

At 115-130 days of gestation, the single foetuses in 19 Merino ewes were injected in the hamstring muscles with dexamethasone. Four foetuses given 5 mg steroid remained in utero; 4 out of 6 given 10 mg were born within 58-80 h, and all 9 given 20 mg were born within 41-51 h. The min. reliably effective total dose by continuous intraperitoneal infusion was found previously to be about 0.4 mg. This suggests that a min. concentration of the steroid must be available for some time if parturition is to occur, that a brief exposure to a relatively high concentration is not in itself enough, and that the elimination of a single intramuscular injection of dexamethasone from the foetus must be a relatively rapid process.