



THE RELATIONSHIP BETWEEN
ORAL HEALTH AND PREGNANCY

Guidelines for non-dentistry health professionals





EFP

European
Federation of
Periodontology

Introduction

The main physiological and hormonal changes in a woman's life take place during pregnancy – and the mouth is one of the main areas where such changes occur. Elevated hormone levels (oestrogen and progesterone) significantly increase vascular permeability in the gingival tissues and, in the presence of dental plaque, promote gingival inflammation. In the presence of oral biofilms, these physiological changes will aggravate gingival inflammation and, in cases of people who already have periodontitis, the clinical parameters will worsen. Both a specific localised lesion (pregnancy tumour) and a more generalised one (pregnancy gingivitis) are associated with pregnancy, although women usually revert to health after delivery.

Pregnancy may be subject to complications that include: low birth weight (less than 2.5 kg), or very low birth weight (less than 1.5 kg); preterm birth (before 37 weeks) or very preterm birth (before 32 weeks); growth restriction (weight for gestational age), pre-eclampsia (commonly defined as maternal hypertension and proteinuria after the twentieth gestational week), miscarriage and/or still birth. Some of these outcomes may occur simultaneously.

It appears that periodontitis is associated with a higher risk of low birth weight, preterm birth, and – especially – pre-eclampsia. However, research is inconclusive and solid conclusions cannot yet be drawn. Possible mechanisms that link periodontitis and adverse pregnancy outcomes involve commensal and pathogenic bacteria colonising the foeto-placental unit through haematogenous dissemination. Thus, the presence of periodontal bacteria and by-products in the foeto-placental unit may activate a local immune/inflammatory response that might subsequently contribute to the development of adverse pregnancy outcomes.

Specific oral-hygiene regimens, together with professional interventions, have been shown to be both safe when implemented during pregnancy and efficient in reducing gingival inflammation and in enabling periodontal health to be maintained during pregnancy.

The results of randomised clinical trials (RCTs) that have evaluated whether periodontal therapy during gestation might have an effect on adverse pregnancy outcomes have not been consistent. The larger and better-quality studies have generally shown that non-surgical periodontal therapy during the second trimester of pregnancy most probably does not alter the incidence of preterm birth and low birth weight. However, a positive effect of periodontal intervention in decreasing rates of preterm birth and low birth weight may occur in women who are at high risk of adverse pregnancy outcomes. These trials have shown that non-surgical periodontal therapy during pregnancy is safe for both the mother and the foetus, and that it improves the periodontal status of most pregnant women with periodontal disease, although falling short of eliminating gingival inflammation.

Based on our current understanding of the effects on the foetal-placental unit of maternal periodontal infections and inflammation, it is likely that periodontal therapy would be more effective in reducing the risk of adverse pregnancy outcomes if it took place before conception.

Recommendations for health professionals

Oral-health education:

As part of their regular care, health professionals should provide oral-health education and oral-health screening to pregnant women.

Oral-health history:

Health professionals should include an oral-health history as part of the patient's general health history, including questions such as: Do you have swollen gums? Do you have problems eating or chewing food? Are you suffering from oral pain or other oral problems?

Oral-health examination:

Health professionals should include an oral examination as part of their regular medical examination. This examination should assess the presence of bleeding in the margin between the teeth and the gingiva and overt gingival inflammation by asking the patient to open her mouth under a direct light and with the use of a tongue depressor. In the presence of these signs, the physician should refer the patient to an oral-health professional for adequate diagnosis and care.

Gingival inflammatory changes:

Health professionals should inform women of the frequent gingival inflammatory changes associated with pregnancy and assure them that these changes are not physiological and that they should be appropriately diagnosed and treated by an oral-health professional.

Adverse pregnancy outcomes:

Health professionals should also inform women that, in the presence of periodontitis, there may be a higher risk of adverse pregnancy outcomes. They should therefore always recommend that pregnant women visit an oral-health professional for a check-up early during gestation. This should be further emphasised to pregnant women at risk of adverse pregnancy outcomes because periodontal therapy may reduce the incidence of such outcomes.

Pre-pregnancy:

Health professionals who treat women who want to become pregnant should also recommend that their patients visit an oral-health professional and establish healthy periodontal conditions before pregnancy, because this may favour the outcome of the planned pregnancy. In this regard, adverse pregnancy outcomes and periodontal disease share some important risk factors (such as smoking), so a healthy lifestyle should be encouraged and promoted.

Oral Health and Pregnancy: the project



Oral Health & Pregnancy

The aim of the Oral Health and Pregnancy project, a collaboration between the European Federation of Periodontology (EFP) and Oral-B, is to promote women's oral health during pregnancy through guidelines for patients and for healthcare professionals.

The importance of oral health during pregnancy cannot be underestimated. Scientific studies have shown connections between gum disease and adverse pregnancy outcomes such as premature birth, low birth weight, and pre-eclampsia.

The Oral Health and Pregnancy project offers the site oralhealthandpregnancy.efp.org which is full of advice – based on the latest scientific evidence – about the steps that need to be taken to ensure good oral health in pregnant women. The portal includes written, graphical, and video material in three areas:

- *The importance of women's oral health during pregnancy;*
- *The links between periodontal diseases and pregnancy;*
- *Preventing and treating periodontal disease during pregnancy.*

At the heart of the Oral Health and Pregnancy portal are sets of guidelines about oral health in pregnant women for dentists, dental hygienists, other health professionals, and for women themselves. These guidelines have been drawn up by some of the world's leading experts in periodontal science and are based on the results of numerous scientific studies.

The project will also provide a toolkit for the 30 national societies of periodontology which are members of the EFP to enable them to run their own campaigns on oral health and pregnancy, whether through similar portals or through the production and distribution of leaflets based on the guidelines. This toolkit will enable the important information contained in the guidelines to reach health professionals and women across Europe in local languages and adapted to local needs.

oralhealthandpregnancy.efp.org

A joint EFP - Oral-B project



The European Federation of Periodontology (EFP) is the leading global voice on gum health and gum disease and the driving force behind EuroPerio – the most important international periodontal congress – and Perio Workshop, a world-leading meeting on periodontal science. The EFP also edits the Journal of Clinical Periodontology, one of the most authoritative scientific publications in this field.

The EFP comprises 30 national societies of periodontology in Europe, northern Africa, Caucasia, and the Middle East, which together represent about 14,000 periodontists, dentists, researchers, and other members of the dental team focused on improving periodontal science and practice.

www.efp.org



Oral-B is the worldwide leader in the over \$5 billion tooth-brush market. Part of the Procter & Gamble Company, the brand includes manual and electric toothbrushes for children and adults, oral irrigators, interdental products such as dental floss, together with toothpastes and mouth rinses. Oral-B manual toothbrushes are used by more dentists than any other brand in the USA and many international markets.

Oral B has been an EFP partner since 2009 and has participated in many EFP events, including EuroPerio7 (2012) and EuroPerio8 (2015) as a Diamond sponsor, the EFP Postgraduate Symposium in 2013 and 2015, and the European Workshop in Periodontology in 2014. The company will be a Diamond Sponsor of EuroPerio9, which takes place in Amsterdam in June 2018.

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