

# Impact of Treating Maternal Periodontal Disease on the Risk of Preterm Birth and Low Birth Weight: Preliminary Findings of Umbrella Review

May Salama, BDS, MPH, CPH

*School of Community and Environmental Health, Norfolk, VA*

## BACKGROUND

Preterm birth (PTB) and low birth weight (LBW) are the leading cause of perinatal mortality and morbidity. It has been hypothesized that maternal oral health during pregnancy may play a significant role in the pathogenesis of PTB and/or LBW. However, causal associations have not been confirmed and the results from the studies remained controversial.

## OBJECTIVES

To examine the most recent evidence on the impact of treating maternal periodontitis on the risk of PTB and/or LBW, which is a prerequisite to formulating guidelines regarding this issue.



## METHODS

An electronic search was done via PubMed, Embase, and Cochrane Registry of Systematic Reviews databases for systematic reviews of observational and interventional studies with or without meta-analyses published in English between 2002 and 2023. Quality assessments of systematic reviews were conducted using the PRISMA checklist.

## RESULTS

Studies identified through database searching (n= 584)

Studies screened (n=584)

Studies assessed for eligibility (n=35)

Studies excluded, with reasons n=549

n=532 (Not SRs)  
n=12 (Duplicated)  
n=3 (Umbrella reviews)  
n=1 (Not in English)  
n=1 (Abstract only)

A total of 584 studies were retrieved, 35 systematic review studies of which met the inclusion criteria and were analyzed. Systematic reviews generally concluded that treating maternal periodontitis was beneficial in reducing PTB and /or LBW. However, most of the systematic reviews on this topic were of low quality and showed controversial findings, which could be due to the heterogeneity of the primary research studies.

## CONCLUSIONS

A total of 584 studies were retrieved, 35 systematic review studies of which met the inclusion criteria and were analyzed. Systematic reviews generally concluded that treating maternal periodontitis was beneficial in reducing PTB and /or LBW. However, most of the systematic reviews on this topic were of low quality and showed controversial findings, which could be due to the heterogeneity of the primary research studies.

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