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# Mouth Rinse Effective in Reducing Risk for Preterm Birth

Laird Harrison

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## INFORMATION FROM INDUSTRY

An over-the-counter mouthwash reduced the risk for preterm birth by more than two thirds in women with periodontal disease, according to a study presented here at the International Association of Dental Research (IADR) 89th General Session and Exhibition of the IADR.

"We were surprised by the magnitude of the results," lead researcher Marjorie K. Jeffcoat, DMD, from the University of Pennsylvania in Philadelphia, told *Medscape Medical News*.

About a third of pregnant women have periodontal disease, said Dr. Jeffcoat. She explained that hormones associated with pregnancy might stimulate the inflammation that characterizes periodontitis.

A connection between periodontal disease and preterm birth has been suggested, but research attempting to improve birth outcomes with scaling and planing have had mixed results.

In their study, Dr. Jeffcoat and colleagues enrolled 204 women at 6 to 20 weeks of gestation who had periodontal disease and who had refused standard dental care. Many pregnant women do not seek dental care for fear it might harm their fetus, but there is no evidence of such a risk, said Dr. Jeffcoat.

The researchers of this study offered all the women professional dental care and gave them toothbrushes and toothpaste and instructions in oral hygiene, she said.

The researchers randomly chose 49 participants to receive Crest *Pro-Health* mouth rinse, the active ingredient of which is cetylpyridinium chloride. They gave the other 155 participants identical bottles containing water. They advised both groups to rinse.

The researchers divided the subjects into groups of unequal size because they wanted to have a large enough untreated group to ascertain the true rate of preterm birth in this population, said Dr. Jeffcoat.

There were no significant differences in preterm birth or in tobacco or alcohol use between the 2 groups at baseline. The women in the untreated group were slightly younger than the women in the rinse group ( $23.3 \pm 0.36$  vs  $25.5 \pm 0.64$  years;  $P < .004$ ).

The researchers delivered the mouth rinse or placebo rinses to the women and kept track of empty bottles to make sure they were using it. At baseline and before delivery, the women had dental exams; the examiners were blinded to which women were using the mouth rinse.

Only 6.1% of the women using the rinse experienced preterm births, which the researchers defined as birth at less than 35 weeks. In comparison, 21.9% of the untreated group experienced preterm births ( $P < .01$ ).

At birth, the mean gestational age of the babies in the untreated group was  $36.8 \pm 0.29$  weeks; in the rinse group, it was  $38.4 \pm 0.52$  weeks ( $P < .011$ ).

Similarly, birth weights were  $2633 \pm 63.56$  g for babies in the untreated group and  $3087 \pm 133.50$  g for babies in the rinse group ( $P < .001$ ).

"The only adverse event we had was one woman saying she would rather have cinnamon flavor," joked Dr. Jeffcoat.

How can a rinse make so much difference? Dr. Jeffcoat suggested that periodontal bacteria increases inflammation, not only in the women's mouths, but also elsewhere in their bodies, increasing the risk for preterm birth.

Asked to comment, Robert Genco, DDS, PhD, a distinguished professor of dentistry at the State University of New York at Buffalo, told *Medscape Medical News* that "it's an amazing finding." However, he thinks it is too early for clinicians to change the way they treat pregnant women. Much larger clinical trials are needed, he said.

This is only one of many studies attempting to improve preterm birth risk by treating periodontal disease, and the findings are conflicting, he said. "There are some intriguing and provocative small studies, but the big ones have been negative."

Dr. Jeffcoat responded that scaling and planing studies that have shown progress in treating periodontal disease have also shown improvement in preterm birth.

In Dr. Jeffcoat's study, neither group of women experienced an improvement in their periodontal disease, but the disease levels remained constant in the rinse group and progressed in the untreated group.

Dr. Jeffcoat plans to do a multicenter trial to verify the results of this study, but she said it is not too early for obstetric practices to act on the results. She and her colleagues have successfully trained obstetric nurses to examine pregnant women for signs of periodontal disease, and to refer the women to dentists. Until the women see a dentist, however, Dr. Jeffcoat said the obstetricians might prescribe this mouth rinse.

She explained that other mouth rinses might work as well, but she chose this one because it does not contain alcohol, which might harm the fetus.

*The maker of the rinse, Procter & Gamble, paid part of the cost of the study; the rest of the money came from the Commonwealth of Pennsylvania. Dr. Jeffcoat and Dr. Genco have disclosed no relevant financial relationships.*

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