Increased seminal ROS levels have been widely reported to have an adverse affect on the fertilizing capacity of human spermatozoa. Some studies reported strong correlation between ROS levels and IVF outcome, while others found no relationship. The aim of our study was to conduct a meta-analysis of all published studies correlating ROS levels with fertilization rate following IVF. A meticulous review of the literature was conducted searching the Medline database as well as hand searching relevant publications. A total of 8 studies that looked at the role of reactive oxygen species in IVF outcome were retrieved. Only 3 studies had similar design including statistical methods. ROS levels in all 3 studies were measured after FMLP stimulation by chemiluminescence. Method of weighted average for random-effects meta-analysis was used to combine the results from each study. ROS levels significantly correlated with IVF fertilization rate [estimated overall correlation -0.374 (95% confidence intervals -0.520, -0.205)] by linear (Pearson) correlation. Forrest plot of meta-analysis is shown below. We conclude that from the available data it appears that ROS has a significant effect on the outcome of IVF procedure. Measurement of ROS levels in the semen specimens prior to IVF may be useful in predicting the IVF outcome.