

Breeding Frequency And Bitch Age

March 30, 2009 by [Joanna Kimball](#)

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The key to understanding reproductive health in dogs is knowing that, as far as a bitch's body knows, there is no difference between being pregnant and not being pregnant, after a heat cycle.

Those of us (humans, cows, horses, etc.) that cycle on a regular basis prepare our uterus to accept a fertilized egg or eggs every month or so. For a couple of weeks after ovulation we have a higher-than-normal progesterone level, which makes the uterus, which has grown a bunch of soft blood vessels and tissue, keep those vessels and tissue thick and strong so a fertilized egg can land on a lovely spot where there's lots of blood to suck up and start growing its own little blood vessels.

For humans and other repeated cyclers, when there is no fertilized egg, the body gets the signal very quickly and the ovaries stop producing progesterone and the lining of the uterus breaks down and goes back to normal, at least for another few weeks until ovulation occurs again.

Dogs have a completely different system.

It starts out roughly the same, with the uterus preparing for the eggs by growing a good plush lining, and the eggs ripen on the ovaries and hooray, there's some lutenizing hormone, and the eggs are released. It gets a little weirder from there, because unlike humans that have fertilizable eggs within a few hours of ovulation dogs' eggs take two or three days. And unlike humans, whose eggs implant and begin to grow into the blood vessels about a week after ovulation, dogs take about three weeks. But the process is basically analogous.

Where dogs are VERY unlike us is that there is never any signal given to the body that there are in fact no fertilized eggs to nourish, that this has been an unsuccessful heat cycle.

Instead, a dog's progesterone level stays high for the entire 63 days that she would have been pregnant; her uterus develops the incredibly effective and thick system of blood vessels that would be necessary to nourish an entire full-term litter.

You can honestly say that the only difference between a bitch who was bred and a bitch who was not bred is how many calories she's burning—either she has to support a litter or she doesn't—because her body honestly doesn't know any difference. Aside from some relaxin to loosen her joints (which is present in pregnant dogs but not in non-pregnant ones after the heat cycle is over), the hormone levels are the same.

This would all be just a veterinary curiosity were it not for the fact that the body doesn't like growing things and then not using them. When the uterus grows this tremendous blood supply, the blood supply actually shapes itself as though there are puppies there. The little attachment sites where the placentas would grow into the uterine lining are shaped differently and have different types of blood vessels. When there are no puppies to fill those shapes, the attachment sites form cysts. After multiple empty heat cycles, much of the uterus can be filled with fluid and cysts. In many bitches, that progresses to infection and pyometra.

The upshot of this whole situation is that bitches are not meant to have empty heat cycles. All else being equal, it is better and safer for them to be pregnant at each heat cycle (or spayed) than it is for them to remain unbred. And diet, panties, and other interventions (or lack thereof) are not the answer – the answer is to use the uterus or lose it.

Now of course not all things are equal. We all keep bitches unbred so we can finish them, or special them, or because it's not a good time for a litter according to our schedule, or because we don't have the time to screen puppy people, etc. We typically skip at least the first cycle if it came before the bitch was fully grown, so she can put all her calories into growing. I think that's a perfectly reasonable tradeoff to make, from a veterinary health perspective, though I am not sure it *must* happen; in production-based species like sheep and goats we know that breeding the young females before they are done growing is actually beneficial to them (when you look at lifelong production and health) and they catch up just fine. But I'm not comfortable looking at a bitch who's still a puppy with puppies, and I would not want to risk a glitch in growth, so waiting until the bitch is fully adult is something I'd always advise.

I don't think it's necessary to wait a full two years, though—that became conventional wisdom because OFA gives you a final number at that age. But if you PennHIP or if you choose to rely on orthopedic opinion, or if you have a breed with virtually no dysplasia, there's no reason to wait until the full two.

Skipping the first season, or the first couple, is certainly totally normal. Sometimes we have to skip more because of our needs or timing. But after full growth has been attained, she's finished or shown as much as you plan to show her, health testing is done, and the bitch's reproductive life is ready to begin, what is not supportable, from a health perspective, is **INSISTING** that bitches skip seasons; I've even heard people say that the "best" breeders skip two seasons between each litter.

This is purely us thinking of dogs like humans—we get tired and worn and unhealthy if we produce babies every nine to twelve months, so shouldn't we give dogs at least a year? But it's not the same thing. Humans are pregnant for nine months, and we are designed to lactate for another two years (minimum) after birth. If you put a pregnancy in the middle of that lactation you deplete yourself; you want to complete the full lactation (or the time the lactation would have lasted if you choose not to breast-feed) and then get pregnant again. This leads to babies two or three years apart, which is (if you look around at your family and friends) what usually happens anyway and is certainly not viewed as unusual or dangerous.

Bitches are pregnant for nine-ish weeks (though they are actually nourishing puppies for only six of those weeks), they lactate heavily for about four or five weeks after that, and then typically have at least two months before their next heat cycle. Unless her calories were so inadequate that she did not recover her normal body weight during those two months (and if she didn't, I'd be looking seriously at how she's being fed and cared for) there's no reason she cannot have a normal and safe and uneventful pregnancy on the next heat. There is **CERTAINLY** no reason to rest her for two seasons; in fact, you're making it a lot more likely that she will have reduced fertility or fecundity (number of healthy puppies) if you do.

Remember that as far as ANY bitch's body is concerned, she **IS** having two litters a year. You don't do her a favor by having one or both of them be invisible.

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