

# Maintaining Oral Health in Children with Special Healthcare Needs

A quick guide for caregivers outlining oral health status and routine oral hygiene measures

## Understanding special healthcare needs (SHN)<sup>1-3</sup>

Physical, developmental, mental, sensory, behavioural, cognitive, social, or emotional impairment often requires healthcare intervention and the use of specialised services



Healthcare for these individuals requires specialised knowledge, heightened awareness, attention, adaptation, and accommodative measures (including infrastructure or materials) beyond what is considered routine

Oral health is an essential part of an individual's overall well-being, especially for children with SHN, as they are at an increased risk of developing oral health problems throughout their lifetime<sup>2,4</sup>

This infographic provides an overview of the conditions, challenges, and principles of oral healthcare in children with SHN, but the information included is not exhaustive

## Oral health status in children with SHN<sup>1,4</sup>



### Major factors contributing to their poor oral health<sup>1,4</sup>

- ! Inability to achieve adequate oral hygiene
- ! Inability to express their pain and discomfort
- ! Lack of resources and organisational support
- ! Lack of knowledgeable professionals to evaluate and manage their oral condition



Regular check-ups with paediatric dental professionals are vital to establish a prevention routine for a healthy mouth and allow early intervention

## Oral health challenges in children with SHN<sup>4-8</sup>

Excessive tooth-grinding habits in children with e.g., cerebral palsy, cause excessive wear of hard dental tissues

Seizures increase the risk of traumatic dental injury; medications used to manage seizures may result in gingival overgrowth

Malformed teeth predispose to crowding or poor alignment, plaque accumulation, gum disease, and tooth decay



Delay in tooth emergence (up to two or three years of age)

Patients with immune suppression and bleeding disorders are at an increased risk of oral health problems and worsening of existing oral diseases

Medication with high sugar content increases the risk of dental caries and worsens existing disease

Some medications, such as those used to limit drooling, can result in dry mouth

## Impact of oral health conditions in children with SHN<sup>4,8,9</sup>



- Reduced nutritional intake
- Impaired social interactions
- Difficulty in undertaking daily activities
- Associated anxiety
- Reduced quality of life (QoL)
- Decreased communication
- Lack of self-confidence

## Pre-existing medical conditions affect oral health in children with SHN

Uncontrollable movements, hyperactivity, weakness of muscles, and short focus span



Stability and mobility impact safe delivery of oral care

Speech, visual, and intellectual disability



Difficult communication impacts self-care routines

Medications, diet, and allergy



Special medical requirements



### Challenges for children with cerebral palsy, autism, developmental delay, and Down syndrome<sup>2</sup>

- ❗ Unable to grasp the importance of preventive oral health practices
- ❗ Express greater anxiety and aversion to dental treatment, delaying care and impeding cooperation
- ✅ Individually adapted behavioural management methods may be needed to attain cooperation

For children with SHN to receive the correct and necessary dental treatment, this requires:<sup>4,7</sup>

- Better understanding from all involved stakeholders regarding the specific requirements
- Availability of appropriate healthcare facilities
- Proper knowledge and training for dental professionals to adapt their practices



Children with SHN are more likely to receive curative rather than preventive care, usually extractions and emergency treatments<sup>2,5</sup>

## Caregiver guide to daily oral care routine<sup>2,3</sup>



Toothbrushing may be difficult for children with SHN to learn, along with adapting to the:

- Texture, smell, and taste of toothpaste
- Tactile sensation of brush bristles
- Vibrations from toothbrushing

- ✓ Children with SHN require additional guidance, supervised toothbrushing, and specialised cleaning aids for adequate oral care

## Variety of oral health products and adjuncts to help with oral care



### Electric toothbrushes

- Special/modified brushes, electric toothbrushes,\* or three-headed toothbrushes
- Customised toothbrush handle

### Toothpaste

- Use of flavoured, unflavoured, or non-foaming toothpaste should be determined on a case-by-case basis, taking into account any sensitivity or sensory issues
- Fluoride toothpaste, e.g., stannous fluoride, for better biofilm control

### Other needs

- Fluoride mouth rinses, antibacterial rinses, and gels
- Floss holders or interdental brushes
- Tools for facilitating compliance, like finger guards or mouth props
- Tongue cleaning aids

\*There is scientific evidence to recommend oscillating-rotating electric toothbrushes to paediatric dental patients<sup>10,11,12</sup>

## Home care to improve oral health<sup>2,3</sup>



- Remove dental plaque with a toothbrush and fluoride toothpaste, twice a day
- Children's teeth should be brushed using either a soft manual or electric toothbrush
- Tooth brushing should be conducted such that each tooth surface is reached and brushing should take place for 2 minutes, also in preschool children

## Caregiver guide<sup>2-4</sup>



- Establish a "dental home" for regular dental check-ups and build a connection with your child's dental professional
- Establish a dental care routine
- Schedule regular appointments to discuss oral health needs
- Behaviour guidance and management to dispel anxiety or dental fear and gain cooperation in medical settings
- Work with your child's dental professional to soothe, acclimatise, and distract during check-ups and treatment to avoid protective stabilisation and sedation

## Preventive strategies

Application of sealants by dental professionals to reduce the risk of caries; topical fluoride application and antibacterial mouth rinses prevent caries and gingivitis

Increased recall frequency for patients with severe dental disease is recommended

Anticipatory guidance about the risk of trauma during seizures and mouthguard fabrication is helpful

Timely referrals help avoid unnecessary pain, discomfort, increased treatment needs and costs, unfavourable treatment experiences, and diminished oral health outcomes

Transition to adult dental care homes is critical for extending the standard of oral health established during childhood



Orthodontic evaluation is recommended in the case of:






- ✓ Facial asymmetry
- ✓ Malocclusion
- ✓ Abnormalities in nasal breathing
- ✓ Difficulties with chewing, swallowing, speech, and/or oral functioning

Additional motivation involves improving the child's oral function and QoL

Visit <https://oralhealth.knowledgehub.wiley.com/children> for additional resources

## Dental caries<sup>9, 13</sup>

Children with SHN are at an increased risk for dental caries or tooth decay due to several reasons

-  Difficulty maintaining proper oral hygiene
-  Difficulty in tooth brushing
-  Decreased salivary flow reduces buffering capacity
-  Medications dosed in sugary suspensions
-  Need for sucrose-rich diet

## Recommendations for prevention of dental caries<sup>13, 14</sup>


-  Daily brushing with fluoride toothpaste
-  Toothpaste with higher concentrations of fluoride
-  Fluoride applications
-  Supervised tooth brushing until at least 7 years of age, often longer or even lifelong

## Recommendations for age-related amount of toothpaste<sup>13</sup>

Age Group	Fluoride Concentration	Grain Size
First tooth: Up to 2 years	1,000 ppm fluoride	Grain-of-rice sized
2–6 years	1,000 ppm fluoride	Pea-sized
Over 6 years	1,450 ppm fluoride	Up to the full-length of the brush

Toothpaste (up to 5,000 ppm fluoride) and topical fluorides (fluoride gels, rinses, and varnishes) are prescribed for:





- Selected patients with SHN
- Adolescents with increased caries risk
- Children under treatment with fixed orthodontic appliances
- During risk periods such as tooth emergence

 Preventive programmes should be re-evaluated at regular intervals and adapted to a patient's individual needs and risks

## Dietary and lifestyle modifications<sup>2, 13, 14</sup>

- Reduce consumption of sugar or sugary medicines or look for sugar-free alternatives; restrict this to meal times
- If necessary, alter the frequency of preventive measures like brushing or supplement with a fluoride mouthwash
- Drink plain water often during the day and avoid sugary and fizzy drinks
- Use sugar substitutes (e.g., xylitol), within limits, to prevent dental caries in high-risk groups
- Encourage a non-cariogenic diet

## Key messages

-  Individualised oral care regimen should be established for routine preventive care
-  Providing increased access to specialised care is imperative, encompassing both expertise and facilities, such as those for sedation and narcodontics
-  Adequate training can ensure caregivers and other healthcare professionals deliver specialised care to children with SHN confidently
-  Improving access to dental care for children with SHN requires enhancement and restructuring of the dental education curriculum together with large systems-level changes in dental care practices and modes of delivery

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