Effect of freezing on the relative escape force of sperm as measured by a laser optical trap.

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OBJECTIVE: To determine the possible effect of freezing on sperm escape force as measured by laser trap.
DESIGN: Controlled clinical study.
SETTING: Normal volunteers, academic setting.
PATIENTS: Normal, healthy volunteers.
INTERVENTION: Sperm selection, freezing and thawing. Measurement of relative (sperm) escape force before and after freezing.
MAIN OUTCOME MEASURE: Comparison of escape force as a measurement of freezing effects.
RESULTS: Wide individual variations noted, with some individuals showing significant increases or decreases. The relative escape force in fresh (76.1 +/- 31.1 mW) and in frozen-thawed samples (75.6 +/- 40.0 mW) were similar.
CONCLUSION: Freezing does not affect the relative escape force of normal sperm. Any possible detrimental effect of freezing on sperm may be related to other sperm functions.