

Maternal Transmission of *Strep. mutans* to Infants Through Saliva

Children of mothers who chew xylitol-sweetened gum during the first two years of the child's life are five times less likely to acquire *Strep. mutans*. Researchers in Japan wanted to know if this was true for Japanese mothers and babies.

Pregnant women visiting an OBGYN clinic in Okayama, Japan were tested for salivary *Strep. mutans* to identify those with high counts. These mothers were randomly assigned to either the xylitol chewing gum group or the no-gum group. The study began at the sixth month of pregnancy and continued for two years. Both groups were given basic oral hygiene instruction and the gum group was supplied with 100 percent xylitol-sweetened chewing gum and instructed to chew the gum at least four times daily.

At each three-month visit the gum chewers were given enough chewing gum for the next three months. They also recorded exactly how much and how often they chewed the gum and any side effects.

Unstimulated saliva and plaque samples from the infants were taken from the tongue and the ridges/teeth when present at six, nine, 12, 18 and 24 months. Children of moms in the no gum group acquired *Strep. mutans* nine months earlier than the other children, at 12 months versus 21 months. Of the 56 xylitol mothers, 37 percent of their children were *Strep. mutans* negative at 24 months, compared to 13 percent of the no gum group.

CLINICAL IMPLICATIONS:

Pregnant moms should begin chewing xylitol-sweetened gum beginning at six months of pregnancy to lower oral *Strep. mutans* levels, thus preventing transmission to their babies through saliva.

Nakai, Y., Shinga-Ishihara, C., et al: Xylitol Gum and Maternal Transmission of Mutans Streptococci. J Dent Res, 89: (1) 56-60, 2010.

