Timing of Insemination and Gender

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At a recent dairy meeting one of the producers asked if timing of insemination influences the gender of the newly created life.

Researchers at the University of Wisconsin-Madison looked into this several years ago and the results are briefly summarized in the table. In their study, ovulation was synchronized using a GnRH-prostaglandin-GnRH protocol, and ovulation occurred 24-32 hours after the second GnRH.

Reproductive measures in lactating Holstein cows inseminated at specific times in relation to ovulation synchronized by an injection of GnRH.

	Time from second GnRH until AI					
	0 h	8 h	16 h	24 h	32 h	Total
Cows	149	148	149	143	143	732
Conception Rate %	37	41	45	41	32	39
Pregnancy Loss %	9	21	21	21	32	22
Calving Rate %	31	31	33	29	20	29
Twinning Rate %	0	6.5	0	2.5	3.5	2.4
Female: male %	61:39	45:55	54:46	54:46	65:35	55:45

If cows were inseminated early and way before ovulation, the results were a higher percentage of females, a lower conception rate, but very little pregnancy loss for the cows who did get pregnant.

If cows were inseminated late and close to or after ovulation, the results were a higher percentage of females, a lower conception rate, and a higher pregnancy loss for the cows who did get pregnant.

So the answer to the question "Does timing influence gender?" is yes, but getting more heifers by this method is accompanied with lower fertility particularly when insemination is close to ovulation.

The best overall results were achieved when cows were inseminated 16 hours after the second GnRH. This continues to be the recommended time of insemination for cows bred at the end of a synchronized ovulation protocol.