

**SCI SEMEN: TO FREEZE
OR NOT TO FREEZE?**

Cryopreservation may be as viable an option for fertility preservation in men with spinal cord injuries (SCIs) as in uninjured men, according to a recent study published in *Fertility and Sterility*.

Men with SCIs exhibit reduced fertility owing to a combination of factors, including erectile dysfunction, anejaculation, and poor semen quality. A team based in São Paulo, Brazil, compared semen from SCI patients—collected using either penile vibratory stimulation or electroejaculation—with that of uninjured controls for parameters including sperm motility, mitochondrial activity, and DNA fragmentation. The investigators found that sperm from SCI patients exhibit reduced motility, generate less energy, and are much more likely to harbor fragmented DNA.

Cryopreservation reduced the quality of the samples from both patients and controls, with motility being reduced by the same proportion in both groups. They also observed an increase in DNA fragmentation and a decrease in mitochondrial activity following freezing and thawing of sperm from both patients and controls. Whilst these data demonstrate that cryopreservation is detrimental to sperm quality in general, these changes do not appear to be more disadvantageous to men with SCI than those without.

“It seems from our results that freezing itself is not more harmful for samples from these men, it’s just that the starting point is at a much lower plateau,” says Ricardo Bertolla, from São Paulo Federal University. “Thus, if the starting point is higher, freezing may be a good option.”

The authors are currently using shotgun proteomics to generate lipid profiles in order to determine how the semen of SCI patients differs from that of uninjured men. Once the mechanisms of SCI-related infertility are understood, conclusions regarding the best way to manage this condition can be drawn.

Annette Fenner

Original article Ferreira da Silva, B. *et al.* Is sperm cryopreservation an option for fertility preservation in patients with spinal cord injury induced anejaculation? *Fertil. Steril.* **94**, 564–573 (2010)