Decreased Blood Flow to the Uterus Might Contribute to Mare Infertility

Throughout a mare's estrous cycle, her uterine blood flow changes frequently. University of California, Davis, researchers compared uterine blood flow and perfusion in normal, young, healthy mares to that of older subfertile mares with vascular degeneration—a condition in which the vessels of the uterine wall have degenerative, often disruptive, changes in surrounding elastic fibers (called elastosis). This vascular elastosis may be associated with infertility. They found decreased uterine blood flow and perfusion in the uterus of older subfertile mares, compared to the young fertile mares, regardless of estrous cycle stage. They also noted no increase in uterine blood flow during estrus in the subfertile mares, which should have occurred.

“Their take-home message was that decreased uterine perfusion in mares with vascular degeneration may play a role in subfertility or infertility and postulated that it could contribute to post-mating endometritis (inflammation of the uterine lining), delayed uterine clearance (of semen and inflammatory debris following breeding), and possibly even early embryonic or fetal death,” said Blanchard.