

EFFECTS OF ANIMAL PAIRING ON MARMOSET SPERM COLLECTED BY PENILE VIBRATORY STIMULATION

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The marmoset monkey (*Callithrix jacchus*) is an important model species for the development of reproductive technologies in humans and endangered primates. Obtaining sufficient sperm of high quality is a limiting factor in implementing marmoset IVF. A method for the collection of marmoset semen, using penile vibratory stimulation (PVS), has recently been described (1). Due to the high rate of copulation in marmosets, the pairing of males with females may affect semen collection. The aim of the present study was to determine whether the quantity and motility of sperm collected by PVS is affected by animal pairing. A total of 10 adult male marmosets were used, of which 3 were paired with another adult or juvenile male, and 7 were paired with an adult female. Semen was collected from each male on up to 5 separate occasions in sterile glass tubes. PVS involved the application of successive sequences of increasing vibration to the penis using a FertiCare personal vibrator. Immediately following collection, pre-warmed Hepes-buffered TALP medium (200 µl) was added to the ejaculate. Sperm suspensions were evaluated for total sperm count and sperm motility. Ejaculates were obtained from male-paired males on every attempt (12 of 12), whereas 5 of 23 attempts failed to yield an ejaculate from female-paired males. The number of sequences of stimulation needed to obtain an ejaculate differed between males but was unaffected by animal pairing. The ejaculates collected from female-paired males had lower total numbers of sperm ($3.9 \pm 1.4 \times 10^6$ v. $10.1 \pm 2.2 \times 10^6$; $P < 0.05$) with a lower percentage motile ($35 \pm 9\%$ v. $85 \pm 13\%$; $P < 0.01$), compared with those from male-paired males. We conclude that housing males separately from females increases the quantity and motility of sperm collected by PVS.

(1) Schneiders, A., Sonksen, J., Hodges, J. K. (2004) *J. Med. Primatol.* **33**, 98–104.