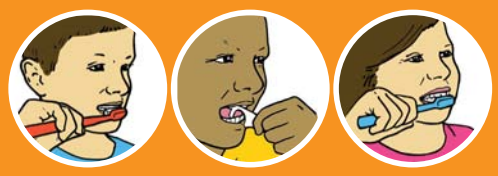
Healthy Smiles for Autism



Oral Hygiene Tips for Children with Autism Spectrum Disorder

Smithsonian Institution
Affiliations Program

NATIONAL MUSEUM OF DENTISTRY
smile-experience.org

Healthy Smiles for Autism
Table of Contents

1. Oral Hygiene Tips
2. Oral Hygiene Facts
3. A Lifetime of Sparkling Smiles
4. Choose Your Oral Health Tools
5. Create a Place to Brush and Floss
6. We're Ready to Brush and Floss
7. Tips for Behavior Modifications
8. Tips for Sensory Modifications
9. More Helpful Tips
10. Let's Find a Dental Team
11. Let's Get Ready to Visit the Dentist
12. At the Dental Office
13. Parent Resources
14. Visual Sequencing Cards: Brushing and Flossing
19. Visual Sequencing Cards: Visiting the Dentist
21. Social Story: I Can Brush My Teeth
25. Social Story: I Can Floss My Teeth with My Loose Floss
27. Social Story: I Can Floss My Teeth with My Flosser
28. Social Story: My Visit to the Dentist
31. Picture Dictionary

Special Thanks

The National Museum of Dentistry partnered with Kennedy Krieger Institute's Center for Autism and Related Disorders and the University of Maryland Dental School to develop this best practices guide to oral health care for children with autism spectrum disorder.

Special thanks to Elizabeth Stripling, Ed.D., Rondalyn Whitney, Ph.D., OT/L, Paula Danquah-Brobby, MS, BCBA, Brian Freedman, Ph.D. and Catherine Walton, MS, at Kennedy Krieger Institute and Dr. Jill Wallen at the University of Maryland for their help in developing this guide.

Healthy Smiles for Autism is made possible by the support of Henry Schein Cares and Blakeslee Advertising, and a generous gift from Dr. Irwin and Lucia Smigel.

Oral Hygiene Tips for Children with Autism Spectrum Disorder

There are many ways to help your child develop the skills he or she needs to take care of his or her mouth. Use this guide to start an oral health routine at home. In time, your child will learn how to independently complete each step in the routine.

The National Museum of Dentistry develops unique learning opportunities to teach you and your children how to have a healthy mouth for life. Oral health is an important part of overall health.

Due to the Centers for Disease Control and Prevention's recent report on the number of children with autism spectrum disorder in the United States, the museum discovered a need to offer parents of children with autism spectrum disorder assistance. This guide empowers parents by providing tools to effectively teach a lifelong oral health routine and prepare for a child's first dental visit.

Oral Hygiene Facts

- 13% of U.S. children and adolescents ages 17 and under (over 9 million) have a special health care need.[1]
- One in five households include children with special health care needs.[2]
- Autism affects 1 in every 110 kids and 1 in every 70 boys in the United States.[3]
- Oral hygiene may be the most important risk indicator for new cavities in children with autism spectrum disorder.[4]
- Children with special needs have higher rates of poor oral hygiene, gingivitis, and periodontal disease than the general public.[5]
- Medications, special diets, and oral motor habits can cause oral health problems for many children with special needs.[6]
- Dental care is the leading unmet health care need among children with special needs.[7]
- Across all income levels, children with special needs are almost twice as likely to have an unmet oral health care need than their peers without special needs.[8]

[1] National Maternal and Child Oral Health Resource Center, Georgetown University, Oral Health for Children and Adolescents with Special Health Care Needs: Challenges and Opportunities (Washington, DC, 2005), 1.

[2] Family Voices, Inc., Who Are Children With Special Health Care Needs, http://www.familyvoices.org/info/cshcn.php (April 2, 2010).

[3] Centers for Disease Control (CDC). Prevalence of Autism Spectrum Disorders --- Autism and Developmental Disabilities Monitoring Network, United States, 2006. MMWR 2009, 59(SS10), 1-20, http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5810a1.htm (accessed October 5, 2010).

[4] Jennifer Marshall, Barabara Sheller, and Lloyd Mancl, "Caries-risk Assessment and Caries Status of Children with Autism," Pediatric Dentistry 32, no. 1 (2010): 75

[5] National Institute of Dental and Craniofacial Research, Practical Oral Care for People with Developmental Disabilities (Bethesda: NIH, 2009), 1.

[6] Ibid.

[7] Oral Health for Children and Adolescents with Special Health Care Needs, 1.

[8] Ibid.

A Lifetime of Sparkling Smiles

Brushing and flossing—along with regular dental visits—are the keys to a healthy mouth. Good oral health is important for your child's overall health. Helping your child learn an oral health routine will give him or her the tools to have a lifetime of sparkling smiles.

1 Parents are key

to their child's success in learning good oral health care.

2 When you brush and floss your teeth,

you are helping your child learn good oral health care.

3 When you visit the dentist,

your child sees the importance of having help in taking care of your teeth.

4 When you take care of your child's teeth,

you are helping him or her understand how brushing and flossing feels.

Choose Your Oral Health Tools

Walking down the oral health care aisle of your local store can be overwhelming. Choosing the right toothbrush, toothpaste, and floss for your child is important for his or her oral health. Take time to find products that work for your child, and you're sure to make brushing and flossing a success every time.

1 Let's pick a toothbrush

Toothbrushes come in different shapes, colors, and sizes. Be sure to choose a toothbrush that is the right size for your child's mouth.

Pick a soft-bristle toothbrush to protect your child's teeth and gums.

Modify the toothbrush handle if your child has trouble holding a toothbrush. Consider placing a tennis ball or foam grip on the handle so it's easier to hold.

After your child has mastered using a manual toothbrush, you may want to switch to an electric toothbrush. Start with a battery-operated toothbrush for your child to feel the vibrating motion. Once your child is comfortable with the vibrating sensation, you can transition to an electric toothbrush.

2 What's your favorite toothpaste flavor?

Toothpaste comes in many different textures and flavors, so you're bound to find something your child can enjoy.

Try out a variety of brands to find a flavor and texture your child likes. A pediatric dentist has more flavors than you can find in stores. Don't give up, there's a flavor for everyone—even chocolate!

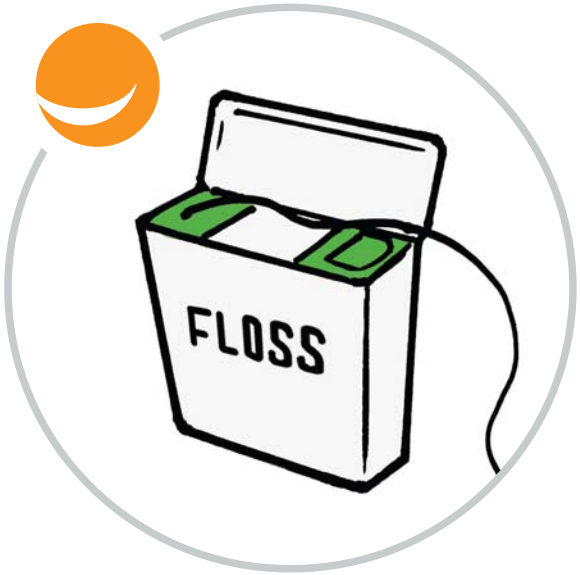
Look for a fluoride toothpaste. Fluoride helps protect the teeth from cavities. However, if your child has a hard time swallowing, choose a non-fluoridated toothpaste instead.

3 Don't forget to floss!

Floss comes in a variety of sizes and flavors. Let your child try different kinds to find one that is comfortable and tastes good.

Choose the right thickness. Thicker floss works well on teeth that have some space in between them. Thinner floss is good for teeth that are closer together.

Try a flosser. Flossers come in manual and electric varieties, and may make flossing easier for your child. Experiment with different types to find something that works.



Create a Place to Brush and Floss

The bathroom is the ideal place to brush and floss; but, if your child is uncomfortable, it's okay to choose another room. Just remember it may be hard to transition your child from one room to another.

1 Set up a specific place for brushing and flossing

This will help your child associate the room with a routine.

Create a special place for your child's dental supplies. Be sure to keep them in the room where your child will be using them.

2 Know your child's needs

Choose a place that is relaxing and addresses your child's sensory needs (light, sound, etc.).

3 Be consistent

Return to the same room each time you brush and floss.

We're Ready to Brush and Floss

Follow these steps to help your child brush and floss like a pro.

1 Show by example

Have your child watch you brush and floss your teeth. Explain and demonstrate each step as you go.

2 Open wide

Teach your child to open his mouth to brush and floss.

3 Touch

Before any brushing begins, touch the toothbrush to your child's hands and lips.

4 Brush and floss your child's teeth

This will help your child discover how brushing and flossing feels.

5 Set the oral care routine

Follow these steps each time:

- Stand behind your child with his head on your chest. If this is uncomfortable for either of you, stand in front of the child.
- For children under the age of three, use a small smear of toothpaste. For older children, use a pea-size amount.
- Guide your child's hand to his mouth.
- Assist your child in brushing the outside of his teeth, using a gentle circular motion.
- Brush the inside and chewing surfaces of his teeth, as well as his tongue.
- Have your child spit out any excess toothpaste and wipe his mouth.
- Hold floss in a "C" shape and move it up and down between teeth. Only floss one tooth at a time.

6 Transition

Slowly let your child take over each step of the process. Always offer help if your child is having difficulties.

Tips for Behavior Modifications

Every child learns differently. Here are a variety of suggestions to help your child brush and floss successfully.

1 Offer choice

Let your child pick out his or her own toothbrush. You may want to show him or her different styles, colors, and of course, the cartoon character toothbrushes. Let your child choose his or her favorite toothpaste and floss flavors and consider experimenting with flossers.

2 Celebrate

Offer praise and celebrate each brushing and flossing step that is completed by your child. For example, celebrate when your child enters the bathroom to brush his or her teeth. Praise your child when he or she puts the toothbrush in his or her mouth.

3 Shape your child's behavior

Once your child steps into the bathroom, offer some form of praise and positive reinforcement (reward, cheer, high five). After celebrating the completed step, move onto the next one. Continue this pattern until he or she has finished brushing and flossing.

Your child may not be able to complete all the steps the first time. Keep building upon each step until your child can brush and floss on his or her own. Be patient. This process may take days, weeks, or even months.

4 Earn a reward

Consider using a token board. Write or draw each step on the board. When your child completes a step, place a sticker next to it. Once your board has been filled with stickers, give your child a prize. Based on your child's needs, the board can be created for daily, weekly, or monthly oral care routines.

You could also try a rewards jar. Have your child drop a token (marble, penny, etc) into the jar each time he or she completes a step. When the jar is full, give your child a prize. This method also adds opportunities for extra encouragement. When your child is especially brave or compliant, put a handful of tokens in the jar and say 'jackpot!' to let him know something special has happened.

5 Make it a game

Play 'My Turn, Your Turn.' Start by touching your mouth with a toothbrush, and having your child copy your movements. Continue this pattern through all steps of the oral health care routine until it is completed.

6 Distract your child

Sing songs or try brushing your child's teeth while doing an activity he or she enjoys. For example, if he or she likes books, brush your child's teeth while reading him or her a story.

Tips for Sensory Modifications

Many children have a mouth sensitivity that makes brushing and flossing difficult. Here are a few suggestions to decrease their anxiety.

1 Try a "power suit"

Putting on a "power suit" can mean wrapping your child in a blanket, pinning on a cape, or holding him or her on your lap and giving cozy hugs. Hats, scarves, boas and other accessories can also do the trick. Some children benefit from receiving sensory input prior to brushing their teeth to decrease anxiety.

2 Hug it out

Once your child's anxiety is lowered, try completing a step. If your child is still anxious, give him or her a tight hug and then continue with the step when he or she is calm.

3 Desensitize

If your child is sensitive to toothbrushes, start by wiping his or her teeth and gums with a washcloth. Once he or she is comfortable with the washcloth, try using an infant toothbrush that you can put on your finger. Slowly build up to a vibrating infant teether, toothbrush, battery-operated toothbrush, and then an electric toothbrush.

Your child may also be sensitive to toothpaste textures and flavors. Experiment with your child to find one he or she likes.

4 Play Games

Oral motor activity games get your child used to putting something in his or her mouth. Have him or her whistle or play a kazoo in the bathtub. Let him or her drink pudding or a smoothie through a straw.

More Helpful Tips

Here are a few more suggestions to make brushing and flossing a fun and successful experience.

1 Be patient

Work with your child every day. It will take time for your child to learn the routine. Remember to use repetition and offer assistance when needed.

2 Use a visual sequence

A visual sequence is a set of pictures that identify each step in a process or each task to be completed. Providing your child with visual cues can assist him or her in learning the brushing and flossing routine and increases the likelihood your child will learn to independently complete the activity.

Use the visual sequence cards at the back of this guide during your child's oral care routine. Arrange the cards in order to visualize each step of brushing and flossing.

3 Read a social story

Use the social story in this guide, or create your own, to help your child understand each step of the process.

4 Use a timer

A 2-3 minute timer will help your child understand how long each step takes. It will also help him or her to recognize when a step is done. Egg timers, electronic stopwatches, or clocks work well.

5 Offer support

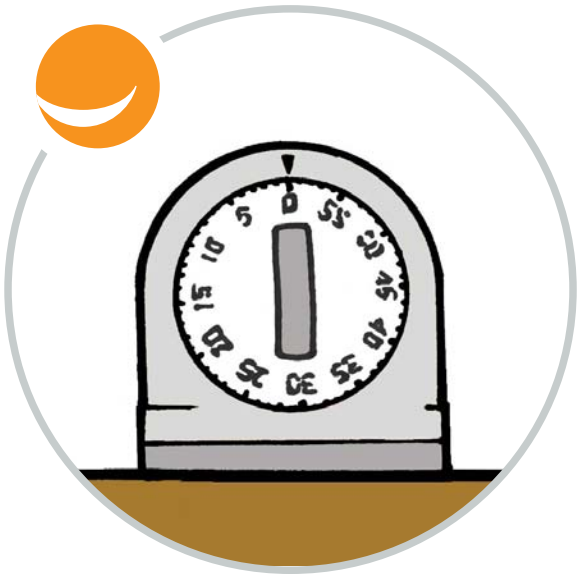
If your child is overly anxious, he or she may have a fear. You need to respect this fear and try different techniques to provide as much support as possible.

6 Be a detective

Try different and creative ways to help your child. For example, you could go on a toothpaste hunt to find the best flavor.

7 Ask for help

Contact your dentist, a nationally registered occupational therapist, or a board certified behavioral therapist for assistance. Your child's school can find specialists in your area.



Let's Find a Dental Team

In order for your child to have a positive dental visit, it is important to find a dental team that is able to accommodate his or her needs. Some dentists have had special training for children with autism. To find a dentist in your area, talk to other parents or parenting groups. There are also helpful resources at the end of this guide.

When making your child's dental appointment:

1 Ask to speak to the dentist

2 Share your concerns

with the dentist. Let him know of any special accommodations that need to be made in order for your child to have a positive experience and explain any oral habits or behaviors your child has.

3 Schedule a pre-visit

Try to arrange a visit for your child to meet the dental team before his or her first dental check-up.

4 Schedule your visit

at a time that works best for your child. Morning appointments are often easier for children.

5 Ask for pictures

of the office and staff. This will help prepare your child to know who and what to expect.

Let's Get Ready to Visit the Dentist

Preparing your child for his dental visit will help everyone have a positive experience.

1 Go over the pictures

Look at pictures of your child's dental team and office. Explain who the people are and what they will do to take care of his teeth.

2 Read the social story

found in this guide, or create one of your own, to demonstrate what happens during a dental visit.

3 Read a book

about going to the dentist with your child.

4 Role play

a visit to the dentist:

- Practice sitting in a reclining chair.
- Put gloves on your hands and let your child feel them in his mouth.
- Hold a flashlight over his head to mimic an exam room light.
- Have your child practice opening his mouth, and use a dental mirror to look inside his mouth.

5 Create a non-verbal communication system

For example, use a two-sided face picture. One side is happy for comfortable; the other side is sad for uncomfortable. Practice this system at home so your child can easily express his comfort level at the dentist.

6 Use the visual sequence cards

in the back of this guide to help your child understand what will happen at the dentist. Make sure to take the cards with you to your visit.

7 Model a dental visit

Have your child watch a family member go to the dentist. Describe each step of the visit as it happens.

At the Dental Office

Follow these simple steps to have a terrific visit.

1 Call in advance

Make sure the dentist is running on schedule to avoid sitting in the waiting room for an extended period of time.

2 Greet the dental team

Let your child meet the dentist and the staff who will be taking care of him.

3 Offer support

Sit with your child throughout his or her exam. Communicate his or her comfort level and concerns to the dental team.

4 Give praise

Use verbal praise or a reward system for each step of the dentist visit your child completes.

5 Stay calm

Talk to your child in a soothing voice. If your child is having difficulty with his or her visit, ask the dentist to finish at another time. Sometimes it takes more than one visit for a child to complete a dental exam.

Parent Resources

Contact these organizations for more information and support.

Parent Support Listservs

autinet@autinet.org

PDD-BPkids-subscribe@yahoogroups.com

Autism-Aspergers-subscribe@yahoogroups.com

Parenting_autism-subscribe@yahoogroups.com

Children_with_autism-subscribe@yahoogroups.com

Other Yahoo Groups and MSN Groups – keyword: autism

Resources for Local Support

Autism Society of America
www.autism-society.org

National Autism Association
www.nationalautismassociation.org

Autism Speaks
www.autismspeaks.org

Autism Information

U.S. Autism and Asperger Association
www.usautism.org

Interactive Autism Network
www.ianproject.org

The Autistic Self Advocacy Network
www.autisticadvocacy.org

Autism Science Foundation
www.autismsciencefoundation.org

Anna Kennedy Online
www.annakennedyonline.com

AutismAsperger.net
www.autismasperger.net

Autism Community
www.autism-community.com

Autism Family Online
www.autismfamilyonline.com

TheAutSpot
www.theautspot.com

Together in Autism
www.togetherinautism.org

Oral Health Resources

Special Care Dentistry Association
www.scdonline.org

National Institute of Dental and Craniofacial Research
www.nidcr.nih.gov

Autism Speaks Family Resource Guide
(locate a dentist in your area who specializes in autism spectrum disorder)
www.autismspeaks.org/community/resources

Sensory Resources

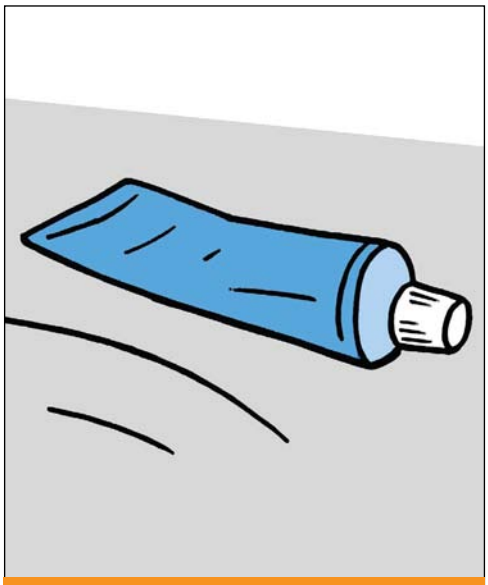
The American Occupational Therapy
www.aota.org

Sensory Processing Disorder Foundation
www.spdfoundation.net

Brushing and Flossing Visual Sequencing Cards

Instructions: Cut out cards along the lines. Place the cards in order and show your child each step of brushing and flossing his or her teeth. Place the cards on a board, mirror, or ledge. Remove each step once it is completed. Use these visual aids each time your child brushes and flosses.

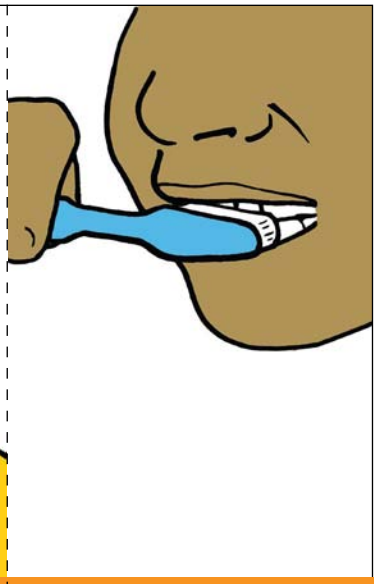
I get my toothbrush.



I get my toothpaste.

I take off the cap and squeeze a pea-size amount of toothpaste onto my toothbrush.

I brush the front of my teeth gently using a circle motion.

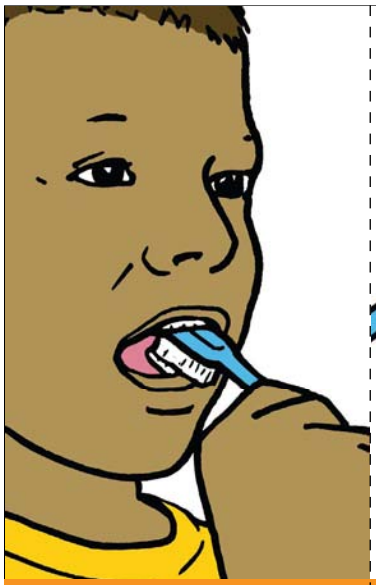


I brush the front of my teeth gently using a circle motion.

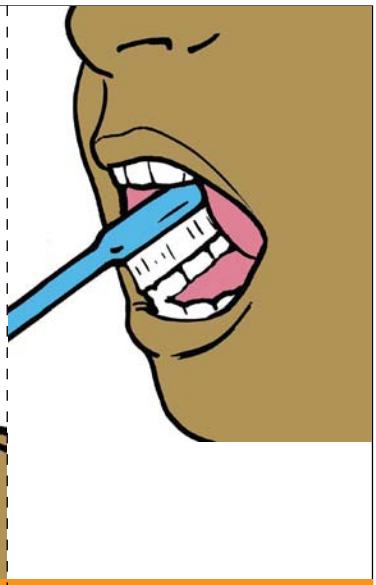
I brush the inside part of my teeth.

I brush the inside part of my teeth.

Brushing and Flossing
Visual Sequencing Cards

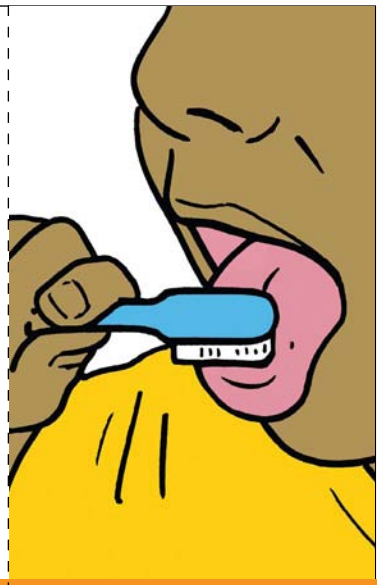


I brush the top of my teeth.



I brush the top of my teeth.

I brush my tongue.



I brush my tongue.

I spit out the toothpaste into the sink.

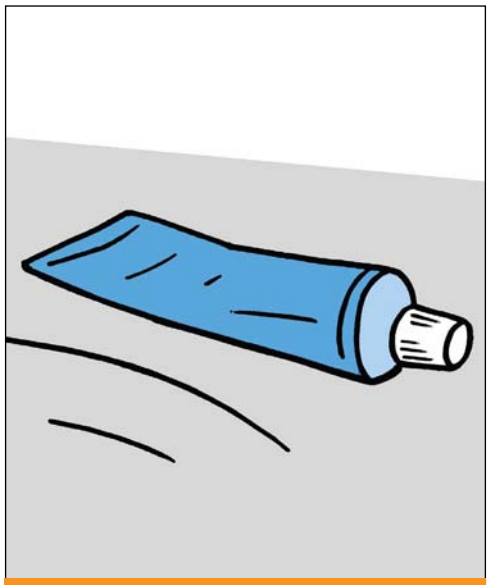
I wipe my mouth with my towel.

I turn the water on and
wash off my toothbrush.

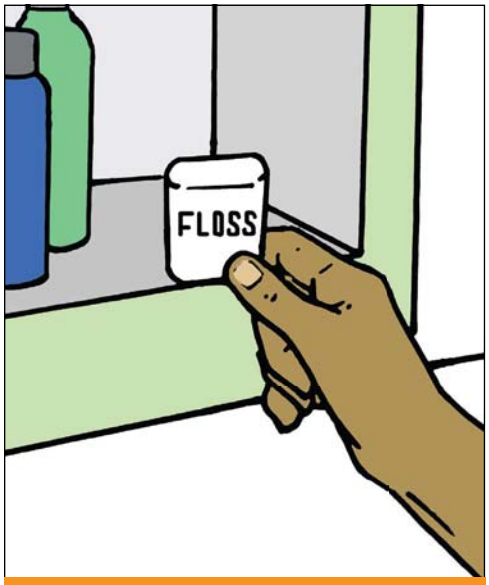
Brushing and Flossing
Visual Sequencing Cards

I turn the water off.

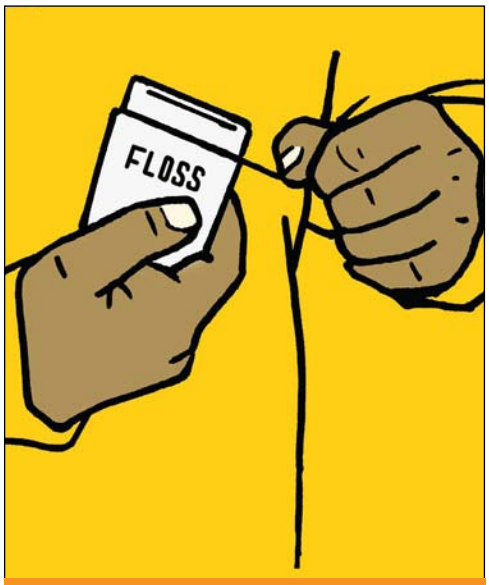
I put my toothbrush back where I got it.



I put the cap back on my toothpaste.
I put my toothpaste back where I got it.



I get my pack of floss.



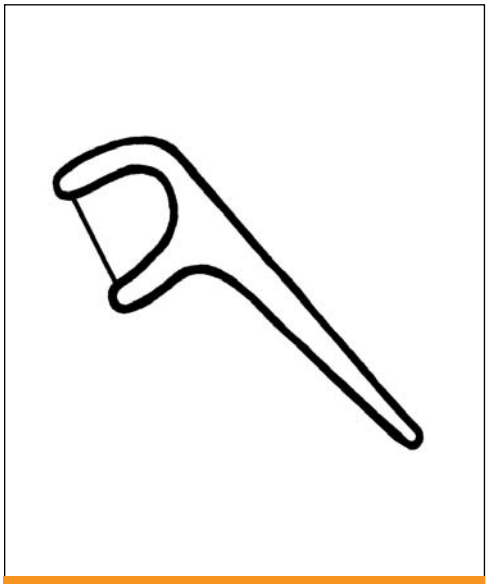
I pull an 18 inch of piece of floss
from the pack and break it off.

I wrap the floss around my middle fingers.

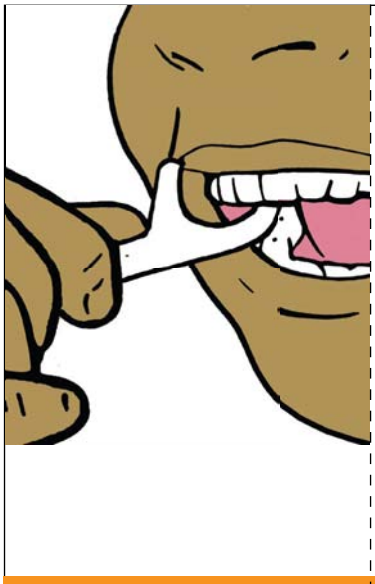
Brushing and Flossing
Visual Sequencing Cards

I hold the floss in a “C” shape and move it up and down my tooth. I floss in between each tooth.

I hold the floss in a “C” shape and move it up and down my tooth. I floss in between each tooth.



I get my flosser.

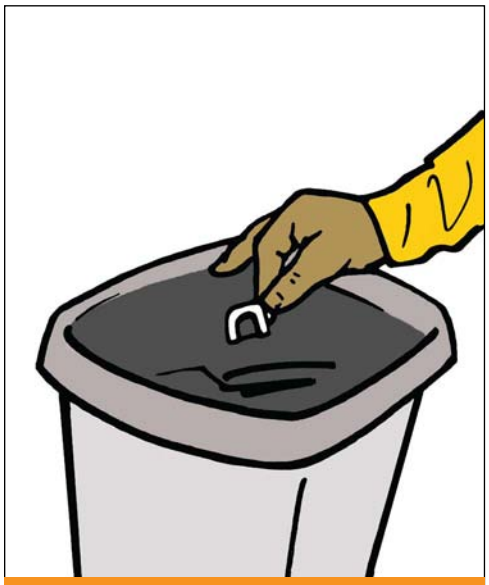


I floss in between each tooth.

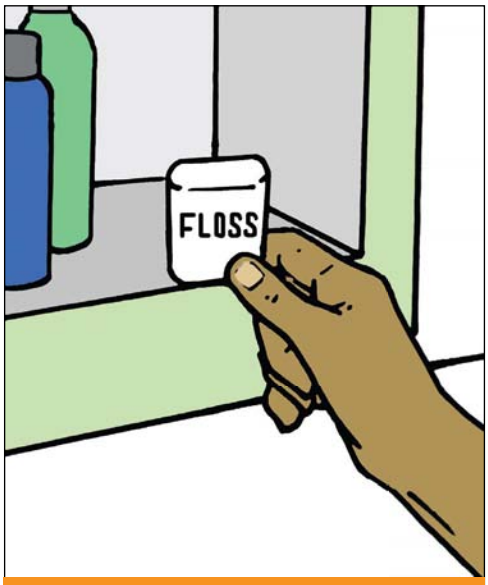
I floss in between each tooth.

I throw the used floss in a trashcan.

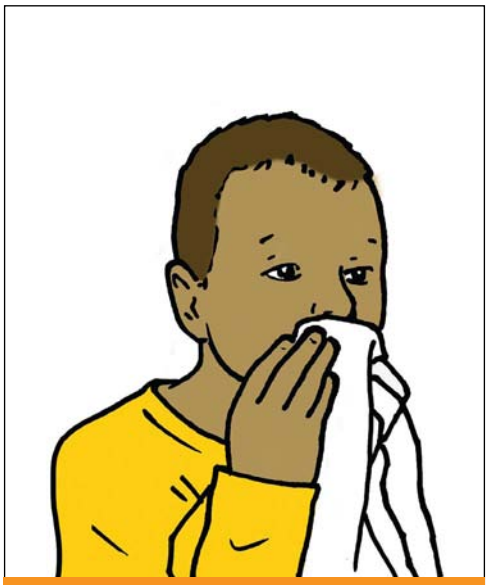
Brushing and Flossing
Visual Sequencing Cards



I throw my used flosser in a trashcan.



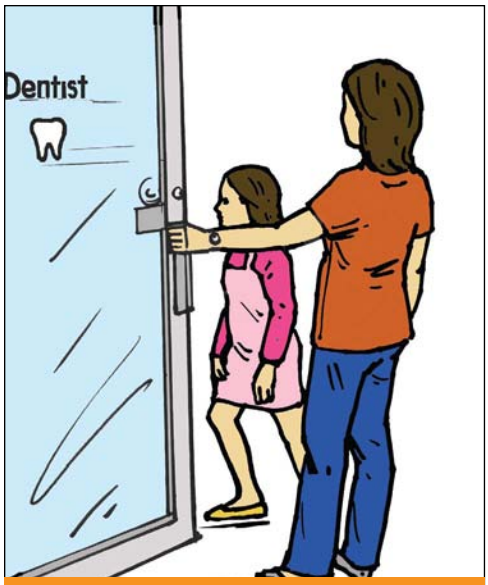
I put my pack of floss back where I got it.



I wipe my mouth with my towel.

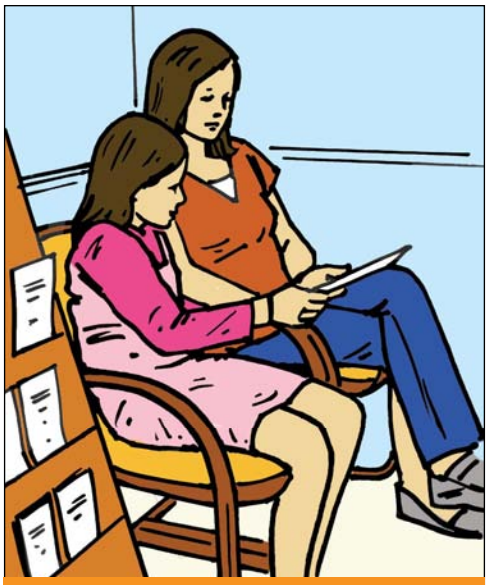
Visiting the Dentist
Visual Sequencing Cards

Instructions: Cut out cards along the lines. Place the cards in order and show your child each step of brushing and flossing his or her teeth. Place the cards on a board, mirror, or ledge. Remove each step once it is completed. Use these visual aids each time your child brushes and flosses.



I am going to the dentist. People everywhere visit the dentist. The dentist helps keep my teeth clean and healthy.

I will check in at the front desk. I will tell the recptionist my name.



I will have a seat in the waiting room. I have to wait for my turn. When my name is called, I will go to a special room to see the dentist.

I will sit in a big chair. It will move and lean back. I have to sit still so the dentist can look at my teeth.

The dentist puts a bib on me. It keeps my clothes clean.

I open mouth so the dentist can see inside. The dentist will shine a bright light on them to see better.

Visiting the Dentist
Visual Sequencing Cards

The dentist will touch my teeth and mouth. He may stretch my mouth. It may feel funny or uncomfortable, but it shouldn't hurt. If my teeth or mouth hurt, I will tell the dentist so he can make them feel better.

The dentist will use some tools to check my teeth and clean them. They may make some noise.

The dentist may take X-rays of my teeth. They help the dentist see how healthy my teeth are. The dentist will put a heavy lead apron on me to take the X-rays.

When the dentist is finished cleaning my teeth, I will rinse my mouth out with water.

I will spit the water out into a sink.

I will wipe my mouth with a paper towel.

I Can Brush My Teeth Social Story

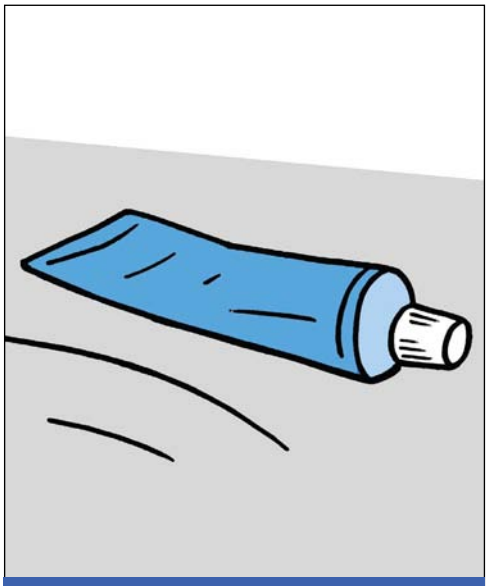
Instructions: Read the social story with your child to learn the routine. Your child may also read the story independently.

I get my toothbrush.

I brush my teeth to keep them healthy.
I brush my teeth in the morning and at night.

I turn on the water and put my toothbrush under it. I can get the bristles wet.

I turn the water off.



I get my toothpaste.

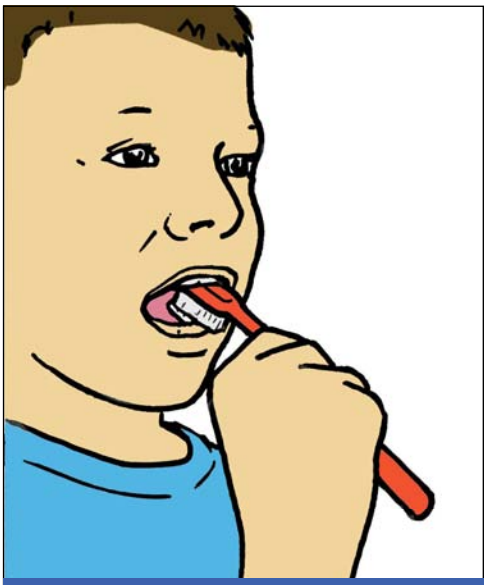
I take off the cap and squeeze a pea-size amount of toothpaste onto my toothbrush.

I Can Brush My Teeth Social Story

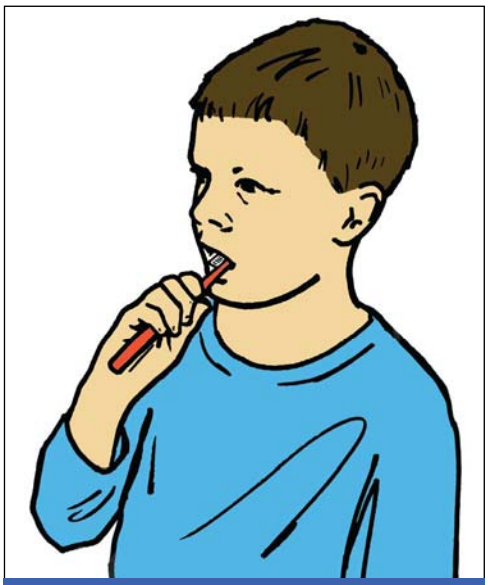
I open my mouth.

I put the toothbrush inside of my mouth.

I brush the fronts of my teeth using a gentle circle motion.



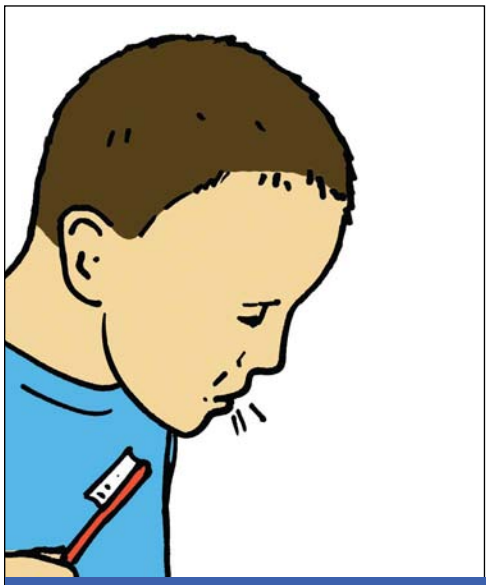
I brush the tops of my teeth.



I brush the inside part of my teeth. I need to brush all the sides of my teeth.

I brush my tongue.

I Can Brush My Teeth
Social Story



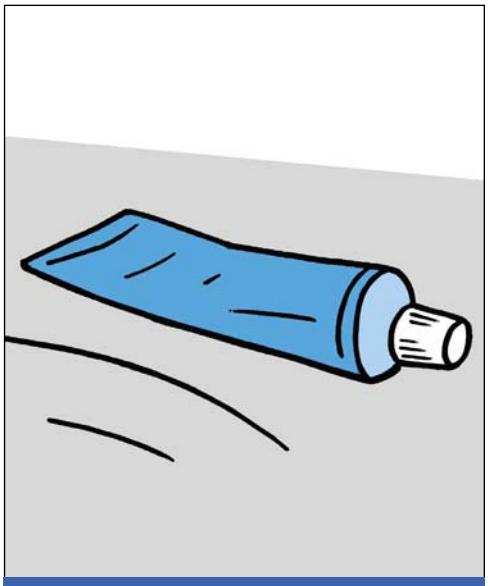
I spit out the toothpaste from my mouth.
I cannot swallow or eat toothpaste. It is only used to clean my teeth.

I wipe my mouth with my towel.

I turn the water on and wash off my toothbrush.

I turn the water off.

I put my toothbrush back where I got it.

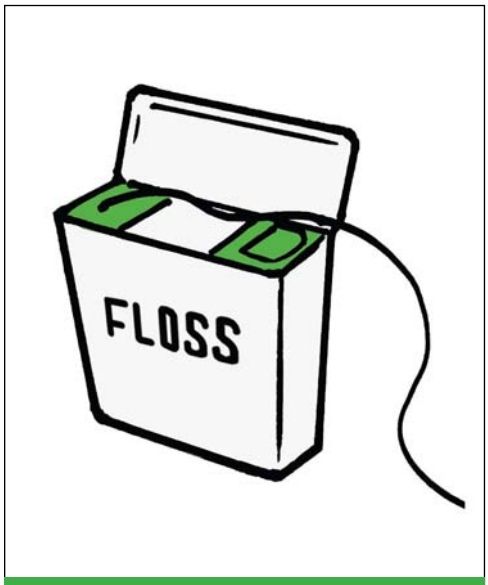


I put the cap back on my toothpaste.
I put my toothpaste back where I got it.

I Can Brush My Teeth
Social Story

Now my teeth are clean and healthy.
It feels good to brush my teeth.

I Can Floss My Teeth with My Loose Floss Social Story



I get my pack of floss.

I floss my teeth every day. I need to floss my teeth to clean in between them.

I pull an 18 inch of piece of floss from the pack and break it off.

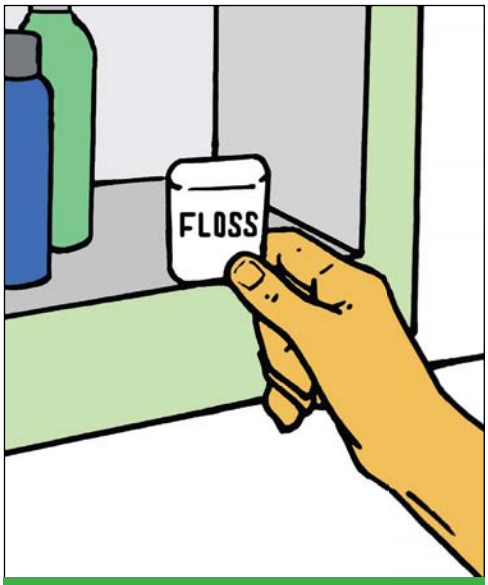
I wrap the floss around my middle fingers.

I hold the floss in a “C” shape and move it up and down my tooth.

I floss gently in between each tooth.

I Can Floss My Teeth with My Loose Floss Social Story

I throw the used floss in a trashcan.

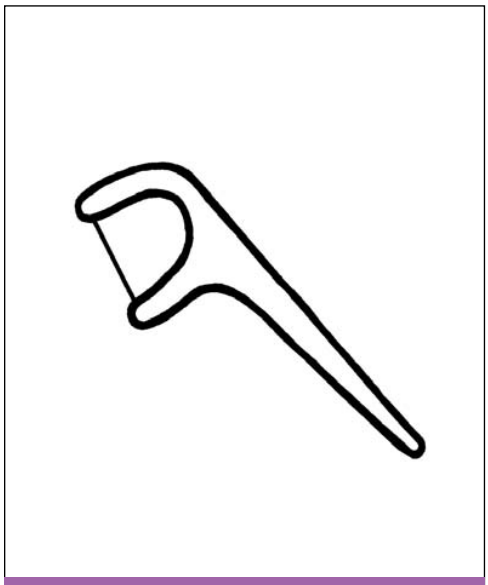


I put my pack of floss back where I got it.

Now my teeth are clean.

I Can Floss My Teeth with My Flosser Social Story

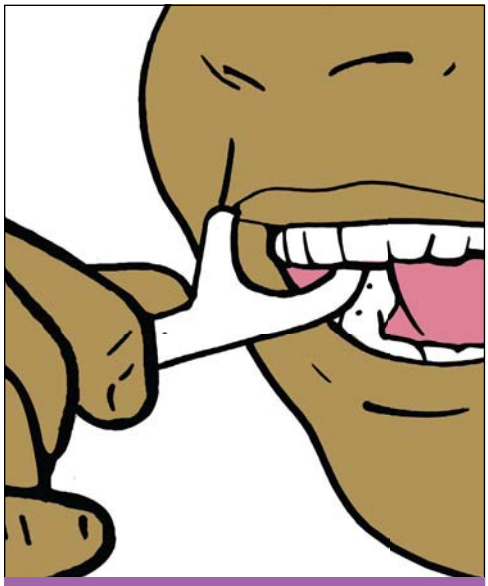
Instructions: Read the social story with your child to learn the routine. Your child may also read the story independently.



I get my flosser.

I floss my teeth every day. I need to floss my teeth to clean in between them.

I put the flosser in between my teeth and move it up and down.



I floss in between each tooth.

I throw the used flosser in a trashcan.

Now my teeth are clean.

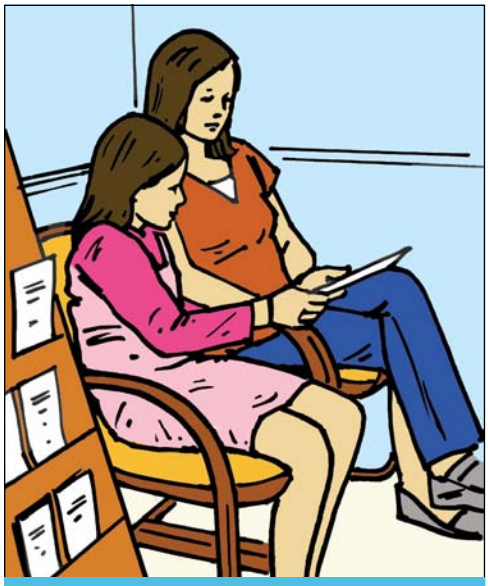
My Visit to the Dentist Social Story

Instructions: Read the social story with your child to learn the routine. Your child may also read the story independently.

People everywhere visit the dentist. The dentist helps keep my teeth clean and healthy.

My family goes to the dentist. I can go to the dentist too.

I will check in at the front desk. I will tell the receptionist my name.



I will have a seat in the waiting room. I have to wait for my turn. When my name is called, I will go to a special room to see the dentist.

I might feel nervous or scared at the dentist office. I need to tell the dentist and my parent how I feel. They will make me feel better.

I will sit in a big chair. It will move and lean back. I have to sit still so the dentist can look at my teeth.

My Visit to the Dentist Social Story

The dentist puts a bib on me. It keeps my clothes clean.

I open my mouth so the dentist can see inside. The dentist will shine a bright light on them to see better.

The dentist will touch my teeth and mouth. He may stretch my mouth. It may feel funny or uncomfortable, but it shouldn't hurt. If my teeth or mouth hurt, I will tell the dentist so he can make them feel better.

The dentist will use some tools to check my teeth and clean them. They may make some noise.

The dentist may take X-rays of my teeth. They help the dentist see how healthy my teeth are. The dentist will put a heavy lead apron on me to take the X-rays.

When the dentist is finished cleaning my teeth, I will rinse my mouth out with water.

My Visit to the Dentist
Social Story

I will spit the water out into a sink.

I will wipe my mouth with a paper towel.

I go to the dentist to keep my teeth healthy. The dentist did a good job taking care of my teeth. I did a good job at the dentist.

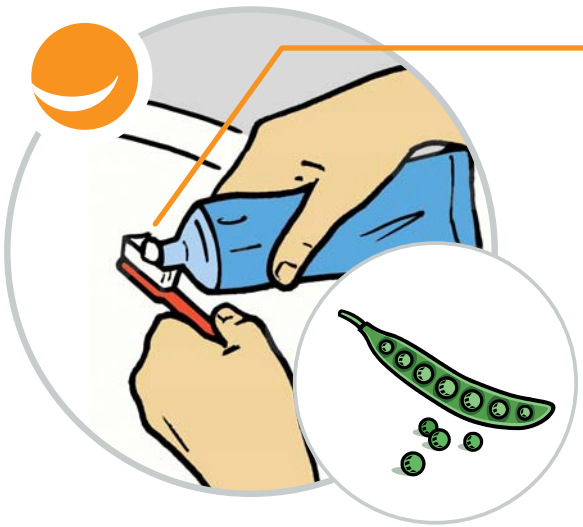
Picture Dictionary

Bristle

The part of the toothbrush where you put toothpaste

Cap

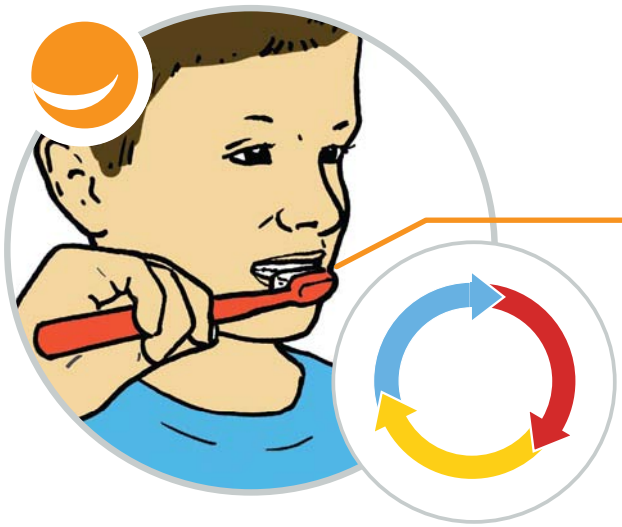
The lid on a toothpaste tube



Pea-size

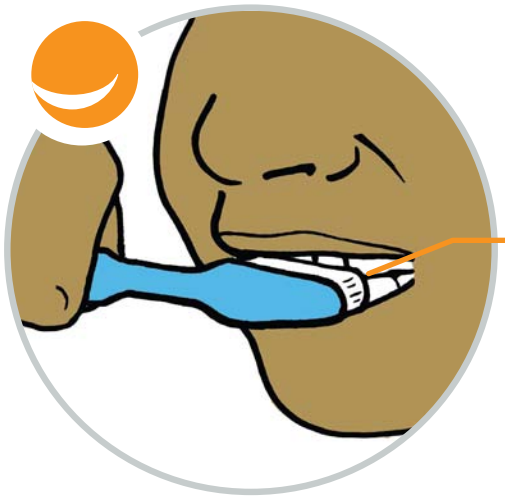
The amount of toothpaste used on a toothbrush—about the size of one pea

Picture Dictionary



Circle Motion

The way to brush teeth and gums in order to clean all surfaces



Front Teeth

The outside surface of the teeth

Inside Part of Teeth

The inner surface of the teeth

Picture Dictionary

Top of Teeth

The chewing surface of the teeth

Lead Apron

A heavy, weighted apron that is worn on top of the body when an X-ray is being taken

Bib

A piece of cloth, plastic, or paper that is tied or clipped around the neck to keep clothes clean

About the National Museum of Dentistry

Smile-inspiring exhibitions and innovative programs educate the public about the importance of good oral health as part of a healthy life.

Visit www.smile-experience.org for:

- Educational resources on oral health.
- Planning a visit to the museum.

For copies of this guide:

This guide is available free of charge to parents of children with autism. Go to www.healthysmilesforautism.org or call 410-706-9599.

Give us your feedback:

Help us continue to provide quality materials that are important and relevant to you.
Send us an email at education@dentalmuseum.umaryland.edu or call 410-706-9599.
Your comments are important to us.

Educational Partners:

Center for Autism and Related Disorders
at Kennedy Krieger Institute

University of Maryland School of Dentistry

Made Possible By:

HSC Henry Schein Cares
Helping Health Happen.

BLAKESLEE
ADVERTISING / MARKETING / PR

A generous gift from
Dr. Irwin and Lucia Smigel

the smile experience
The Dr. Samuel D. Harris
NATIONAL MUSEUM of DENTISTRY

University of Maryland
31 South Greene Street
Baltimore, MD 21201
410-706-0600
www.smile-experience.org