

Loss of Primary Incisors

- Early loss of lower primary incisors is generally due to ectopic eruption of the permanent incisors giving the potential for increased intracanine width during permanent incisor eruption, the clinician should monitor development in the lower incisor area and generally not intervene.
- Individual circumstances may indicate extraction of the antimere primary incisor to enhance incisor positioning and midline symmetry.
- The loss of lower incisors in other circumstances such as trauma, advanced caries, or extraction of a neonatal tooth may result in anterior space loss if it occurs before primary canine stabilization is realized.
- Premature loss of maxillary primary incisors does not generally result in decreased upper intracanine dimensions if the incisor loss occurs after the primary canines have erupted into occlusion at approximately 2 years of age.
- If the anterior primary teeth were in contact before the loss or there is evidence of an arch-length inadequacy in the anterior region, space adjustments in alignment after the loss of one of the primary incisors is a potential factor in space maintenance

The major consequence of early loss of maxillary primary incisors

1. delayed eruption timing of the permanent successors as reparative bone and dense connective tissue covers the site.
2. Unattractive appearance
3. and potential development of deleterious habits (e.g., tongue-thrust swallow, forward resting posture of the tongue,
4. improper pronunciation of fricative sounds—"s," "f")

An anterior appliance may be

Acrylic partial dentures

have been successful in the replacement of single and multiple maxillary primary incisors.



Disadvantages:

1. need cooperation in wear
2. frequent appliance loss or damage, such removable appliances

can be problematic in preschool-age children.

A fixed option

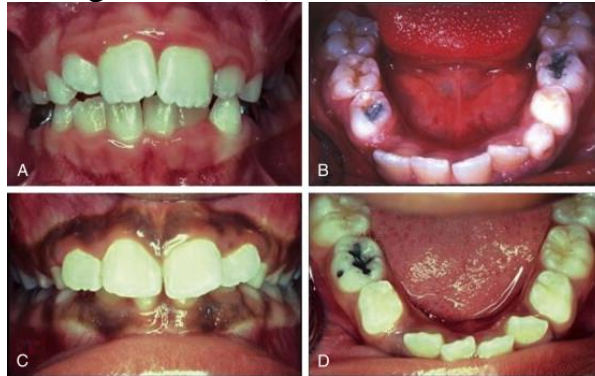
using primary incisor denture teeth secured from a rigid steel wire (0.036 or 0.040) extended to bands or stainless steel crowns on the primary molars, an additional stabilization in keeping the wire from flexing can be obtained by placing an occlusal rest on the first primary molar, or by covering the ridge with acrylic resin.



Loss of Primary Canines

Mandibular primary canine

- ❖ Most often due to ectopic eruption of permanent lateral incisors, early loss of a mandibular primary canine is a significant indicator of a tooth size–arch size discrepancy.
- ❖ Unilateral loss of a lower primary canine is frequently followed by
 - a shift in the dental midline toward the side of loss,
 - lingual collapse of the incisor segment,
 - and possibly deepening of the bite (Figs. A and B).
- ❖ The asymmetric disruption in arch integrity complicates normal eruption of the permanent canines and premolars toward the affected side.
- ❖ If ectopic eruption involves bilateral loss of both lower primary canines,
 - pronounced lingual inclination and distal drifting of the permanent incisors,
 - deepening of the overbite,
 - increased overjet,
 - and significant loss of arch perimeter are likely to be the alignment results (see Figs. C and D).



- ❖ If one primary canine is lost during incisor eruption, it may be desirable to extract the contralateral primary canine to help maintain arch symmetry.
- ❖ Although extraction of the contralateral primary canine may improve the appearance of incisor alignment and midline integrity, crowding problems requiring such intervention strongly indicate *a significant arch length deficiency* that will likely become grossly evident upon permanent canine and premolar eruption.

Maxillary primary canine

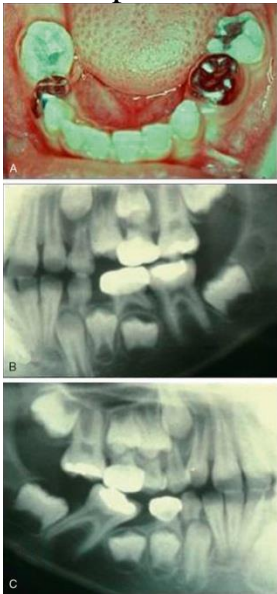
- ❖ The ectopic loss of maxillary primary canines occurs less frequently than does mandibular loss.
- ❖ When it occurs, ectopic loss of a maxillary primary canine typically reflects a very distal eruptive displacement of the permanent lateral incisor and not necessarily a significant tooth mass problem.

- ❖ Atypical upper anterior alignment may occur, with resultant crowding and blockage of the permanent canine because it erupts so late in normal transition.
- ❖ Early loss of maxillary primary canines is an indicator for early orthodontic treatment with an understanding that the child is a definite candidate for comprehensive orthodontic intervention.

Premature loss of first primary molar

The effect of premature loss of first primary molars in both arches is mostly dependent on ***the state of eruption of the first permanent molars***.

- ❖ If the primary first molar is lost during the primary dentition from ages 3 to 5 years, there should be little or no space loss associated with mesial movement of the second primary molar.
- ❖ However, as first permanent molars erupt at ages 5 to 7 years, a strong force is exerted that pushes the second primary molar forward into the first primary molar space



- This results in a loss of posterior arch length within the quadrant that can lead to crowding as the canines and premolars erupt in later stages.
- In addition to posterior effects, mandibular arch length may be further compromised by distal and lingual shifting of anterior teeth toward the side of first primary molar tooth loss.

Therefore the loss of a first primary molar in either arch, approximating eruption of first permanent molars, indicates that the use of a space maintainer is generally desirable to stabilize second primary molar and canine positioning.

- ❖ If the first primary molar is lost after first permanent molars have erupted into occlusion and the second primary molar is still in position, minimal space loss should be evidenced in either arch. This is particularly applicable when first permanent molars are positioned in a full Class I or Class II cuspal interdigitation.

The Band and Loop Maintainer.



Advantages

1. easy and economical to make,
2. takes little chair time,
3. and adjusts easily to accommodate the changing dentition.

Disadvantages

1. it does not restore chewing function
2. Will not prevent the continued eruption of the opposing teeth

Technique:

1. a stainless steel band must fitted on tooth



2. Impression of dentition and band, the band is removed from the tooth and seated in the impression



3. On the model of the impression, a piece of 0.036-inch steel wire is used to prepare the loop and soldered to the band.



4. Band and loop appliance cemented intraorally



The stainless steel crown and loop maintainer may be used

- if the posterior abutment tooth has extensive caries and requires a crown restoration or
- if the abutment tooth has had vital pulp therapy, in which case it is desirable to protect the crown with full coverage.



The technique

- The steel crown should be prepared
- before cementation, a compound impression is made
- the crown is removed from the tooth and seated in the impression ,
- and the stoneworking model is prepared.
- A piece of 0.036-inch steel wire is used to prepare the loop.

Because it is difficult to remove the crown to make adjustments in the loop, some dentists prefer to adapt a band over a cemented crown restoration and construct a conventional band and loop appliance.