

# Acupuncture performed before and after embryo transfer improves pregnancy rates

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## Abstract

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**OBJECTIVE:** Conflicting evidence exists on whether acupuncture is beneficial for patients undergoing In Vitro Fertilization (IVF) cycles. Therefore, this study was undertaken to determine whether on-site acupuncture, performed both before and after embryo transfer, affects clinical outcomes.

**DESIGN:** Retrospective data analysis.

**MATERIALS AND METHODS:** The Acupuncture Group consisted of 49 patients who received acupuncture on-site before and after embryo transfer in 2007. The treatment did not follow the Paulus protocol. The Control Group were 212 patients with no acupuncture undergoing IVF cycles in the same time period. The data was subdivided by SART age classifications to determine if acupuncture differentially benefitted certain age groups. Clinical Pregnancy Rate (CPR) was defined as the presence of fetal cardiac activity. Loss Rate was the percentage of pregnancies that did not proceed from a positive hCG to a clinical pregnancy. Data were analyzed using the unpaired t-test and Fisher's exact test, with significance defined as  $P < 0.05$ .

**RESULTS:** Patients with a positive hCG were significantly higher in the Acupuncture Group for women less than 35 years old (63.3% vs.43.2%,  $p = 0.048$ ). The Acupuncture Group also had a higher CPR in the under 35 category (60.0% vs. 34.6%,  $p = 0.01$ ). There were no differences in the other age groups. Combining all the age groups, the cycle parameters between the two Groups were equivalent, while the CPR was higher and the Loss Rate lower for the Acupuncture group (Table 1).

TABLE 1. Cycle Data for All Age Groups

	Acupuncture	No Acupuncture	P Value
N	49	212	
Age	32.6 $\pm$ 4.2	32.0 $\pm$ 3.8	0.33
No. Oocytes	13.7 $\pm$ 6.6	13.2 $\pm$ 6.9	0.65
Cell Number	6.8 $\pm$ 2.0	7.0 $\pm$ 2.1	0.36
Fragmentation Score	2.5 $\pm$ 0.6	2.5 $\pm$ 0.6	1.00
No. Embryos Frozen	2.5 $\pm$ 3.2	2.7 $\pm$ 3.5	0.85
No. Embryos Transferred	2.3 $\pm$ 0.6	2.2 $\pm$ 0.6	0.29
Positive hCG (%)	57.1 (28/49)	45.8 (97/212)	0.16
Clinical Pregnancy (%)	55.1 (27/49)	34.4 (75/212)	0.01
Loss Rate (%)	3.6 (1/28)	22.7 (22/97)	0.02

CONCLUSIONS: Although other studies regarding acupuncture have been inconclusive, perhaps these positive results are related to two important factors. The treatments were performed on-site, eliminating the stress of traveling to another site before and after the embryo transfer. Also, the acupuncture treatment protocol did not follow the traditional Paulus protocol, thereby suggesting there is still more research to be done on how best to treat infertility issues with acupuncture