Final oocyte maturation in GnRH antagonist co-treated IVF/ICSI cycles can be triggered with HCG or a GnRH agonist. We conducted a systematic review & meta-analysis of RCT to evaluate the efficacy and safety of the final oocyte maturation trigger in GnRH antagonist co-treated cycles. Primary outcome: ongoing pregnancy rate (OPR). Secondary outcome: OHSS incidence. Results: There was a statistically significant difference against the GnRH agonist for OPR in fresh autologous cycles (n=1024) with an OR of 0.69 (95% CI: 0.52 -0.93). There was a statistically significant difference in favour of GnRH agonist regarding the incidence of OHSS in fresh autologous cycles (OR: 0.06; 95% CI: 0.01 -0.33). As far as the proper timing of HCG administration in GnRH antagonist co-treated cycles is concerned, there was no evidence of statistically significant difference between early or late HCG administration on OPR (OR: 1.31, 95% CI: 0.90 -1.91). As far as the dosage of HCG for final oocyte maturation triggering is concerned, there was no evidence of statistically significant difference between the traditional dose (10.000IU) or a lower dose (2500-5000 IU) on OPR (OR 0.75, 95 % CI: 0.27 – 2.12).As regards the type of HCG, u –HCG or rec-HCG, there was more ongoing pregnancies rec-hCG group (OR: 2.32; 95% CI: 1.08 -5.00). Conclusion: HCG administration at an earlier or later day (follicular size ≤ 16-17mm) and a lower dose (< 10.000IU) than the traditional HCG regimens seems to be the optimal trigger for final oocyte maturation in GnRH antagonist co-treated IVF/ICSI treatment cycles. Thus GnRH antagonist co-treated cycles plus HCG for final oocyte maturation triggering seem to be a patient and clinic friendly protocol.