Nutrition and Oral Health
A Resource Guide

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Introduction

The National Maternal and Child Oral Health Resource Center (OHRC) developed *Nutrition and Oral Health: A Resource Guide* to provide information to assist health professionals, program administrators, educators, parents, and others in promoting good eating and oral health practices to help prevent oral disease in pregnant women, infants, children, and adolescents.

Nutrition and oral health are interrelated. Nutrition and diet can affect overall health and well-being as well as the development and integrity of the oral cavity and the progression of oral diseases. Likewise, oral disease impacts the ability to eat and nutrition status. Caries-causing bacteria in the mouth use sugar in food to make acid that can break down tooth surfaces and create tooth decay (dental caries). Establishment of a dental home promotes individualized caries-preventive strategies, including dietary recommendations and appropriate oral hygiene instruction, as the primary teeth begin to erupt.¹

The U.S. Department of Health and Human Services and the U.S. Department of Agriculture develop dietary guidelines every 5 years to help Americans ages 2 and older make healthy food choices to help prevent chronic disease and enjoy a healthy diet. The *2015–2020 Dietary Guidelines for Americans* emphasize consuming less than 10 percent of calories per day from added sugars.² In addition, the World Health Organization recommends reducing the intake of sugar to less than 10 percent of total energy intake and, to reduce children’s risk for weight gain and dental caries, limiting the intake of sugar to less than 5 percent of total energy intake per day (less than 16 grams of sugar for children ages 4–8).³ Additionally, the American Heart Association recommends reducing sugar consumption in children and adolescents to less than 25 grams of added sugar per day.⁴

The resource guide is divided into two sections. The first section describes materials, such as brochures, fact sheets, guidelines, curricula, and reports published from 2016 through 2019 as well as seminal resources published before 2016. The second section lists federal agencies, national professional associations, resource centers, and national coalitions that may serve as resources.

Our intent is to share resources that are useful and that represent current science and practice. For further information, we encourage you to contact the organizations listed. Your state and local departments of health, state and local oral-health-related associations and societies, state or
The following National Maternal and Child Oral Health Resource Center staff members assisted in the development of this publication: Beth Lowe, Sarah Kolo, and Olivia Pickett. In addition, we are grateful to the following individuals for reviewing the resource guide: Lori Cofano, Lauren Neufeld, Sandy Tesch, Pamella Vodicka, and Julia Wacloff.

References


Materials

Data and Surveillance

DENTAL HEALTH MATTERS

This infographic focuses on the oral health status of children and adolescents in South Dakota. Topics include untreated tooth decay in children ages 6–8 in South Dakota compared to the U.S. population and ways to prevent tooth decay, the number of high school students who have missed school because of problems with their teeth or mouths, the percentage of students in third grade who have not visited the dentist in the past 12 months, and the percentage of children who do not have dental sealants. Information about healthy behaviors and using products containing fluoride is also provided.


Policy

FEEDING INFANTS AND YOUNG TODDLERS: USING THE LATEST EVIDENCE IN WIC SETTINGS

This brief summarizes feeding guidelines for pregnant women and infants and children from birth to age 2 that are relevant to the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Topics include WIC services and an overview of the feeding guidelines. The applications of the feeding guidelines in the WIC setting, including staff training on the guidelines, participant education, and breastfeeding support, are also discussed.


HEALTHY BEVERAGE CONSUMPTION IN EARLY CHILDHOOD: RECOMMENDATIONS FROM KEY NATIONAL HEALTH AND NUTRITION ORGANIZATIONS—CONSENSUS STATEMENT

This consensus statement provides evidence-based recommendations on beverage consumption for infants and children from birth to age 5. The document includes definitions of beverage types and describes the process for developing the recommendations. It offers information about beverages that are best for infants and children, beverages to limit, and beverages to avoid. For each beverage, recommended amounts to give infants and children of different ages are provided.

HEALTHY FUTURES: ENGAGING THE ORAL HEALTH COMMUNITY IN CHILDHOOD OBESITY PREVENTION

This special supplement includes articles prepared for the Healthy Futures: Engaging the Oral Health Community in Childhood Obesity Prevention National Conference. The articles discuss the science related to preventing childhood obesity and reducing children’s consumption of sugar-sweetened beverages and strategies that oral health professionals and organizations can employ to prevent childhood obesity. The articles examine (1) the science related to preventing childhood obesity, (2) the science related to reducing children’s consumption of sugar-sweetened beverages or sugar-containing beverages, and (3) strategies that could be employed by oral health professionals and organizations and others to prevent childhood obesity.


HEALTHY FUTURES: ENGAGING THE ORAL HEALTH COMMUNITY IN CHILDHOOD OBESITY PREVENTION NATIONAL CONFERENCE—EXECUTIVE SUMMARY

This executive summary provides an overview of the Healthy Futures: Engaging the Oral Health Community in Childhood Obesity Prevention National Conference and key findings. It also presents a list of proposed strategies for preventing childhood obesity in the following areas: research, dental students’ education and training, oral health professionals’ continuing education and training, advocacy/policy, consumer-based education interventions, interprofessional collaboration, and reimbursement.


HEALTHY FUTURES: ENGAGING THE ORAL HEALTH COMMUNITY IN CHILDHOOD OBESITY PREVENTION NATIONAL CONFERENCE—EXECUTIVE SUMMARY

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KIDS AND DRINKING WATER: A GLASS HALF FULL OR HALF EMPTY?

This paper discusses the importance of children drinking water. Topics include information about the importance of water consumption in preventing chronic disease; obstacles to ensuring that students have access to clean, safe drinking water in schools; drinking water challenges in communities; and opportunities for funders to increase children’s access to and consumption of free, safe drinking water. Improving access, prioritizing education, funding data collection and research, promoting multisectoral partnerships, and advocating for supportive policies are also discussed. In addition, the paper presents a policy framework to support healthy development in children by investing in accessible, safe drinking water.


NUTRITION COUNSELING FOR OBESITY PREVENTION IN CHILDREN: A HANDBOOK FOR THE DENTAL COMMUNITY

This handbook is intended to increase the knowledge of dental students, residents, and fellows and dental hygiene students about obesity prevention, nutrition, and nutrition counseling for children. The handbook provides an overview of childhood obesity and its consequences, recommendations that support optimal oral health and healthy weight in children, and tools that oral health professionals can use to support childhood-obesity-prevention efforts.

Professional Education and Training

BRIGHT FUTURES: GUIDELINES FOR HEALTH SUPERVISION OF INFANTS, CHILDREN, AND ADOLESCENTS (4TH ED.)

These guidelines provide background information and recommendations for promoting the healthy development of infants, children, and adolescents from birth to age 21, as well as standards for health supervision visits. Topics include lifelong health for families and communities, family support, health for children and adolescents with special health care needs, development, mental health, weight, nutrition, physical activity, oral health, use of social media, and safety and injury prevention. A companion pocket guide is also available. [Funded by the Maternal and Child Health Bureau]


BRUSH UP ON ORAL HEALTH

This series of tip sheets provides Head Start staff with information on current practice, practical tips to promote good oral health, and recipes for healthy snacks. Topics include teething, fluoridated community water, healthy drink choices, healthy bedtime habits, oral health during pregnancy, and preventing oral disease.


CAVITY FREE KIDS: HOME VISITING RESOURCE

These resources for home visitors are designed to help families establish good oral health habits and obtain oral health care. The items are intended to complement the materials that home visitors use with families and can be incorporated into topics that home visitors address with families. Topics include the importance of primary teeth, brushing and flossing, eating healthy foods, drinking water, and visiting the dentist. Setting and reaching oral health goals and addressing oral health problems or emergencies are also discussed.


CHECKLIST FOR CHILD CARE STAFF: BEST PRACTICES FOR GOOD ORAL HEALTH

This checklist provides items that child care program staff can check to reflect what they are doing to promote good oral health for infants, toddlers, and young children. Items not checked can serve as goals to help staff work toward improving their practices related to food and drinks and oral hygiene. The checklist is divided into three main categories: infants from birth to age 1, toddlers ages 1–3, and young children ages 3–5. Within each category, items to check are listed in two subcategories: foods and drinks and oral hygiene. The checklist is written in simple language and is available in English and in Spanish.


CHILDREN’S DRINK FACTS 2019: SALES, NUTRITION, AND MARKETING OF CHILDREN’S DRINKS

This report focuses on the sales, nutrition, and marketing of children’s drinks, defined as drinks that companies promote as products intended for children ages 2–11 to consume. The report identifies and analyzes sweetened drinks, flavored water, and drink mix categories as well as
COOK’S CORNER: RECIPES FOR HEALTHY SNACKS—COMPILED FROM BRUSH UP ON ORAL HEALTH (2ND ED.)

This cookbook includes recipes to support children’s healthy growth and development with ingredients that are fresh, low in fat, and high in fiber. None of the recipes include added sugar. The recipes can be used by early care and education programs to help meet updated nutrition standards from the federal Child and Adult Care Food Program. The cookbook is divided into recipes for dairy, fruit, vegetables, and more. Each recipe includes a list of ingredients, directions, a picture of the prepared recipe, and, where needed, safety tips. It is available in English and in Spanish.


GOOD DENTAL HEALTH: A PARTNERSHIP BETWEEN YOU & ME

This flip book for health professionals to share with parents covers the basics of good oral health in infants and young children. Each page is double-sided and designed as a teaching tool. The patient-facing pages feature simple text (in English and in Spanish) and pictures and illustrations to educate families. On the back of the patient-facing pages are conversation guidelines for health professionals. The flip book also includes a chart to help health professionals establish self-management goals for families to work on at home.


HEALTHY SMILES FOR MOM AND BABY: IMPLEMENTATION GUIDE

This guide describes an approach to increasing pregnant women’s and infants’ utilization of oral health services by implementing two models for obtaining oral health care: (1) maintaining a closed referral system and (2) integrating preventive oral health services into Special Supplemental Nutrition Program for Women, Infants and Children (WIC) services. The guide also highlights education activities for health professionals and social services professionals who provide care to pregnant women and parents with infants. [Funded by the Maternal and Child Health Bureau]


ORAL HEALTH CARE DURING PREGNANCY: PRACTICE GUIDANCE FOR TEXAS PRENATAL AND DENTAL PROVIDERS

This document provides guidance on oral health care during pregnancy for prenatal care health professionals and oral health professionals in Texas. Topics include myths vs. facts, guidance for health professionals, oral conditions during pregnancy, and oral health pharmacologic considerations for pregnant women. It also includes resources for consumers, available in English and in Spanish, about good oral health during pregnancy and during infancy as well as a dental referral form for pregnant women. The document was adapted from Oral Health Care...
**Setting Goals for Oral Health During Pregnancy**

This checklist for home visitors and their clients in Maryland is designed to help them establish goals for oral health during pregnancy. Topics include making a dentist appointment, going to the dentist, brushing with fluoridated toothpaste, flossing, drinking tap water, drinking less soda and other sugar-sweetened beverages, and eating fruits and vegetables. The checklist is available in English and in Spanish. [Funded by the Maternal and Child Health Bureau]


This curriculum for health professionals provides oral health education to parents of infants and children from birth through age 3. The curriculum is composed of 10 modules, and each module provides background information and a sample agenda. Topics include oral health and infancy, teething, primary teeth, the age 1 dental visit, oral health screenings, tooth decay, fluoride, toothbrushing and flossing, weaning, nutrition and feeding habits, oral habits, dental first aid, medications and oral health, and special conditions. The client handouts are available in English and in Spanish.


**Thanks for Protecting Us 2**

This video discusses the importance of healthy primary teeth to children's overall health and how health professionals can play a role in preventing oral disease in infants and young children by administering fluoride varnish as soon as the first tooth emerges. The video also discusses other ways that health professionals can encourage good oral health at well-child visits, including providing information about toothbrushing, proper use of bottles, good nutrition, how to establish a dental home, and the importance of establishing a dental home.


**Public Education**

**5-2-1-0 Healthy Choices Count! Action Guide—Early Care, Education, After-School**

This guide is part of the 5-2-1-0 Healthy Choices Count Program, an evidenced-based prevention framework to promote healthy habits. The guide discusses how early care and education sites can adopt a whole child approach to wellness and education by providing healthy foods in the classroom and cafeteria and creatively increasing physical activity throughout the day. The guide explains why the 5-2-1-0 method works and presents 10 strategies for success. It also discusses how to implement the program in an early care or education site in five steps: engage, register, implement, share, and check in.
BABY STEPS FOR TINY TEETH

This video shows a conversation between a new mother and her friend. Topics include the importance of not cleaning an infant's pacifier with saliva, not putting a child to sleep with a bottle, and not giving infants juice. The video provides a dentist's perspective on why it is important for infants to visit the dentist. It shows the dentist examining an infant while explaining each step of the process. Tips on how to check an infant's mouth for tooth decay and how to clean an infant's gums and teeth are provided. The video is available in English and in Spanish.


BRUSHING FOR TWO: A HEALTHY START FOR YOUR BABY

This tip sheet for pregnant women explains why oral health is important and how to maintain good oral health during pregnancy. Contents include information about oral hygiene, nutrition, and the safety of receiving oral health care during pregnancy. The tip sheet is printed in English on one side and in Spanish on the other.

FOODS FOR HEALTHY TEETH (REV.)

This brochure for consumers focuses on nutrition and oral health. Topics include healthy foods, foods and drinks to avoid, juice recommendations, xylitol, and prevention of tooth decay. The brochure is available in Amharic, Arabic, Burmese, Dari (Afghan Persian), English, Haitian Creole, Karen, Kinyarwanda, Levantine (Arabic), Pashto, Spanish, and Sudanese (Arabic).


FROM DROOL TO SCHOOL: CARING FOR YOUR CHILD’S ORAL HEALTH FROM THE DROOL YEARS THROUGH THE SCHOOL YEARS (UPD.)

This booklet for parents provides information on how to care for an infant’s or child’s oral health from birth through the elementary school years. The booklet also includes information about how to find and pay for oral health care and activities that parents can do with their child to help them learn together about the importance of good oral health. The booklet is available in Arabic, English, and Spanish. A brochure and a video are also available.


HEALTHY HABITS FOR HAPPY SMILES

This series of handouts for pregnant women and parents of infants and young children provides simple tips on nutrition and oral health issues. Topics include brushing a young child’s teeth, choosing healthy drinks for young children, encouraging young children to drink water, giving young children healthy snacks, taking care of oral health for pregnant women, and taking care of an infant’s oral health. The series is available in English and in Spanish.


A HEALTHY MOUTH FOR YOUR BABY

This document is intended to help parents keep their infant’s mouth healthy. It lists five steps that parents can take: Protect the infant’s teeth with fluoride, check and clean the infant’s teeth, feed the infant healthy food, don’t put the infant to bed with a bottle, and take the infant to the dentist before age 1. The text is accompanied with colorful illustrations. A conversation between two mothers in which one learns from the other about how to keep a baby’s teeth healthy is included. The document is available in English and in Spanish.


A HEALTHY MOUTH FOR YOUR BABY (FOR AMERICAN INDIANS AND ALASKA NATIVES)

This document is intended to help American Indian and Alaska Native parents keep their infant’s mouth healthy. It lists five steps that parents can take: protect the infant’s teeth with fluoride, check and clean the infant’s teeth, feed the infant healthy food, don’t put the infant to bed with a bottle, and take the infant to the dentist before age 1. The text is accompanied with colorful illustrations. A conversation between two sisters in which one learns from the other about how to keep a baby’s teeth healthy is included.

HEALTHY MOUTHS FOR YOU AND YOUR BABY

This video provides information about what mothers can do to promote good oral health in their infant or young child and why it is important to do so. The video shows an oral health professional demonstrating how to clean the infant’s mouth and observing while the mother cleans the infant’s mouth.


I LIKE MY TEETH (ORAL HEALTH POSTERS)

These posters for consumers share simple, positive messages about brushing children’s teeth with fluoridated toothpaste, drinking fluoridated water, eating a healthy diet, and talking to the dentist or doctor about fluoride treatments for children. The posters are available in English and in Spanish.


INFANT NUTRITION AND ORAL HEALTH

This handout for parents provides information about nutrition to promote children’s oral health. Topics include what sugar does to teeth, feeding with a bottle and a cup, healthy foods for young children, and the best times to give children foods containing sugar. The document is available in English and in Spanish. [Funded by the Maternal and Child Health Bureau]
ORAL HEALTH AND PREGNANCY

This brochure for consumers provides information about the importance of good oral health habits during pregnancy for women and their infant. The brochure provides information about oral health coverage for women in Maryland, the safety of receiving oral health care while pregnant, and oral conditions that can occur during pregnancy. Tips about how to keep the mouth healthy during pregnancy are provided, and myths and facts about oral health during pregnancy are presented. The resource is available in English and in Spanish. [Funded by the Maternal and Child Health Bureau]


ORAL HEALTH BEFORE DURING AND AFTER PREGNANCY

This video for pregnant women focuses on maintaining good oral health before, during, and after pregnancy. Topics include the importance of pregnant women understanding the value of maintaining their oral health, changes during pregnancy that can affect a women’s oral health, how a woman’s oral health can affect the oral health of her unborn child, and the safety and importance of getting oral health care during pregnancy. Tips on how to prepare for dental visits during pregnancy, as well as information about nutrition during pregnancy and what to do for women who experience nausea, are also provided. The video is available in English and in Spanish. [Funded by the Maternal and Child Health Bureau]


ORAL HEALTH DURING PREGNANCY/ BABY’S FIRST DENTAL VISIT

This bookmark for pregnant women provides information about nutrition and oral health during pregnancy and infancy. The bookmark offers tips on oral hygiene, nutrition, and dental visits during pregnancy on one side and during infancy on the other. [Funded by the Maternal and Child Health Bureau]


ORAL HEALTH FACT SHEETS

These fact sheets for consumers provide information on a variety of oral health topics. Topics include dental benefit coverage, dental caries, fluoride, general anesthesia and oral sedation, gum disease, mouthguards, nutrition, oral cancer, oral piercing, pregnancy, sealants, smokeless tobacco, and xylitol. The fact sheets are available in English, Chinese, Hmong, Russian, Spanish, and Vietnamese.


PREGNANCY AND DENTAL HEALTH: WHAT YOU NEED TO KNOW

This postcard provides information about what pregnant women need to know about oral health during pregnancy. Topics include morning sickness, changes in the mouth, the importance of healthy eating, and oral health during pregnancy. The postcard is written in simple language. [Funded by the Maternal and Child Health Bureau]

PREGNANCY AND ORAL HEALTH

This fact sheet for consumers provides information about the importance of good oral health during pregnancy for pregnant women and their infant. Topics include the importance of oral hygiene, getting oral health care, and good nutrition during pregnancy. Tips for choosing healthy snacks and drinks, how to care for the mouth if a woman has morning sickness, and finding a dentist are included.


RETHINK YOUR DRINK, CHOOSE WATER!

This infographic provides information about sugar-sweetened beverages (SSBs) and tips on healthy alternatives. Topics include the potential impact of SSB consumption on oral health; the amount of sugar in different beverages; and recommended daily limits on sugar for infants, children, adolescents, and adults. Information about reading nutrition labels, limiting juice, and choosing water is provided.


SHARE THE LOVE, SHARE THE WATER

This video is designed to encourage families to drink water. The video also provides information about avoiding beverages containing sugar to prevent diseases such as diabetes and dental caries.


SUGAR BITES

These brochures, posters, videos, and web graphics are part of a public-awareness campaign aimed at preventing the development of chronic diseases by encouraging parents to choose water for young children instead of drinks that are high in sugar. The resources focus on reducing children’s risk for obesity, dental caries, and diabetes by reducing their consumption of flavored milk, juice drinks, soda, and sports drinks. The resources are available in English and in Spanish.


TAKE CARE OF YOUR CHILD’S BABY TEETH

This video for parents explains why primary teeth are important for children. Tips for soothing infants who are teething, promoting healthy primary teeth, and taking infants and young children to the dentist are provided. The video demonstrates how to brush an infant’s or child’s teeth and the appropriate amount of fluoride toothpaste. Also discussed are problems in the mouth that need immediate attention from a dentist. In addition, the video explains what kind of foods and drinks are best for infants’ and children’s oral health and overall health.

WHY EARLY DENTAL VISITS MATTER

This video for parents explains the importance of the age 1 dental visit. Oral health professionals discuss good oral hygiene and nutrition and how early and regular professional oral health care can help to establish a positive professional-family relationship and healthy child development. The video is presented in English with Spanish subtitles.


WHY FLUORIDE IN YOUR TAP WATER IS A GOOD THING

This video explains why adding fluoride to community water systems is safe and effective at preventing tooth decay. The video features commentary from oral health professionals and pediatric health professionals about the value of community water fluoridation for children and adults.

Organizations
Organizations

ACADEMY OF NUTRITION AND DIETETICS
120 South Riverside Plaza, Suite 2190
Chicago, IL 60606-6995
Telephone: (312) 899-0040
Website: www.eatright.org

The Academy of Nutrition and Dietetics works to improve the nation’s health and advance the profession of dietetics through research, education, and advocacy. The academy also provides expert testimony at hearings, comments on proposed federal and state regulations, and develops position statements on food and nutrition issues.

AMERICAN ACADEMY OF PEDIATRIC DENTISTRY
211 East Chicago Avenue, Suite 1600
Chicago, IL 60611-2637
Telephone: (312) 337-2169
Website: www.aapd.org

The American Academy of Pediatric Dentistry is committed to promoting optimal oral health and oral health care for infants, children, and adolescents, including those with special health care needs.

AMERICAN ACADEMY OF PEDIATRICS
Section on Oral Health
141 Northwest Point Boulevard
Elk Grove Village, IL 60007-1098
Telephone: (800) 433-9016
E-mail: oralhealthinfo@aap.org
Website: www.aap.org/oralhealth

The American Academy of Pediatrics’ Section on Oral Health focuses on improving communication between pediatrics and pediatric dentists and improving advocacy for oral health, nutrition, and early diagnosis and prevention of oral disease in children, including those with special health care needs.

AMERICAN DENTAL ASSOCIATION
211 East Chicago Avenue
Chicago, IL 60611-2678
Telephone: (312) 440-2500
Website: www.ada.org

The American Dental Association is committed to the public’s oral health and to ethics, science, and professional advancement. Initiatives include those related to advocacy, education, research, and the development of standards.

AMERICAN DENTAL HYGIENISTS’ ASSOCIATION
444 North Michigan Avenue, Suite 3400
Chicago, IL 60611
Telephone: (312) 440-8900
Website: www.adha.org

The American Dental Hygienists’ Association works to advance the art and science of dental hygiene, promote standards of education and practice in the profession, and provide professional support and educational programs.

CENTERS FOR DISEASE CONTROL AND PREVENTION
Division of Oral Health
4770 Buford Highway, N.E., Mailstop F-10
Atlanta, GA 30341-3717
Telephone: (770) 488-6054
E-mail: oralhealth@cdc.gov
Website: www.cdc.gov/OralHealth

The Centers for Disease Control and Prevention, Division of Oral Health, provides leadership in preventing and controlling oral disease, promoting oral health, and improving the quality of community water fluoridation.
The Robert Wood Johnson Foundation’s Healthy Eating Research: Building Evidence to Prevent Childhood Obesity supports research on environmental and policy strategies that have the greatest potential to improve healthy eating and weight patterns among children to prevent childhood obesity, especially among groups at high risk for obesity: black, Latino, American Indian, and Asian/Pacific Islander children and children who live in communities where a high proportion of families have low incomes.

The U.S. Department of Agriculture, Food and Nutrition Service, provides leadership on food, agriculture, natural resources, rural development, nutrition, and related issues based on public policy, science, and effective management. The department strives to provide all Americans access to a safe, nutritious, and secure food supply.