be born?

A positive relaxin test indicates that a bitch is pregnant at the time of the test. It does not predict that the pregnancy will end successfully with the delivery of live puppies. Unfortunately, there are many reasons why pregnancies fail, and pregnancies can be lost at any stage following conception. Sometimes a bitch will be positive for relaxin on the first test, but will be negative on a later test. This indicates that the pregnancy has been lost, even though the pet owner may not have noticed anything out of the ordinary.

Are there other ways of detecting pregnancy in the bitch?

The traditional method of detecting pregnancy in the bitch is careful abdominal palpation (gently pressing on the surface of the abdomen with the fingers) to detect swellings in the uterus that signal the presence of developing puppies. This method depends on the temperament and size of the bitch, the number of fetuses present, and experience of the person doing the palpation.

A more technically sophisticated method of detecting pregnancy is abdominal ultrasound. This is perhaps the most sensitive and reliable way of monitoring pregnancy, and is capable of detecting developing embryos as early as 2 weeks post breeding.



This client information sheet is based on material written by Kristiina Ruotsalo, DVM, DVSc, Dip ACVP & Margo S. Tant BSc, DVM, DVSc.

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