NHLBI Evidence Table: RF13-MA

PMID	First Author	Title	Year	Study Type	CVD	RF by CQ	Study Origin	Setting	Search Range	Data Sources	Study Eligibility Criteria	Number of Studies	Main Study Objective	Study Pop. (N)	Target Population	Patient Characteristics	Study Characteristics	Interv. Type	Specific Intervention Examined	Observational Relationship Assessed	Outcomes Measured	Treatment Effect and Statistical Significance	Main Reported Findings by Critical Question	Limitations of Studies Reviewed	Quality of MA
15495004	Lumley J	Interventions for promoting smoking cessation during pregnancy	2004	MA	None	Q10 (RF13)	Australia	Clinical	MEDLINE: Jan 2002-July 2003 EMBASE: Jan 2002-July 2003 PsychLIT: Jan 2002-July 2003 CINAHL: Jan 2002-July 2003 AUSTHEALTH: Jan 2002-July 2003	Cochrane Pregnancy and Childbirth Group trials register Cochrane Tobacco Addiction Group's trials register CENTRAL MEDLINE EMBASE PsychLIT CINAHL AUSTHEALTH Hand searches of journals and proceedings of major conferences Expert suggestions	Studies with randomized or quasi-randomized allocation Studies in women who are pregnant in any care setting and seeking pre-pregnancy consultation Studies with health professionals on strategies to change knowledge, attitudes and behavior related to smoking cessation Interventions providing 1 or more of the following: -Information about the effects of smoking on the fetus/infant -Advice by a health professional to 'stop smoking' -Advice supplementation by reinforcement at subsequent antenatal visits, group counseling, peer support, recording smoking status, measuring by-products of smoking at other antenatal visits, feedback of smoking effects on the fetus, or positive information about the fetus and fetal development -Individualized advice and support for smoking cessation based on 'stages of change' -Provision of pregnancy-specific self-help manual on strategies for quitting -Provision of the following as an adjunct to information/advice: nicotine replacement therapy (NRT); telephone follow up + reinforcement of advice and strategies, or; rewards/incentives -Strategies to change the attitudes, knowledge and behavior of healthcare providers with respect to smoking cessation	48	Assess the effects of smoking cessation programs implemented during pregnancy on the health of the fetus, infant, mother, and family	NR	Maternal	NR	NR	Behavioral	Provision of information on the risks of smoking to the fetus and infant and the benefits of quitting Recommendations to quit and setting a quit date Feedback about the fetus Feedback about harmful levels of cotinine or carbon monoxide Teaching cognitive-behavioral strategies for quitting smoking Advice tailored to 'stages of change' Provision of rewards, social or peer support Nicotine replacement therapy	N/A	Relative risk (RR) of continued smoking	Pooled data from 48 trials revealed a significant reduction in continued smoking in late pregnancy in the intervention groups (pooled RR: 0.94; 95% CI: 0.93 to 0.95). This equates to an absolute difference in the proportion continuing to smoke of 6%. There was significant heterogeneity among these trials There were no statistically significant differences between these findings and those in the 25 trials of high intensity (pooled RR: 0.92; 95% CI: 0.91 to 0.94) with an absolute difference in continued smoking of 8%, in the 25 trials with a high quality score (pooled RR: 0.95; 95% CI: 0.94 to 0.97) which had an absolute difference in continued smoking of 5%, or the 17 trials with validated smoking cessation, a high intensity intervention, and a high quality score (pooled RR: 0.95; 95% CI: 0.93 to 0.97), which had an absolute difference in continued smoking of 5%. All these groups showed significant heterogeneity The findings were similar when analyses were restricted to the 36 trials with biochemically validated smoking cessation (pooled RR: 0.94; 95% CI: 0.92 to 0.95) and an absolute difference in continued smoking of 6%. Of trials grouped by intervention strategies, the cognitive behavioral group, which was the largest, showed a similar pooled effect to that of the whole group (pooled RR: 0.95; 95% CI: 0.92 to 0.97). The 7 trials using "stages of change" theory were not effective (pooled RR: 0.98; 95% CI: 0.94 to 1.01, nor were the 3 trials using feedback (pooled RR: 0.92; 95% CI: 0.77 to 1.11) In those specific interventions utilizing smoking relapse prevention among women who had stopped smoking by the first antenatal visit, the pooled odds ratio for smoking in late pregnancy did not reach statistical significance (pooled RR: 0.80, 95% CI: 0.63 to 1.03)	Q10: Pooled data from 48 trials revealed a significant reduction in continued smoking in late pregnancy in the intervention groups NRT does not appear to have a significant advantage over other types of interventions	Method of randomization rarely described in sufficient detail to permit assessment of whether allocation was concealed at the time of trial entry Studies differed substantially in their intensity, their duration, and the people involved in their implementation Undefined "usual care" for many comparison/control groups Withdrawals from the trials were common	Excellent
15495004	Lumley J	Interventions for promoting smoking cessation during pregnancy	2004								Studies measuring one or more of the following outcomes: -Smoking cessation in late pregnancy, self-reported and validated -Smoking cessation in the puerperium, self-reported and validated -Birthweight (mean birthweight, proportion less than 2500 g, less than 1500 g) -Gestation at birth (proportion less than 37 wk, less than 32 wk, less than 30 wk) -Perinatal mortality (stillbirths, neonatal deaths, all perinatal deaths)											Nicotine replacement therapy (NRT) does not appear to have a significant advantage over other types of interventions. The 3 trials of NRT were borderline (pooled RR: 0.94; 95% CI: 0.89 to 1.00)			
18278059	Oken E	Maternal smoking during pregnancy and child overweight: systematic review and meta-analysis	2008	MA	None	Q13(RF8)	USA	Clinical	1966 - June 2006	PubMed Ovid	Studies reporting an association between maternal prenatal smoking and child overweight from 1966 through June, 2006. Include multivariable association of prenatal smoking with overweight Previously published data English only Outcomes post 3 yr of age	14 Studies	Perform a systematic review of studies reporting on the association between maternal prenatal cigarette smoking and child overweight.	84563 (14 observ-ational studies)	Parental/ Family/ Caregiver	Children whose mothers smoked during pregnancy	North America Australia Europe Smoking during pregnancy in the studies ranged from 7.5% to 51%	None	NA	Mothers smoking during pregnancy and childhood overweight.	BMI	Children whose mothers smoked during pregnancy were at an elevated risk for overweight compared with children whose mothers who did not smoke during pregnancy (pooled adjusted OR=1.50[CI:1.36,1.65]). The pooled estimate from unadjusted odds ratios was similar (OR=1.52[CI:1.36,1.69]) suggesting that sociodemographic & behavioral differences between smokers and non-smokers did not explain the observed association. Simulating a symmetric set of studies to address publication bias yielded similar results(OR=1.40[CI:1.26,1.55]) Among studies with information on the amount of maternal smoking, all found evidence for dose-response. Smoking throughout pregnancy was associated with greater risk than smoking only in early pregnancy. Association of child overweight with prenatal maternal smoking was independent of fetal growth, birth weight or postnatal wt gain.	Q10: Children whose mothers smoked during pregnancy were at an elevated risk for overweight compared with children whose mothers who did not smoke during pregnancy (pooled adjusted OR=1.50[CI:1.36,1.65]).	Publication bias likely exists, as smaller studies reported stronger effects than larger ones, and no published studies were null or reported an inverse association. However, this was addressed by simulating a symmetric set of studies with similar results. All of the studies included in the meta-analysis relied upon maternal self-report of smoking behaviors without biochemical validation. Residual confounding may explain the observed higher risk for overweight in exposed children.	Good