Habits Effects produced depend upon duration of habit and intensity. It is best not to make a great fuss of a finger-sucking habit. If parents concerned, reassure them (in presence of child) not to worry, as only little girls/boys suck their fingers. Appliances to break the habit may help, but most children will stop when they are ready. However, this is no reason to delay the start of Rx for other aspects of the malocclusion.

Effects of premature loss of deciduous teeth

Unfortunately, when a child attends with toothache, in the rush to relieve pain it is all too easy to extract the offending tooth without consideration of the consequences. The major effect of early deciduous tooth loss is localization of crowding, in crowded mouths. The extent to which this occurs depends upon the patient's age, degree of crowding, and the site. In a crowded mouth the adjacent teeth will move round into the extraction space, therefore, unilateral loss of a C (and to a lesser degree a D) will result in a centre-line shift. This is also seen when a C is prematurely exfoliated by an erupting 2. As correction of a centre-line discrepancy often involves fixed appliances, prevention is better than cure, so loss of Cs should always be balanced. If Es are lost the 6 will migrate forward. This is particularly marked if it occurs before eruption of the permanent tooth, so if extraction of an E is unavoidable try to defer until after the 6s are in occlusion and do not balance or compensate.

The effect of early loss of 1° teeth on the eruption of the permanent successor is variable.

Timely loss of Cs is indicated for:

- $\underline{2}$ erupting palatally due to crowding. Extraction of $\underline{C|C}$ as the $\underline{2}$ erupting may allow the tooth to escape labially and prevent a Xbite.
- Extraction of lower Cs when a lower incisor is being crowded labially will help to ↓ loss of periodontal support.

Balancing extraction Extraction of the same (or adjacent) tooth on the opposite side of the arch to preserve symmetry.

Compensating extraction Extraction of the same tooth in the opposing arch.

Further reading

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Extractions

In orthodontics, teeth are extracted to relieve crowding, level and align, and to provide space to compensate for a skeletal discrepancy.

► Before planning the extraction of any permanent teeth a thorough orthodontic and radiographic examination should be carried out.

► In a Class I or II, it is advisable to extract at least as far forward in the upper arch as the lower; vice versa in a Class III.

Lower incisors Rarely tooth of choice as it is difficult to arrange 6 ULS teeth around 5 LLS teeth. Indications: ↓ prognosis or perio support, Class I buccal segments and LLS crowding, mild Class III with well-aligned buccal segments.

Upper incisors If traumatized or dilacerated, there may be no alternative (➔ Management of missing incisors, p. 112). Peg-shaped $\underline{2}$ may be extracted if contra-lateral $\underline{2}$ absent.

Lower canines Usually only extracted if severely displaced.

Upper canines See ➔ Buccally displaced maxillary canines, p. 141.

First premolars are a popular choice in moderate to severe crowding because of their position in the arch. They also give best chance of spontaneous improvement especially if extracted just as the 3s are appearing, but if appliance therapy is planned, defer until the canines have erupted.

Second premolars Preferred in cases with mild crowding, as their extraction alters the anchorage balance, favouring space closure by forward movement of the molars. FAs are required, especially in the lower arch. If 5s hypoplastic or missing there may be no choice. Early loss of an E will often lead to forward movement of the 6 and lack of space for 5s. In the upper arch this results in $\underline{5}$ being displaced palatally and provided $\underline{4}$ is in a satisfactory position, extraction of $\underline{5}$ on eruption is advisable. In the lower arch 5s are usually crowded lingually. Extraction of lower 4 is easier and will give lower 5 space to upright spontaneously.

First permanent molars See ➔ Extraction of poor quality first permanent molars, p. 138.

Second permanent molars Extraction of $\overline{7}$ will not alleviate incisor crowding but may relieve mild lower premolar crowding and avoid difficult extraction of impacted $\overline{8}$.

To increase likelihood of $\overline{8}$ erupting successfully to replace $\overline{7}$, need: posterior crowding and $\overline{8}$ formed to bifurcation and at an angle of between 15° and 30° to long axis $\overline{6}$. Even so, may still require appliance therapy to align $\overline{8}$ on eruption.

In the upper arch extraction of $\underline{7}$ often limited to facilitating distal movement of the upper buccal segments.