

Bone Grafting the Cleft Maxilla

Bone grafting in the dental ridge of the upper jaw (maxilla) is now standard, reliable treatment for patients with facial clefts. Bone grafting is an operation which involves taking a small amount of bone from one place (usually the hip, head, ribs, or leg) and placing it in the area of the cleft near the teeth. The procedure is employed to accomplish the following four goals:

1. To provide support for unerupted teeth and teeth next to the cleft.
2. To provide support for the lip and nose and to improve symmetry.
3. To form a continuous upper gum (alveolar) ridge, creating a more natural appearance and stability to the ridge.
4. To improve the stability of the front part of the roof of the mouth (premaxilla), if a bilateral cleft is present.

Bone grafting is a useful procedure and is most successful in patients under 10 years of age and as early as 5 to 6 years of age as the front incisor teeth are erupting. The overall erupting varies from child-to-child but usually is completed between the ages of 10 and 12. If the bone graft is placed after the permanent teeth have erupted, it will be too late to achieve goal number one above, although it may be useful toward achieving the remaining three goals.

Older patients may benefit from a bone graft but have less chance of total success. If the patient is a smoker, has a systemic disease such as diabetes, or has poor oral hygiene, the risk that the graft may fail increases even more.

Once the bone graft has been placed, there are three options that may be considered to replace any missing teeth in the area of the graft. These are:

- 1) moving adjacent teeth into the bone graft;
- 2) prosthetic replacement (dental bridge); or
- 3) dental metallic bone implants.

The best option for an individual patient will be chosen by the dental specialists on the cleft palate team. (See CPF's Factsheet entitled *Replacing a Missing Tooth*.)

For further information on cleft lip and palate, or for a referral to a cleft palate/craniofacial team, please contact:

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