

**Nonoxynol-9 Spermicide for Prevention of
Vaginally Acquired HIV and Other
Sexually Transmitted Infections:
Systematic Review and Meta-analysis of
Randomised Controlled Trials Including
Over 5000 Women**

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What Is Already Known on This Topic

- N-9 is an effective spermicide that has been used widely for 50 years
- Observational studies and trials suggest N-9 protects against STI
- Randomised trials have provided largely inconclusive results for HIV
- Concern has been raised that frequent N-9 use may increase the frequency of genital ulceration, and hence risk of HIV

Objectives

- To compare use of vaginally administered spermicide N-9 (in various formulations) with placebo (or no treatment) in women for the prevention of HIV and other STI (including RTI)

Design

- Systematic review of randomised controlled trials
 - Cochrane protocol and final review peer-reviewed
 - Cochrane methods
 - Extensive literature search
 - Data extraction checked by 2 reviewers
 - Fixed / random effects model as appropriate

Outcomes

- Primary outcomes were:
 - new HIV infection
 - new episodes of various STI
 - genital ulcers / lesions

Studies

- Only one trial excluded due to quality
- Five RCTs with HIV as the outcome and nine RCTs with STI as the outcomes, including 5096 women
 - predominantly commercial sex workers
- All but one contributed to the meta-analysis

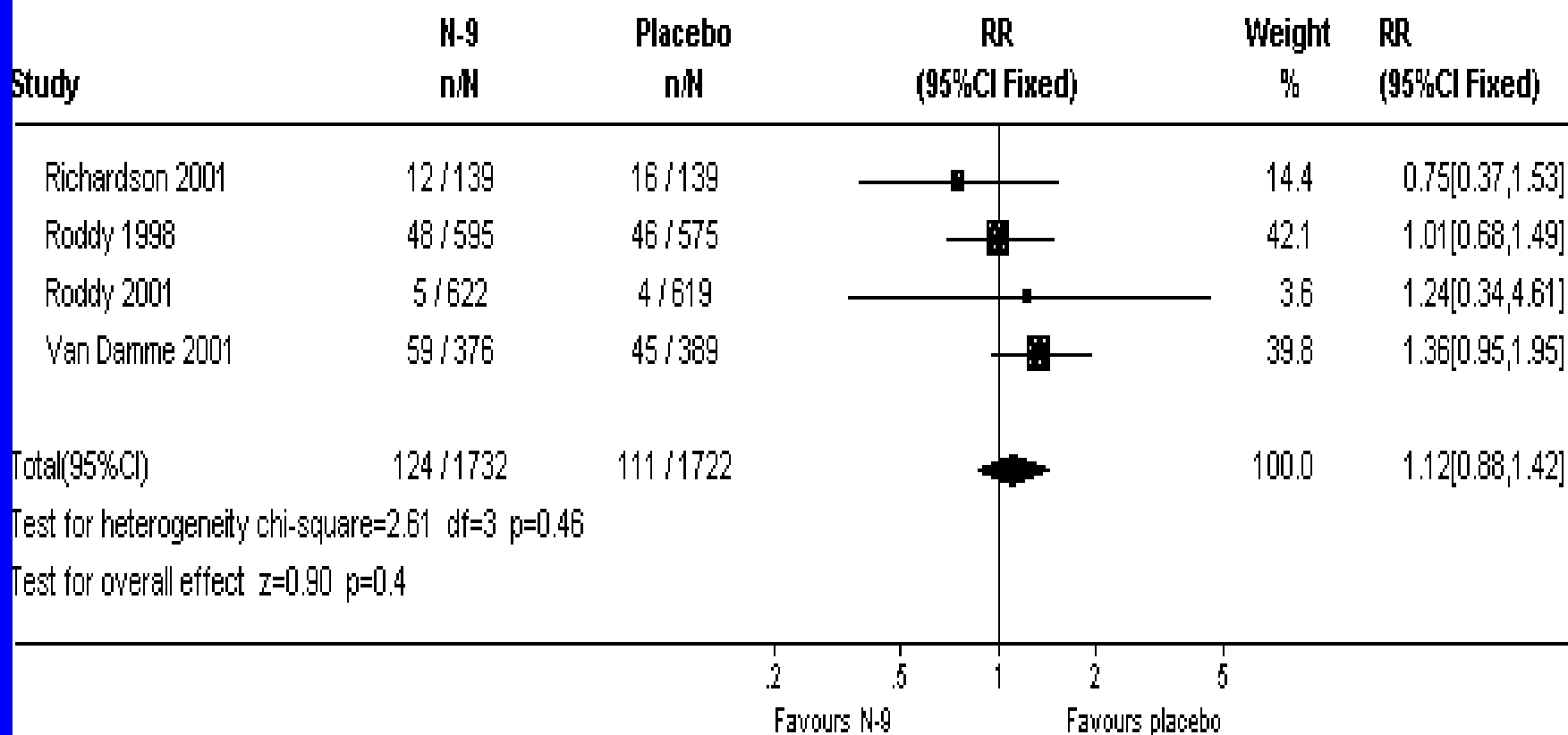
Results

- Relative risk (RR) of HIV infection
 - 1.14 (95% CI 0.92-1.41)
- Genital lesions
 - 1.15 (1.02-1.36)

N-9 Vs Placebo:HIV

Comparison: 01 N-9 vs placebo

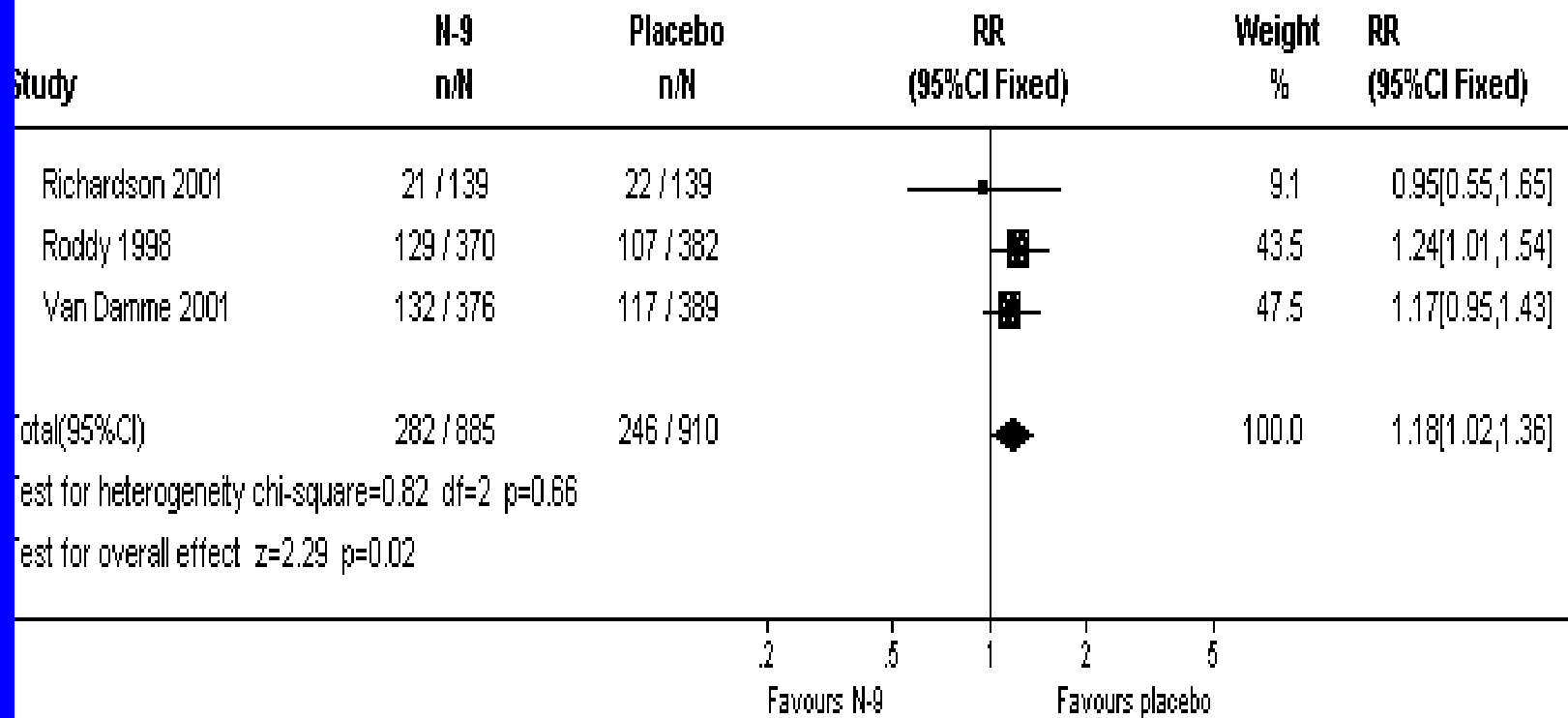
Outcome: 01 HIV infection



N-9 Vs Placebo: Genital Lesions

Comparison: 01 N-9 vs placebo

Outcome: 02 Genital lesion



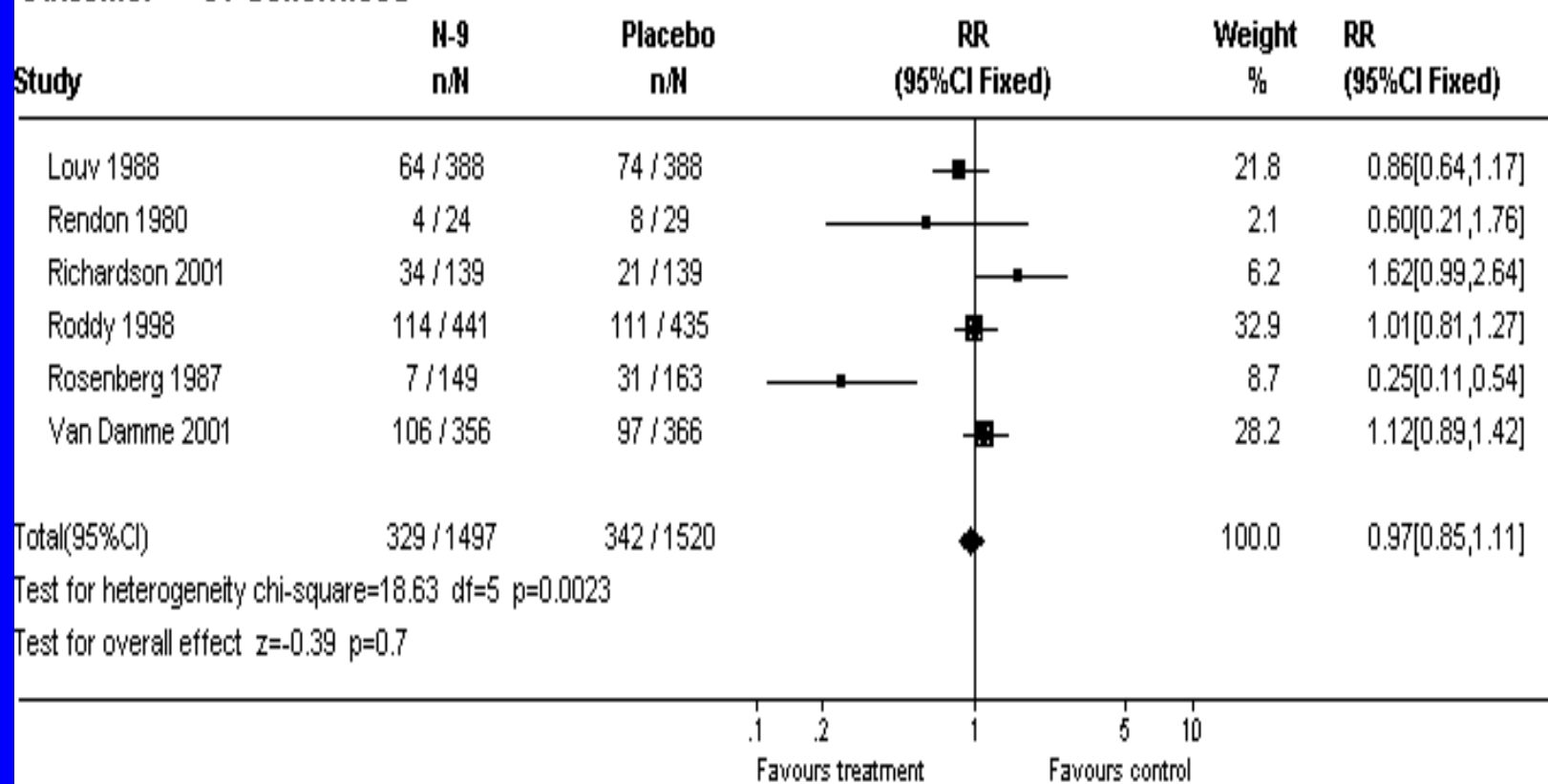
Results

● Gonorrhoea:	0.97	(0.85-1.11)
● Cervical infection:	1.01	(0.84-1.22)
● Trichomoniasis:	0.84	(0.69-1.02)
● Bacterial vaginosis:	0.88	(0.74-1.04)
● Candidiasis:	0.97	(0.84-1.12)
● Chlamydia:	0.88	(0.77-1.01)

N-9 Vs Placebo: Gonorrhoea

Comparison: 01 N-9 vs placebo

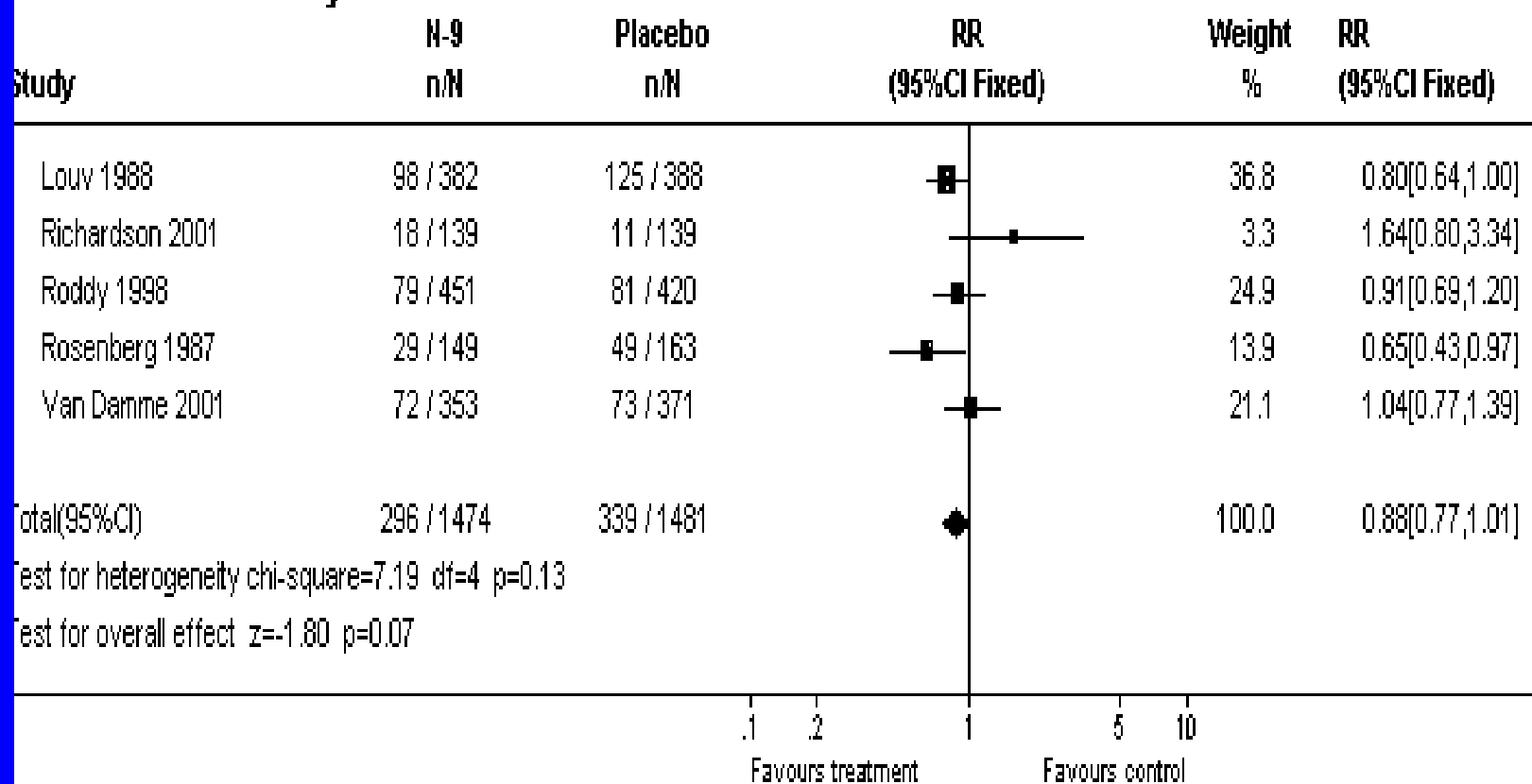
Outcome: 01 Gonorrhoea



N-9 Vs Placebo: Chlamydia

Comparison: 01 N-9 vs placebo

Outcome: 02 Chlamydia



Conclusion

- N-9 does not provide protection against HIV infection
- N-9 does not provide protection against STI or RTI
- There is evidence of harm through increased risk of genital ulceration
- N-9 cannot be promoted for HIV and STI prevention