# Cleft Lip and/or Palate: A Practical Guide for Primary Dental Care Teams

clapa
For the UK cleft community

BSPD
British Society of Paediatric Dentistry

BOS
BRITISH ORTHODONTIC SOCIETY

RD-UK
Consultant & Specialist Group
Informing, Educating & Inspiring

# Contents

# Abbreviations

| | |
|---|---|
| **ABG** | alveolar bone graft |
| **BOS** | British Orthodontic Society |
| **BPE** | Basic Periodontal Examination |
| **BSP** | British Society of Periodontology and Implant Dentistry |
| **BSPD** | British Society of Paediatric Dentistry |
| **BSRD** | British Society for Restorative Dentistry |
| **CDS** | Community Dental Service |
| **CEN** | Clinical Excellence Network |
| **CFSGBI** | Craniofacial Society of Great Britain and Ireland |
| **CLAPA** | Cleft Lip and Palate Action |
| **CNS** | clinical nurse specialist |
| **DBOH** | Delivering Better Oral Health |
| **DCby1** | Dental Check by One |
| **DDE** | developmental defects of enamel |
| **DPT** | dental panoramic tomograph |
| **ENT** | ear, nose and throat |
| **FGDP** | Faculty of General Dental Practice |
| **GDP** | general dental practitioner |
| **MDT** | multidisciplinary team |
| **MIH** | molar incisor hypomineralisation |
| **NaF** | sodium fluoride |
| **OH** | oral hygiene |
| **ppm** | parts per million |
| **RD-UK** | Restorative Dentistry UK |
| **RIOTN** | Restorative Index of Treatment Need |
| **SDCEP** | Scottish Dental Clinical Effectiveness Programme |
| **SLT** | speech and language therapy |

# About this guide

**Cleft lip and/or palate is a lifelong condition requiring coordinated multidisciplinary care. The primary dental care team plays a vital role in prevention, early identification of issues, routine care and continuity between specialist reviews.**


This guide provides practical, evidence-based shared-care guidance for GDPs and primary dental care teams in the UK, structured by age. Some age bands overlap, because assessment for alveolar bone grafting and the surgery itself span these years and timing varies between centres.

References to the practice team apply to everyone in primary dental care, with each team member working within their own scope of practice.

For each stage, it summarises:

- what the primary dental care team should prioritise
- what the specialist cleft and MDT services will usually be doing.

# How to use this guide

Use the **age band sections** as practical chairside prompts to support anticipatory guidance as patients move through key stages of care.

Use the **"When to liaise or refer"** content to support timely escalation and avoid interventions that could compromise planned orthodontic, surgical, or restorative care.

**Adapt recall intervals and prevention intensity according to risk;** children and young people with cleft lip and/or palate should be treated as high risk for dental caries from infancy.

## Development and collaboration

This resource has been led by the British Society of Paediatric Dentistry and co-produced with the Cleft Clinical Excellence Networks (CENs) within the following UK professional societies:

- Craniofacial Society of Great Britain and Ireland (CFSGBI)
- British Society of Paediatric Dentistry (BSPD)
- Restorative Dentistry UK (RD-UK)
- British Orthodontic Society (BOS)

It is intended to support consistent, safe, and confident primary dental care aligned with UK cleft pathways and multidisciplinary team (MDT) working.

**Working group acknowledgement:** Urshla Devalia; Mechelle Collard; Joshua Kennedy; Nabina Bhujel; Sarra Jawad; Khalid Malik; Peter Mossey; Adele Bronkhorst.

**Cleft type photographic images:** reproduced with kind permission of **The Special Smiles**

# Introduction

## Cleft lip and/or palate is one of the most common congenital craniofacial conditions caused by incomplete fusion of the lip, alveolus and/or palate in early pregnancy. Children born with a cleft usually require long term multidisciplinary care, including surgery, speech and language therapy, orthodontics and specialist dentistry.

The primary care dental team is a key local point of contact for children, young people and their families. Primary care teams provide consistent preventive care, monitor dental development, and support timely referral and communication with specialist cleft services. This resource is designed to support primary dental care teams in delivering confident, evidence-based care for patients born with a cleft from infancy through to adulthood.

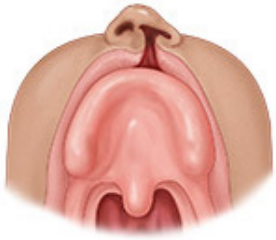
# Images of each cleft type

No Cleft

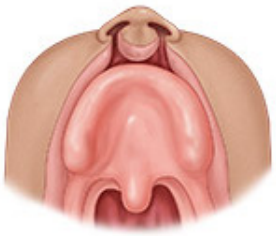
Unilateral Cleft Lip

Bilateral Cleft Lip

No Cleft



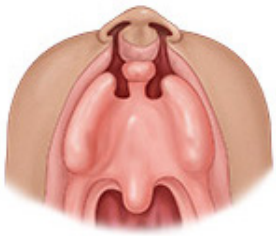
Unilateral Cleft Lip



Bilateral Cleft Lip

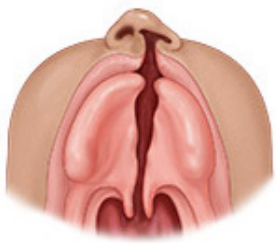
Cleft of Soft Palate

Unilateral Cleft Lip and Alveolus

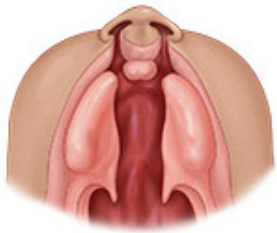


Bilateral Cleft Lip and Alveolus

Cleft of Soft and Hard Palate



Unilateral Cleft Lip and Palate



Bilateral Cleft Lip and Palate

Cleft type images reproduced with kind permission of The Special Smiles (**thespecialsmiles.com**)

# The Cleft Care Journey: Shared Care across Birth to Adulthood

- Specialist cleft MDT
- Primary dental care
- MDT audit clinic

## 0–5 years
Early years & primary dentition

### MDT activities
- ‹8 weeks: cleft nurse specialist contact
- 3–6 months: lip repair surgery
- 6–13 months: palate repair, speech and language therapy review
- 1–3 yr: clinical nurse specialist & surgical review
- Specialist paediatric dental review
- 5 yr: MDT audit clinic

### Primary dental care checklist
- Access to a dentist by age one, **Dental Check by One (DCby1)**
- Treat as high caries risk
- Fluoride toothpaste 1,350–1,500 ppm
- Fluoride varnish (22,600 ppm NaF) from age 2, twice yearly or more as a high caries risk group
- Diet and feeding advice; no night bottles
- **'Lift the lip'** education for carers

**5-year MDT audit clinic**

## 6–9 years
Early mixed dentition & pre-graft

### MDT activities
- Specialist paediatric dental input
- 7–9 yr: alveolar bone graft (ABG) assessment for clefts involving the alveolus
- Pre-graft orthodontic assessment & planning
- ABG psychology screening & preparation
- Communication with GDP on planned care

### Primary dental care checklist
- Reinforce diet & oral hygiene
- Effective brushing, fluoride toothpaste
- Fissure sealants on permanent molars
- Monitor eruption, anomalies, hypodontia
- Do not extract teeth near cleft

**10-year MDT audit clinic**

## 8–13 years
Alveolar bone graft & ortho

### MDT activities
- Alveolar bone graft surgery
- Comprehensive fixed appliance orthodontics
- Monitor facial growth
- Coordinated extraction planning
- Paediatric dental management of dental anomalies
- Continued paediatric dental review

### Primary dental care checklist
- Pre-graft optimisation: caries-free, plaque-free
- Continue fluoride varnish
- Support oral hygiene (OH) during fixed appliances
- Manage caries within Restorative Index of Treatment Need (RIOTN) 1–2 scope
- Liaise before any extraction in cleft area

## 14–20 years
Orthodontics, retention & transition

### MDT activities
- 15 yr: MDT audit clinic
- Orthodontic finishing & retention
- Orthognathic surgery (selected cases)
- Restorative dentistry rehabilitation planning
- 20 yr: final audit clinic
- Transition to adult services

### Primary dental care checklist
- Continue preventive and recall care
- Manage routine restorative needs
- Support retention compliance
- Confirm adult cleft contact pathway
- Facilitate continuity into adult care
- Refer to psychology via MDT if indicated

**15-year and 20-year MDT audit clinics (final formal MDT review at 20)**

## 20+ years
Adult care & long-term maintenance

### Specialist support
- Specialist input remains available
- Complex restorative rehabilitation
- Joint planning with GDP as required
- Implant assessment where appropriate
- Speech prostheses / obturator review

### Primary dental care checklist
- Lifelong periodontal and caries management
- Check soft tissues and prostheses
- Restore within RIOTN 1–2 scope
- Refer for complex restorative rehabilitation
- Re-refer if obturator needs replacement

# 0–5 years: Early years and primary dentition

## Why this stage matters:

Children with cleft lip and/or palate should be regarded as high risk for dental caries from infancy. Evidence shows that children with clefts experience higher levels of caries than their peers, even in the primary dentition. Early and effective prevention at this stage has a significant impact on long term oral health, as well as later orthodontic treatment and surgical outcomes.

The primary dental care team provides continuity of care for families during this period, supporting preventive behaviours between specialist reviews and safeguarding strategically important teeth required for future cleft related treatment.

## Early years priorities checklist:

- ✓ Treat as high caries risk from infancy
- ✓ Check feeding and diet, including night bottles
- ✓ Encourage attendance by age one
- ✓ Lift the lip to check incisors near the cleft
- ✓ Liaise with the cleft team if concerned

# Your role at this age (0–5 years)

## Key points for assessment

When you see an infant or young child with a cleft, you should:

- confirm the child is under the care of a regional specialist cleft team
- recognise the child as high risk and tailor prevention accordingly
- assess feeding practices and diet, including night time feeding habits
- monitor eruption of primary incisors and molars
- examine teeth adjacent to the cleft site carefully, as these may show enamel defects or altered anatomy and are often strategically important for later orthodontic planning.

## Lip mobility and 'lift the lip' technique

Children who have undergone cleft lip repair (unilateral or bilateral) will have varying degrees of scarring and reduced mobility of the upper lip due to surgical repair of the orbicularis oris muscle. This can make access to the labial surfaces of the upper incisors and the labial sulcus more difficult during toothbrushing and clinical examination.

It is therefore essential that clinicians and parents/carers are explicitly advised to "lift the lip" to allow adequate visualisation and cleaning of this area.

You should:

- gently lift the upper lip to inspect the labial surfaces of the maxillary incisors and the labial sulcus
- advise parents/carers to do the same during toothbrushing at home
- pay particular attention to plaque accumulation and early caries in this region.

This area is highly vulnerable to:

- enamel hypoplasia and hypomineralisation
- molar incisor hypomineralisation (MIH)-like defects affecting incisors
- early caries development.

Failure to adequately clean and monitor this region may compromise both oral health and future orthodontic and restorative outcomes.

Clinicians should also be aware that:

- the lip scar is not typically painful to manipulate once healed
- gentle lip retraction for examination and cleaning is appropriate and should be normalised
- open, sensitive communication with children and families about the scar is important to reduce stigma or anxiety.

Where concerns arise regarding psychological impact or adjustment, liaison with the cleft multidisciplinary team, including psychology colleagues, may be appropriate.

## Preventive care

Provide prevention in line with **SDCEP** and **Delivering Better Oral Health (DBOH)** guidance. Children with cleft lip and/or palate experience a higher burden of caries than their peers, so consistent, enhanced prevention is essential from the outset.

## Diet advice

You should:

- advise parents to stop night time bottle use from around 12 months of age
- explain that prolonged bottle use increases the risk of dental caries.

This may be challenging for some children with a cleft palate. Following palate repair (usually at 6–13 months), some cleft centres advise against dummy use, and bottles may become a source of comfort for both the child and parents.

You can suggest either:

- stopping the bottle altogether, or
- gradually diluting milk with water until the child no longer accepts it.

Reinforce key prevention messages:

- reduce both how much and how often sugar is consumed
- avoid foods high in sugar and sticky foods, including dried fruit
- suggest safer snacks such as cheese, raw vegetables, crackers, rice cakes and breadsticks
- encourage whole fruit rather than juices or smoothies
- avoid fruit juices, smoothies, milkshakes, fizzy drinks and adding sugar
- use a free flow cup with plain water or plain milk only
- avoid sugary foods and drinks before bedtime
- avoid night time drinks other than water.

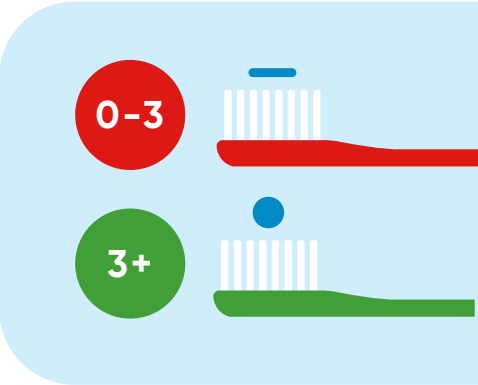
## Oral hygiene advice

You should:

- encourage early and regular dental attendance
- advise brushing twice daily with fluoride toothpaste.

Children with a cleft should be treated as being at increased caries risk. SDCEP and DBOH support toothpaste containing 1,350 to 1,500ppm fluoride for children at increased risk, using a smear under 3 years of age and a pea-sized amount from 3 to 6 years.

Parents usually need to assist with brushing until at least 8 years of age. You should also:




- encourage parents to lift the upper lip to brush the upper incisors
- explain that scarring from lip repair can make brushing more difficult in this area
- highlight that incisors may show hypomineralisation, increasing caries risk
- suggest a single tufted toothbrush where helpful
- encourage spitting without rinsing after brushing to maximise fluoride benefit.

Maintaining healthy, caries free upper primary incisors is important for early speech development and for future orthodontic planning around the cleft site.

### ‘Lift the lip’ key message

Always lift the upper lip to inspect and clean the maxillary incisors in children with repaired cleft lip. Scarring can restrict access, increasing caries risk in an area where enamel defects are already common.

# Early tooth eruption issues and natal / neonatal teeth

## Definitions

- Natal teeth are teeth present at birth.
- Neonatal teeth erupt within the first 30 days of life.

These are uncommon but occur more frequently in children with cleft lip and/or palate, particularly in the region of the alveolar cleft.

## Key points for assessment

In children with cleft lip and/or palate, natal and neonatal teeth:

- are usually prematurely erupted primary teeth, rather than supernumerary teeth
- are most commonly located in the maxillary cleft region
- may be small, conical, hypoplastic or hypomineralised
- often have poor root development and increased mobility.

Diagnosis is usually clinical. Radiographs are not routinely required in infancy but may be useful later if the diagnosis is uncertain or to assess root development.

## Differential diagnosis

Consider soft tissue lesions that may mimic teeth, including:

- epstein pearls
- bohn nodules
- epulis.

Epstein pearls and Bohn nodules resolve spontaneously; a congenital epulis should be referred.

## Management in primary care

Management should be based on symptoms and risk, not simply the presence of the tooth.

**Conservative management** is appropriate where the tooth:

- is asymptomatic
- is not excessively mobile
- does not interfere with feeding.

This includes reassurance, preventive advice and regular review.

**Extraction** may be indicated if there is:

- significant mobility (risk of aspiration)
- persistent trauma to the tongue (Riga Fede disease)
- ongoing feeding difficulties.

In newborns, bleeding risk must be carefully considered. Vitamin K status should be confirmed prior to extraction, and liaison with paediatric or specialist services may be appropriate.

## Parent communication

Explain that:

- the tooth is usually part of the normal primary dentition
- if removed, there may be no replacement until eruption of the permanent successor.

## When to liaise or refer

Liaise with or refer to the cleft paediatric dentist if:

- there are concerns about delayed eruption of incisors
- incisors are erupting palatally and causing functional problems
- natal or neonatal teeth are difficult to diagnose or manage
- feeding difficulties or soft tissue trauma persist despite conservative measures.

Early liaison supports coordinated MDT care and helps avoid interventions that may compromise future orthodontic or surgical treatment.

# What the cleft and specialist team will usually be doing (0–5 years)

## Cleft team dental reviews

Most UK cleft teams aim for children to be seen by a cleft paediatric dentist at around 18 months of age. The aims of this review are to:

- confirm that the child has access to a local dentist (GDP) or Community Dental Service (CDS)
- reinforce age-appropriate diet and oral hygiene advice
- identify early dental risk factors or anomalies.

Depending on centre and need, children may be reviewed on one or more occasions up to approximately 3 years of age.

## Speech and language therapy

Children with a cleft palate routinely undergo formal speech assessments at approximately:

- 18 months
- 3 years

Maintenance of healthy primary incisors is important for speech development. Speech and language therapists frequently encourage children to place the tongue against the palatal surfaces of the upper incisors during articulation; parents should understand why preserving these teeth matters.

## Multidisciplinary cleft clinic at 5 years

All children with a cleft are usually reviewed by the specialist cleft MDT at around 5 years of age. This clinic typically includes cleft surgery, paediatric dentistry, psychology, and (where relevant) ENT/hearing and speech and language therapy.

At this visit, coordinated assessments of speech, hearing, dental health and psychological wellbeing are undertaken. Forward planning also begins for later stages of care, including assessment for alveolar bone grafting (usually between 7 and 9 years of age) and subsequent orthodontic treatment phases.

# 6–9 years: Early mixed dentition and pre-graft planning

## Why this stage matters:

During the early mixed dentition, many children with a cleft will be assessed by the cleft MDT for alveolar bone grafting and may require pre-graft orthodontic preparation. Good oral health at this stage is critical for orthodontic readiness, surgical success and avoidance of treatment delays.

Preventive care, careful monitoring of eruption and early identification of dental anomalies play a significant role in supporting the orthodontic and surgical teams and optimising outcomes.

## Referral triggers and red flags checklist:

- ✓ Abnormal eruption patterns
- ✓ Suspected hypodontia
- ✓ Infra occluded primary teeth
- ✓ Palatal eruption causing problems
- ✓ Multiple or complex anomalies

# Your role at this age (6–9 years)

## Diet and oral hygiene advice

Reinforce core preventive messages:

- limit sugary snacks, particularly after school
- avoid sports drinks and frequent grazing
- tailor oral hygiene advice to the child's specific needs and independence.

Pay particular attention to teeth adjacent to the alveolar cleft, which may be harder to clean and are often close to planned grafting or orthodontic expansion sites.

## Monitoring eruption and dental anomalies

Dental anomalies are significantly more common in children with cleft lip and/or palate and may occur within the cleft region or elsewhere. Commonly affected features include tooth number, size/shape, position/eruption and enamel quality. These findings frequently influence orthodontic and restorative treatment planning. Teeth that erupt in atypical positions, such as palatally, do not necessarily result in functional or aesthetic problems once erupted and can often be maintained without intervention until assessment for alveolar bone grafting.

## Hypodontia

Upper lateral incisors on the cleft side are most frequently absent; maxillary second premolars are commonly missing on the non cleft side. **Be alert to teeth that do not erupt within expected developmental timelines.**

## Radiographic assessment

If hypodontia or delayed eruption is suspected, follow FGDP radiography guidance:

- delayed exfoliation/eruption in 1–2 quadrants → periapical radiograph
- delayed exfoliation/eruption in 3–4 quadrants → panoramic radiograph (DPT)
- infra occluded primary teeth persisting beyond age 10 → periapical radiograph or DPT, depending on extent.

Bitewings and periapicals fall within routine general dental care; liaise with the specialist cleft team before taking a DPT, as these are often taken at planned cleft reviews and duplication should be avoided. Share relevant radiographs with the cleft team where possible.

## Management of retained primary molars

Where premolars are missing:

- seek advice from paediatric, orthodontic and restorative colleagues as part of shared care
- aim to retain primary molars until a definitive orthodontic plan is established.

You should:

- protect healthy retained primary molars with fissure sealants
- restore carious but restorable molars (composite for single surface lesions; stainless steel crowns using the Hall technique for multisurface/extensive caries)
- refer for multidisciplinary input if teeth are unrestorable or infra occluded below the contact point.

Well maintained retained primary molars can provide valuable space and function into adolescence and may reduce the need for complex prosthetic replacement.

## Other dental anomalies

Children with cleft lip and/or palate may also present with microdontia/macrodontia, abnormal crown morphology, double teeth, developmental defects of enamel (DDE), transposition, supernumerary teeth, and root/pulp anomalies. These features may increase plaque retention, sensitivity, caries risk, and treatment complexity, and often have orthodontic implications.

## When to refer

Liaise with or refer to the specialist cleft team if:

- eruption patterns are abnormal
- teeth erupt palatally **and** cause functional or hygiene problems
- multiple or complex dental anomalies are identified.

Early identification and communication support effective shared care between primary care, paediatric dentistry, orthodontics and the wider cleft MDT, and help avoid unplanned extractions that could restrict future orthodontic options.

# What the cleft and specialist team will usually be doing (6–9 years)

## Pre-graft orthodontic assessment and planning

Children with cleft lip and alveolus, and those with unilateral or bilateral cleft lip and palate, are typically assessed by the specialist cleft MDT between 7 and 9 years of age. Assessment focuses on maxillary arch form, space within the cleft segment, and whether pre-graft orthodontic intervention is required.

Some children will require:

- maxillary expansion (with fixed or removable orthodontic appliances) to align segments before alveolar bone grafting
- removal of selected primary teeth within the cleft site, where necessary to facilitate orthodontic preparation and surgical access.

## Your supporting role

Support orthodontic and surgical readiness by:

- reinforcing intensified prevention and meticulous plaque control around teeth adjacent to the cleft in the months leading up to surgery – poor oral hygiene can compromise healing and the success rate of bone graft surgery, and may lead to grafting being delayed until it improves
- ensuring all caries are stabilised or definitively treated prior to planned grafting
- coordinating the timing of any extractions requested by the cleft team in line with the agreed plan, undertaking straightforward extractions only and referring back where these are complex or involve teeth within the cleft segment.

# 8–13 years: Alveolar bone grafting and comprehensive orthodontics

## Why this stage matters:

This period usually includes alveolar bone grafting, typically between 8 and 11 years of age, during permanent canine root development. Comprehensive fixed appliance orthodontics commonly follows, although for many children this begins towards the end of this period or later, and some will have a planned period of observation while facial growth is monitored.

Maintaining excellent oral hygiene and preventing caries during this stage is critical for surgical success, orthodontic progress and avoidance of treatment delays.

## Fixed appliances checklist:

- ✓ Review every three months
- ✓ Apply fluoride varnish at each visit
- ✓ Prescribe high fluoride toothpaste or mouthrinse where indicated
- ✓ Watch for new white spot lesions
- ✓ Check for gingival bleeding
- ✓ Escalate promptly to the cleft orthodontic team

# Your role at this age (8–13 years)

## Before and around alveolar bone grafting

You should:

- maintain disease-free teeth adjacent to the planned graft site – untreated caries, gingival inflammation or infection can delay grafting and compromise outcomes
- reinforce oral hygiene and dietary advice in the months leading up to surgery
- support families with postoperative care advice and ongoing prevention following grafting, in liaison with the cleft team where required.

Liaise directly with the cleft orthodontist about any orthodontic concerns.

## Enamel defects and shape anomalies

Teeth in and around the cleft often have enamel defects or atypical crown form, which can be a source of anxiety about appearance. Improving their appearance and contour, for example with composite, can support both oral hygiene and confidence, but discuss any planned treatment with the cleft team first, as restorations can affect orthodontic bonding and future restorative options.

Atypical crown form in the cleft region. Note the plaque accumulation and gingival inflammation; these teeth are harder to clean.

## During comprehensive fixed appliance therapy

Fixed appliances and cleft-related anatomy increase plaque retention and the risk of caries and periodontal inflammation. Support orthodontic success by:

- providing three monthly reviews for high-risk patients in fixed appliances
- applying fluoride varnish at each visit and recommending high-fluoride toothpaste where indicated, in line with local protocols
- considering a daily fluoride mouthrinse (0.05% NaF, 230ppm fluoride) from 8 years of age where caries risk is active, used at a different time from brushing
- identifying early warning signs (new white spot lesions, repeated debonding associated with poor hygiene, persistent gingival bleeding/swelling)
- liaising promptly with the cleft orthodontic team if concerns arise
- supporting minor orthodontic emergencies where competent and appropriate.

## Extractions and orthodontic planning

Do not plan extractions in the cleft quadrant for orthodontic reasons without prior discussion with the specialist cleft team.

Once agreed with the cleft team, it may be appropriate in primary care to:

- remove carious or over-retained primary molars outside the cleft segment
- remove selected primary teeth within the cleft site, where the timing and tooth selection have been specified
- retain or remove primary molars in hypodontia cases, as part of the definitive orthodontic plan and to the timing the cleft orthodontist specifies.

Seek orthodontic advice before extracting:

- any primary or permanent tooth directly adjacent to the alveolar cleft
- maxillary canines, particularly in the cleft quadrant
- heavily restored but strategically important teeth that may be needed for anchorage or as abutments for future prostheses.

## Ectopic and impacted teeth

Liaise with the cleft team if, compared with the non-cleft side:

- maxillary canines are not palpable buccally by 10-11 years of age
- lateral incisors are absent clinically and radiographically in the cleft region, and the space is closing
- there is asymmetrical eruption or prolonged retention of primary canines/molars in the cleft quadrant.

Imaging to locate unerupted teeth is usually arranged by the cleft orthodontic team; liaise before taking a DPT to avoid duplication. Include any relevant radiographs you already hold with referrals where possible.

# What the cleft and specialist team will usually be doing (8–13 years)

## Alveolar bone grafting

Alveolar bone grafting is typically performed when the permanent canine root is approximately one-half to two-thirds formed, although timing varies between centres. The procedure provides bony support for teeth adjacent to the cleft and supports subsequent orthodontic alignment and, where appropriate, future implant planning.

## Monitoring facial growth

For some patients presenting with a more severe skeletal discrepancy, the years following alveolar bone grafting may be a planned period of observing the developing malocclusion and facial growth rather than active treatment. The primary care dental team should continue routine preventive care and recall throughout, as the interval between grafting and definitive orthodontics can be several years.

## Comprehensive fixed appliance orthodontics

Comprehensive fixed appliance treatment (often involving both arches and including the cleft segment/graft area) usually begins in late childhood or early adolescence, commonly around 11 to 14 years of age. It therefore often follows some years after alveolar bone grafting rather than immediately. In some cases, treatment of the upper arch alone is undertaken to improve alignment, without a full two-arch approach. Treatment aims to align teeth, manage space, correct occlusion and optimise function and facial aesthetics.

# 14–20 years: Orthodontics, retention and transition to adult services

## Why this stage matters:

This stage is a key transition phase. Orthodontic treatment is often underway or nearing completion, long-term retention is established, and some patients may be assessed for orthognathic (jaw) surgery. Regional cleft centres typically provide coordinated care until approximately 20 years of age, after which patients may be discharged if no further cleft-related intervention is required.

Many young people move away for education or employment during this period, and access to routine dental care can be challenging. Continuity of primary care is therefore particularly important.

## Transition to adulthood checklist:

- ✓ Assess caries and periodontal risk
- ✓ Check retainer wear and report concerns
- ✓ Review any prosthesis
- ✓ Support access and attendance continuity
- ✓ Confirm the re-referral route
- ✓ Ask about smoking, vaping and drug use (see the adult section, Periodontal disease)
- ✓ Recommend a daily fluoride mouthrinse where indicated

# What the cleft and specialist team will usually be doing (14–20 years)

## Orthodontic finishing and retention

Final detailing of occlusion and establishment of long-term retention protocols are completed by the orthodontic team, with ongoing review as needed.

## Orthognathic surgery assessment (selected cases)

Some patients with significant skeletal discrepancies may be assessed for orthognathic surgery in the late teenage years or early twenties, when growth is complete. This is coordinated jointly by orthodontic and maxillofacial surgery teams within the cleft service.

## Restorative Dentistry

At this stage, consultants in restorative dentistry may be involved in planning and executing treatment which may involve replacement of missing teeth, reshaping teeth, and advising on future treatment.

## Transition to adult services

Where ongoing specialist input is required, patients may be transferred from paediatric cleft services to adult cleft services. Others may be discharged with advice on rereferral should future cleft related needs arise.

20+ years

# 20+ years: Adult restorative care and long-term maintenance

## Why this stage matters:

Adults born with a cleft lip and/or palate require the same standard of primary dental care as any other adult, including risk-based assessment and recall for caries and periodontal disease.

However, many will also have cleft-related anatomical, functional or prosthetic considerations that influence treatment planning. These should be recognised early and, where appropriate, managed in partnership with a regional cleft consultant in restorative dentistry.

## Adults – when to refer to cleft restorative:

- ✔ Failing complex prostheses
- ✔ Maxillary extractions near cleft
- ✔ Advanced periodontal risk threatening abutments
- ✔ Implant planning near cleft
- ✔ Obturator/speech prosthesis issues

# Your role with adult patients who have a cleft

## Periodontal disease

Carry out a Basic Periodontal Examination (BPE) and manage periodontal disease in line with the current British Society of Periodontology and Implant Dentistry (BSP) classification and guidance. Probing teeth in the cleft region is appropriate; this area may be more sensitive, so explain procedures clearly and proceed gently. Ask about smoking, vaping and recreational drug use, and give very brief advice, as tobacco use is a major modifiable risk factor for periodontitis and for the failure of implants and complex restorations.

Localised recession or pocketing—particularly on the mesial aspects of maxillary canines or the distal aspects of central incisors adjacent to the cleft—may reflect reduced alveolar bone rather than generalised periodontitis. Where periodontal disease is diagnosed, stage and grade using BSP criteria, and provide tailored oral hygiene instruction, mechanical debridement and risk factor management, emphasising meticulous cleaning around the cleft site and any prostheses.

If periodontal disease is advanced and maxillary tooth loss is likely, refer to the regional cleft consultant in restorative dentistry for joint treatment planning and consideration of prosthodontic implications.

## Caries

Adults with cleft lip and/or palate may have an increased risk of caries related to anatomical factors, plaque retention, dietary risk and historical access barriers. Diagnose and manage caries promptly, providing definitive restorations where appropriate within a high-risk, prevention-focused framework.

Mandibular teeth are usually managed as in other adults. Extensive caries affecting maxillary teeth—especially teeth supporting prostheses or adjacent to a cleft or fistula—may compromise restorative or surgical outcomes; early referral to a cleft consultant in restorative dentistry is advisable for contingency planning.

20+ years

## Occlusion

Many adults with cleft lip and/or palate have a skeletal Class III tendency. Restorative treatment in primary care should respect and maintain the established occlusion rather than attempting prosthetic "correction". Some adults may have overlay dentures or complex prostheses designed to compensate for malocclusion; deterioration of these prostheses or their abutments should prompt referral for comprehensive restorative and occlusal assessment.

## Missing teeth

Congenital absence of teeth is common, particularly of the maxillary lateral incisors in the cleft region; premolars may also be missing. Resin-bonded bridges are commonly used when bone volume is limited and can often be maintained or replaced in primary care, provided the occlusion remains stable.

Some adults will have implant-supported restorations. Implant planning near the cleft site requires specialist assessment due to altered bone quality and volume and a higher risk of failure. Removable partial dentures can often be managed in primary care when straightforward; complex designs (particularly obturator-related) should be referred back to the cleft centre.

## Damaged teeth near the cleft site

Teeth adjacent to the cleft may have short or curved roots, root resorption, recession, sclerosed canals, or altered sensibility responses. Bone at the cleft site is also frequently atypical: even after successful grafting, bone volume and quality may be reduced and residual defects may remain. These factors increase procedural risk during extraction or extensive restorative preparation and may threaten strategically important abutment teeth.

Do not extract these teeth (except in genuine emergencies) or prepare them for extensive extra-coronal restorations for cosmetic reasons without prior discussion with a cleft consultant in restorative dentistry, unless addressing active caries or periodontal disease.

20+ years

## Extractions

Mandibular extractions can usually be planned and undertaken in general practice as normal. In contrast, maxillary teeth adjacent to the cleft site may have very thin/absent bone between the oral and nasal cavities, increasing the risk of oro nasal communication or destabilisation of prostheses. Where possible, plan these extractions in conjunction with the specialist cleft team.

## Obturators and speech prostheses

Some adults have residual palatal fistulae after surgery. Obturators can improve speech and reduce nasal leakage of food and drink and are usually provided by specialist cleft restorative teams (materials may include acrylic, cobalt-chromium, silicone, or combinations thereof). Speech prostheses aim to modify airflow and improve speech intelligibility and are often provided in collaboration with speech and language therapy services. Concerns about speech should prompt referral to the regional cleft centre.

## Dental implants

Implants may replace missing teeth or support bridges/overdentures. Near cleft sites, altered bone quality and volume can increase the risk of implant failure, so specialist planning is essential. When NHS-funded implants are considered for cleft-related congenital tooth loss, they are typically delivered through hospital-based specialist services following MDT assessment.

# Key messages: Quick reference summary

# Key messages

## Prevention is paramount

- Treat all patients with cleft lip and/or palate as high risk for caries from infancy and apply SDCEP and DBOH guidance rigorously.
- Encourage fluoride toothpaste containing 1,350 to 1,500 ppm, using a smear under 3 years and a pea-sized amount from 3 to 6 years, regular fluoride varnish application, and meticulous oral hygiene around cleft sites and orthodontic appliances.

## Lifelong shared care

- Primary dental care teams provide routine prevention and primary dental care; specialist cleft teams deliver specialist surgical, orthodontic and complex restorative care.
- Most children are reviewed by the cleft MDT at key stages, including early childhood, around 5 years, during alveolar bone graft assessment and planning (usually between 7 and 9 years), and throughout orthodontic treatment.

## Early referral and communication

- Refer promptly if eruption is abnormal, anomalies are complex, or proposed treatment may affect orthodontic or prosthetic plans.
- Always discuss maxillary extractions near the cleft site with the specialist cleft team before proceeding.
- Liaise early regarding ectopic teeth, hypodontia and pre-alveolar bone graft planning.

## Support oral health during orthodontic treatment

- Maintain disease-free mouths before, during and after orthodontic appliance placement and alveolar bone grafting.
- Monitor white spot lesions and gingival health closely during fixed appliance therapy.
- Coordinate extractions only after the orthodontic team has confirmed timing and tooth selection.

## Respect anatomical differences

- Teeth adjacent to the cleft often have atypical roots, altered pulpal anatomy and fragile alveolar bone.
- Avoid elective or complex restorative or extraction procedures affecting the cleft region without discussion with the specialist cleft team; routine dental care, including management of caries and urgent treatment, should continue as required.

## Prioritise access and continuity

- Young adults with cleft lip and/or palate may struggle to access routine dental care during transitions for education or work; prioritise access where possible.
- Encourage ongoing contact with regional cleft services for specialist and multidisciplinary support as required.

## Know your local cleft network

- Identify your regional cleft centre and referral pathways.
- Use the **CFSGBI Find a Unit directory** to identify your regional cleft centre and its contact details.
- Maintain communication with cleft paediatric dentistry, orthodontic and restorative teams to support safe, coordinated shared care.

# Conclusion

The primary dental care team plays a vital role in the lifelong care of people born with cleft lip and/or palate, through:

- Early and sustained prevention
- Careful monitoring of dental development
- Timely referral when specialist input is needed
- Close collaboration with specialist cleft teams

Together, these help to:

- Safeguard oral health
- Protect strategically important teeth
- Support successful surgical, orthodontic and restorative outcomes

# References


1. Mossey PA, Owens WR. Advances in the prevention of dental caries in orofacial clefts. Plast Reconstr Surg. 2025;156(4S 2):41S–49S.

2. Grewcock RE, Innes NPT, Mossey PA, Robertson MD. Caries in children with and without orofacial clefting: a systematic review and meta analysis. Oral Dis. 2022;28(5):1400–1411.

3. Bhatia S, Collard M. Access to primary dental care for cleft lip and palate patients in the United Kingdom. Br Dent J. 2012;212(7):367–368.

4. Lucas VS, Gupta R, Ololade O, Gelbier M, Roberts GJ. Dental health indices and caries associated microflora in children with unilateral cleft lip and palate. Cleft Palate Craniofac J. 2000;37(5):447–452.

5. Wu Q, Li Z, Zhang Y. Dental caries and periodontitis risk factors in cleft lip and palate patients. Front Pediatr. 2023;10:1092809.

6. Periodontal status of orofacial cleft patients. J Clin Periodontol. 1999;26(2):117–122.

7. Periodontal status among patients with cleft lip, cleft palate, and cleft lip and palate. Cleft Palate Craniofac J. 2015;52(6):e179–e184.

8. Cunha RF, Boer FA, Torriani DD, Frossard WT. Natal and neonatal teeth: review of the literature. Pediatr Dent. 2001;23:158–162.

9. De Almeida CM, Gomide MR. Prevalence of natal/neonatal teeth in cleft lip and palate infants. Cleft Palate Craniofac J. 1996;33:297–299.

10. DeSeta M, Holden E, Siddik D, Bhujel N. Natal and neonatal teeth: a review and case series. Br Dent J. 2022;232(7):449–453.

11. Ezzeldin M, Gee S, Curtis J, et al. Dental anomalies in cleft lip and/or palate children at age 10: a retrospective review across three cleft centres (Part 1). Br Dent J. 2023;234(12):926–930.

12. Sanghvi R, Vaidyanathan M, Bhujel N. Dental anomalies in patients with cleft lip and/or palate. Dental Update. 2022;49(5):393–401.

13. Agel M, Vaidyanathan M, Bhujel N. Developmental defects of enamel and dental anomalies in five-year old cleft patients. Faculty Dental Journal. 2022;13(1):6–11.

14. Office for Health Improvement and Disparities. Delivering Better Oral Health: an evidence based toolkit for prevention. 2021.

15. Scottish Dental Clinical Effectiveness Programme (SDCEP). Prevention and management of dental caries in children. 2025.

16. NHS. Cleft lip and palate – treatment. https://www.nhs.uk/conditions/cleft-lip-and-palate/treatment/

17. NHS England. NHS standard contract for cleft lip and/or palate services (D07). https://www.england.nhs.uk/wp-content/uploads/2013/06/d07-cleft-lip.pdf

# Further resources and professional networks

## CLAPA
www.clapa.com

## BSPD
www.bspd.co.uk

## BOS
www.bos.org.uk

## RD-UK
www.restdent.org.uk

## CFSGBI
Cleft Clinical Excellence Networks:
www.craniofacialsociety.co.uk  Find a Unit | CFSGBI

## BSRD
www.bsrd.org.uk/Index.aspx

## SDCEP
www.sdcep.org.uk/published-guidance

## DBOH
Delivering better oral health toolkit for prevention