

Oral flora of caries-free 1-to-4-year-old children

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Objectives: The prevalence rates of 71 microorganisms previously associated with caries, gingivitis, and/or periodontitis were determined in a caries-free population of 1-to-4-year-old children who were sampled as part of a intervention project involving children seeing primary care pediatricians in two urban medical centers in Boston.

Methods: 118 caries-free children attending well-child visits at two Boston medical centers were included in the study. Samples were analyzed using DNA probes to 71 species. Species detected at >1% total DNA count (>5% for *Streptococcal* species) were considered positive.

Results: *A. israelii* was not detected in any caries-free children. Differences in the distribution of several species were noted by age, race, and Hispanic status. *S. mutans* was significantly more prevalent in children <3 years old compared to children 3 years and older. *S. gordonii* was significantly more prevalent in children 2-to- <3 years old and was absent in children under 2 years. Species for each age group are as follows:

<2 Years Old	2-to<3 Years Old	3 Years & Older
<i>S. mutans</i>	<i>S. gordonii</i>	<i>L. buchnerii</i>
<i>S. oralis</i>	<i>S. mutans</i>	<i>L. fermentum</i>
	<i>S. oralis</i>	<i>L. reuteri</i>
	<i>L. buchnerii</i>	<i>L. rhamnosus</i>
	<i>L. reuteri</i>	<i>A. gerenscereii</i>
	<i>A. gerenscereii</i>	<i>A. odontolyticus</i>
	<i>C. gingivalis</i>	<i>B. dentium</i>
	<i>C. ochracea</i>	<i>A. actinomycetemcomitans</i>
	<i>C. sputigena</i>	<i>C. ochracea</i>
	<i>V. parvula</i>	<i>C. sputigena</i>
	<i>F. nuc. ss. nuc.</i>	<i>C. gracilis</i>
	<i>F. nuc. ss. poly.</i>	<i>C. rectus</i>
		<i>F. nuc. ss. nuc.</i>
		<i>S. noxia</i>

L. reuterii and *L. rhamnosus* were significantly more prevalent among Black and Asian children compared to White children. High prevalence rates of *S. cristatus*, *A. actinomycetemcomitans*, *E. brachii*, *P. melaninogenica*, *P. nigrescens*, and *P. pallens* were obtained for Hispanic children compared to non-Hispanic children. In contrast, non-Hispanic children exhibited a higher prevalence of *S. sanguinis* compared to Hispanic children.

Conclusion: The oral flora of caries-free children differs by age, race, and Hispanic status.

Supported by NIH/NIDCR Grants U54 DE14264 and K24 DE00419