



8. Can tooth decay be transferred in kindergarten, e.g. when toothbrushes touch each other or children swap toothbrushes?

No. Caries is not an infectious disease. **The bacterial microclimate in the oral cavity ensures that singular germs do not pose any effects or risks to children's health.** This effect is particularly significant from the second half of the first year of life, when every baby increasingly uses its oral cavity as a tactile organ. In this important developmental stage for discovering its environment, a baby puts all accessible objects in its mouth - it feels them and thus explores the surface properties, e.g. rough, smooth, cold, sticky, soft. This exploratory path means that children in daycare centers or nurseries also put objects in their mouths that another child may have previously explored, such as toy cutlery, building blocks, small balls.

Towards the end of the first year of life, this oral material exploration subsides. In its play actions, however, the child imitates everyday actions such as eating, hygiene activities, etc. until the fifth year of life and also uses objects such as toy cutlery, combs, brushes, clothing, etc. for this purpose. These actions and ubiquitous droplet infection are the transmission routes of infectious diseases and lice, etc. in daycare centers. However, caries **is not transmitted through exchanged or mixed-up toothbrushes** (cf. www.RKI.de).

9. How should toothbrushes be stored and how often should they be changed?

Each child has their own toothbrush and cup or storage stand. After brushing, the brush should be rinsed thoroughly under running water. It should be stored upright with the head facing up at room temperature.



Toothbrushes must be changed after three months at the latest. In certain intervals, e.g. on Fridays, the toothbrushes can also be cleaned in the dishwasher at 60°C. **A large number of studies have concluded that in everyday life there is no risk of transmitting dangerous pathogens by switching or touching toothbrushes together** (see www.RKI.de).

10. The KAI brushing system

Regular tooth brushing to get rid of plaque is necessary from the first tooth, even with a tooth-healthy diet. Brushing takes 2 to 3 minutes for the complete set of baby teeth. In the morning (and preferably also at noon), your child should "practice" brushing his or her own teeth after eating.

After the 3rd birthday, start your child on the "KAI (COI)" toothbrushing system:

C = chewing surfaces **O** = outside **I** = inside

This simple brushing technique was developed especially for children. The ritualization of the system and the easy distinction between the chewing and outer surfaces support the learning process. The age-typical dexterity of the fine motor skills initially permits only "scrubbing" on the chewing surfaces (up to approx. 3 years) and later circling on the outer surfaces (up to approx. 5 years). By the time they start school, most children have mastered the KAI toothbrushing system very well. This technique is also practiced with the prophylaxis specialists during their visits to the daycare centers.

- **Brush back and forth on the chewing surfaces of the molars. Then bite together and**
- **"draw circles" on the outer surfaces, starting at the very back on the right and moving to the left.**
- **On the inner surfaces, place the toothbrush on the gums and from there "sweep" upwards over the teeth with a twisting motion from the wrist.**

Learning to brush teeth effectively takes until elementary school age. Only when your child can write fluently in cursive will his or her fine motor skills be so developed that adults no longer need to brush daily. That is why it is absolutely necessary that you brush your child's teeth thoroughly clean from all sides, preferably in the evening; Because only little saliva flows at night.

For explanatory videos on the KAI technique and correct dental care for children, follow the QR codes in the next column:

Your local contact:

Landesarbeitsgemeinschaft für Zahngesundheit Baden-Württemberg e.V.

Heßbrühlstraße 7
70565 Stuttgart
Tel.: 0711/222 966-17
E-mail: info@lagz-bw.de
Internet: www.lagz-bw.de

www.lagz-bw.de

Publisher: Landesarbeitsgemeinschaft für Zahngesundheit Baden-Württemberg e.V.
Editorial: Hendrik Krusch, LAGZ-Fachbeirat (advisory board)
Design: Armin Fischer, Bruno Hentschel
As of: February 2022
Author: Dr. Christina Jasmund
Image credits: Adobe Stock (galitskaya, Pavla Zakova, flucas, kol-yadzinskaya, stopabox, Oksana Kuzmina, RioPatuca Images)
Video links: with the friendly consent of the Working Group Zahngesundheit Westfalen-Lippe



Video link:
Brushing
teeth
with KAI



Video link:
Parents brush
children's teeth



**Frequently asked questions
for dental health
promotion in children
from 0 to 6 years**

FAQ for parents and professionals



Landesarbeitsgemeinschaft
für Zahngesundheit
Baden-Württemberg e.V.



1. Why are healthy baby teeth important?

Teeth are important chewing tools. Baby teeth are placeholders for the permanent teeth. Jaw and tooth position influence a person's appearance. The development of facial muscles, among other things, when eating and the correct position of the tongue, which is influenced by sucking and chewing, have an influence on the development of speech and thus on a child's social integration. **Healthy teeth and a functional set of teeth promote one's own well-being**, increase self-confidence and positive charisma.

2. Why is daily brushing so important for healthy teeth?

Learning motor skills is a long process that begins with self-motivated imitation. Repeated practice improves motor skills. These are not completed until the action is automated. **The first six years of life are considered the golden age for motor learning.** Children learn to climb stairs, tie a bow, ride a bicycle, swim, and much more seemingly through play. To do this, they have to repeat the action sequences many times until they have mastered them.

The practice of brushing teeth is successful if it is done as a ritual twice a day after meals, just like washing hands after going to the toilet. **Over a long period of time, children need the example and help of their caregivers for daily repetition.** And they need recognition and praise for their actions - effort must be rewarded. A healthy and beautiful set of teeth as a reward is not directly comprehensible to children, praise from dad, mom, or educators is.

3. How do children learn to brush their teeth?

The bond with the closest caregivers is crucial for learning processes in early childhood. Children like to imitate the actions of their caregivers. It is from these people who are important to them - and not from "strangers" - that young children learn. **What the beloved caregiver can and does, the child also wants to be able to and do.** They successfully imitate smiles.

At first, they try sounds, but later they turn into words and gestures, such as clapping and waving. If the little ones receive positive feedback for this, they reinforce this behavior. Later, children learn everyday actions in this way. When they watch their parents and siblings in the bathroom, they imitate combing their hair, washing their hands, and brushing their teeth. The easiest way for children to learn is to imitate, i.e. to carry out the movements at the same time as mom, dad, or educator and to be praised and encouraged by them, ideally every day.

For young children, the focus is not initially on the brushing technique, but rather the ritual.

To keep children's teeth healthy, they should be brushed twice a day, starting with the first baby tooth. Children should do this themselves from the very beginning. Parents must "re-brush" children's teeth, and this must be done very thoroughly, especially in the evening, as caries activity is very high at night.

Practice of a special tooth brushing routine should be started from the third birthday. Dental prophylaxis specialists regularly visit daycare centers and show children and educators the correct toothbrushing technique. They also inform parents and pedagogical staff how they can support the children in this process.

4. What should parents do while children are brushing their teeth?

Parents are the most important role models for young children. They are formative for health-related attitudes and corresponding behavior later in life. **That's why it makes a lot of sense for them to brush their own teeth at the same time as their children.** Then the children can see and imitate this process. The presence and positive feedback of the beloved caregiver motivates the child decisively and prolongs his brushing time - it makes a great effort for your recognition.

5. Why is daily tooth brushing in daycare facilities important?

For the motor learning process and ritualization, it makes a lot of sense if daycare centers offer daily tooth brushing together - **this ritual forms a habit is formed in the child.** It has been scientifically proven that behaviors established at an early age remain relatively stable¹. Especially in the first years of life, habits/rituals support children's understanding of processes in everyday life.



¹ cf. Wigen, T.I./ Wang, N.J. (2014): Norwegian mother-child cohort study. Scientific Information Service. Oral hygiene and dietary behavior information group. Volume 38: Issue 5/2014



6. Is it the task of pedagogical staff to brush the children's teeth?

The responsibility for dental care basically lies with the parents. Pedagogical professionals have an educational mandate that also relates to the promotion of healthy development. **Health promotion integrated into everyday life should be implemented as a significant educational goal**, among other things by ritualizing daily tooth brushing and imparting developmentally appropriate knowledge to promote oral health, e.g. through projects on healthy nutrition. Regular visits by prophylaxis specialists support the learning of correct toothbrushing techniques and assist the educational specialists in providing topic-specific advice to parents.

7. How does caries develop?

Bacterial colonization of the oral cavity with over 500 different species of microorganisms occurs immediately after birth in the first months of every child's life. This is a completely natural process. **The colonization phase takes place even before the first teeth erupt.** The bacteria do not immediately trigger caries. In healthy conditions, there is a natural balance of different types of bacteria in the mouth, so that no strain of bacteria can cause harm. After eruption, the bacterial colonization of the oral cavity also surrounds all teeth in the mouth as a biofilm (plaque) and always contains caries bacteria.

If the general conditions change, e.g. due to a lack of oral hygiene and incorrect eating habits, the balance also changes.

The bacteria attack the tooth enamel with acids produced by the fermentation of sugar. Caries bacteria feed on sugar and produce, among other things, lactic acid as a waste product. The acid destroys the tooth. Frequent sugar intake promotes excessive multiplication of caries pathogens. The more food they get and the longer food remains in the mouth, the more acid they can produce. **The oral cavity is an ecosystem that can successfully compensate for brief disturbances**, but becomes unbalanced by frequent or permanent acid attacks. Then, unnoticed and at first painlessly, the child develops caries.

