Figure 1. Flow diagram of included studies.

- 474 abstract screened for inclusion after searching with “nicotine” AND “smoking” AND “gum OR Patch OR spray OR inhalers OR Tablet OR lozenge” AND “random*”
- 280 abstracts were obtained when using “bupropion” and “smoking” and “random” and “clinical trial”
- 41 abstracts were obtained when using “varenicline” and “random” and “clinical trial”
- 532 abstracts excluded as irrelevant
- 167 NRT-relevant full-text paper publications retrieved for potential inclusion
- 80 bupropion-relevant full-text-paper were obtained for potential further review
- 16 varenicline-relevant full-text papers were obtained for potential further review

52 NRT relevant studies were further excluded:
- 15: duplicated studies
- 12: intervention not comparable or NRT can’t be independently evaluated
- 5: only with one-year abstinence data and no side effect reported
- 2: smoking reduction studies
- 4: smoking abstinence and craving studies
- 12: not NRT side effect and abstinence related studies
- 1: genotype and NRT response

38 bupropion-relevant studies were further excluded:
- 5: Bupropion can’t be independently evaluated
- 4: comparison of different dosage
- 11: duplicate studies
- 16: not abstinence or bupropion side effects related
- 2: not RCT

5 varenicline-relevant studies were further excluded for the following reason
- 4: without abstinence data
- 1: varenicline vs other treatment

115 NRT studies included in analysis.
- 101 in 4-week efficacy analysis
- All compare NRT with placebo or no NRT independently.
42 bupropion studies included in the analysis
- 40 studies compare bupropion with placebo
- 2 studies compare bupropion with education or no Tx.
- 31 trials in 4-week efficacy analysis
11 studies included in the analysis
- All 11 in 4 week efficacy analysis
- 10 studies compare varenicline with placebo
- 1 compares varenicline with NRT