IMPROVEMENT IN THE RECOVERY OF TOTAL MOTILE SPERM AFTER PERCOLL SEPARATION. A Agarwal, K Seifarth, D Garlak, S Kohn, L Cordek, C Fitzhugh, Dept of Andrology, Cleveland Clinic Foundation, Cleveland, OH.

Objectives: Prolonged exposure to seminal plasma after ejaculation for periods of more than 30 minutes can permanently diminish the fertilizing capacity of human spermatozoa in vitro. It is thus essential that spermatozoa for clinical procedures such as IVF, GIFT or IUI and for laboratory test of sperm fertilizing ability be separated from the seminal plasma as soon as possible after ejaculation. The purpose of this study was to test the efficacy of a new Percoll gradient "Perwash" in improving motile sperm count for IUI sperm wash by comparing it with a commonly used Percoll gradient "Perception."

Material and Methods: Semen specimens from each of 17 men were divided into two equal aliquots. One part was washed using Percoll "Perception" (Fertility Technologies, Natick, MA) and other with Percoll "Perwash" (Irvine Scientific, Santa Ana, CA). The semen samples were layered with Percoll gradient containing an upper phase (47%) on top of the lower phase (90%) in a sterile conical tube. Both gradients were run at 1600 rpm for 20 minutes, and the supernatant was discarded. Two mL of HTF was added to both sperm suspensions and the tubes were spun for 7 min at 1600 rpm. The supernatant was removed, and the sperm resuspended into 0.5 mL of HTF.

Results: Motion characteristics (motility and velocity significantly improved after Percoll separation using either "Perception" or "Perwash" from the unwashed specimen. Comparison of two Percoll gradients after wash showed no significant differences in either motility or velocity. However, the total motile sperm recovery was significantly higher in the Percoll "Perwash" gradient than in the Percoll "Perception" gradient (P < .0024).

Conclusions: The new Percoll "Perwash" gradient provides significantly more total motile sperm than the Percoll "Perception" gradient commonly used in most IUI and ART procedures. We suggest that this new gradient may improve the conception rates of IUI or ART.