

Progestogen maintenance therapy **might** have a modest effect on prolongation of latency time. However, this effect is **not** demonstrated when analyzing low risk of bias studies only.

Progestogen maintenance therapy to prevent preterm birth after an episode of preterm labor: a systematic review and meta-analysis

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INTRODUCTION

- The effectiveness of progestogen maintenance therapy after an episode of preterm labor (PTL) is subject of debate.
- The objective of this study was to conduct a meta-analysis of progestogen maintenance therapy after an episode of PTL.

METHODS

- Systematic review and meta-analysis
- Inclusion criteria:
 - Randomized controlled trials (RCT)
 - Women with gestational age (GA) between 16⁺⁰ and 37⁺⁰ weeks, who remained pregnant after an episode of PTL
 - Randomization between (any type of) progestogen maintenance therapy compared to a control group
- Primary outcome was time to delivery in days (latency time), defined as timing of randomization to delivery
- Secondary neonatal and maternal outcomes are consistent with the core outcome set of preterm Birth studies²
- Studies were extensively assessed for data trustworthiness (data integrity) and risk of bias.

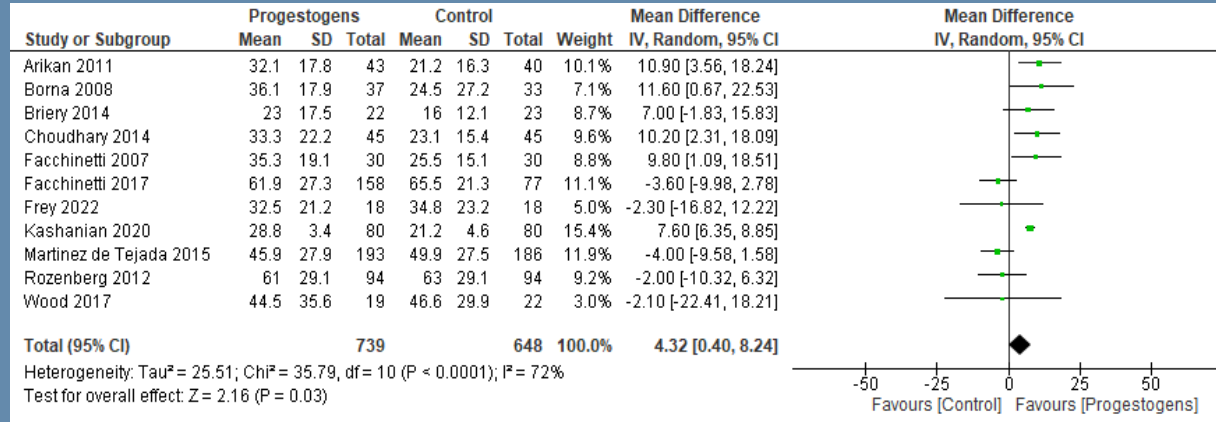


Figure 1: Latency time from randomization to delivery in all included studies

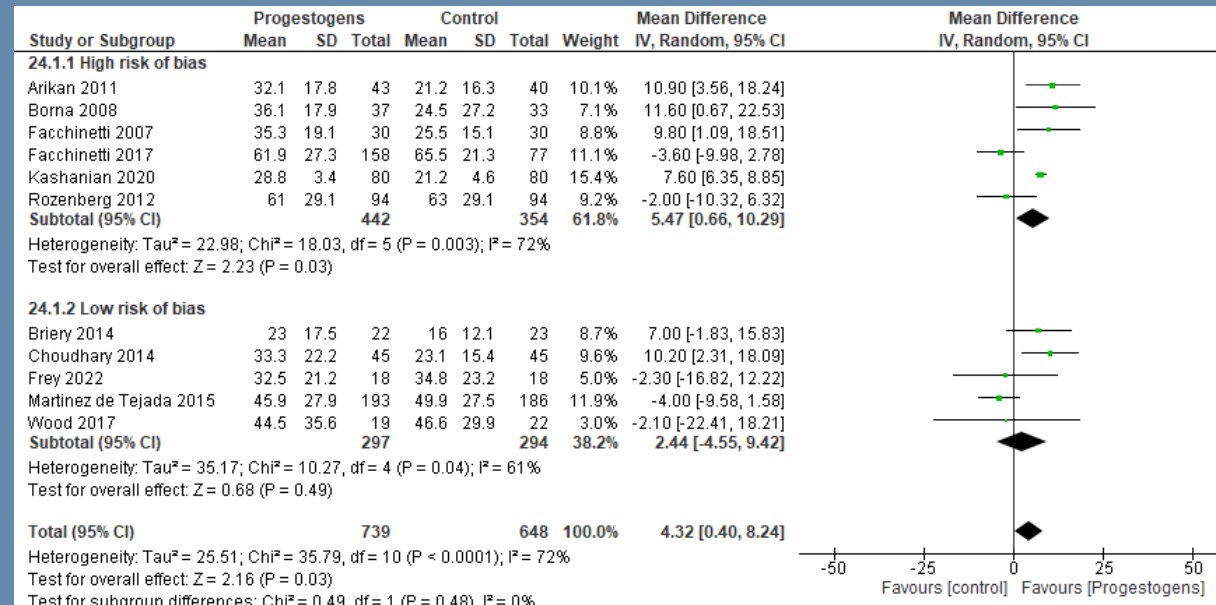


Figure 2: High risk of bias versus low risk of bias in studies; outcome latency time, comparing treatment with progestogens to controls

RESULTS

- Thirteen RCTs including a total of 1.722 women (910 progestogen maintenance group, 812 control group) were included
- Progestogen maintenance therapy demonstrated a longer latency time of 4.32 days (mean difference, 95% CI 0.40-8.24) compared to controls (Figure 1).
- Neonates were born with a high birth weight (mean difference 124.25 grams, 95% CI 8.99-239.51).
- No difference were found for any other perinatal outcomes
- When analysing studies with low risk of bias only (5 RCTs, 591 women), a significant longer latency time could not be demonstrated (Figure 2)

DISCUSSION

- Progestogen maintenance therapy after PTL **might** have a modest effect on prolongation of pregnancy
- When analysing low risk of bias studies only, this effect was **not** demonstrated
- Validation through further research, preferably by an individual patient data meta-analysis is highly recommended.

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2. Van t' Hooft et al. Preventing preterm birth with progesterone in women with short cervical length, outcomes in children at 24 months of age. AJOG 2017.