

Take the perfect impression

Hygienist Diane Rochford walks us through the process – from tip-top tray selection to ‘wriggling toes’

Impression taking has been part of the GDC's Scope of practice for dental hygienists and therapists since 2002. Most commonly, DH&Ts are required to take impressions for study models, to make sports guards, bleaching or therapeutic trays.

Preparation

Impression taking requires skill, confidence and organisation. It is essential that all the materials are to hand.

- Trays – are available in various sizes; small, medium or large, they are plastic (disposable), or metal. Metal trays are re-useable, they must be clean, shiny (not scratched) and sterilised
- A clean rubber mixing bowl and spatula, along with the correct scoop and water measure, salivary ejector and a 3-in-1 tip are also required
- Alginate, is stored in a sealed container and ‘fluffed up’ before use. The majority of powders are ‘dust-free’ care must be taken not to inhale the powder dust as it can cause lung infections
- Soft wax is sometimes required to extend the periphery of the tray or extend the posterior borders.

The procedure and the reasons for taking the impressions must be explained to the patient. Answer any questions they may have, gaining patient consent.

Patients may be indifferent to the procedure or anxious, depending on previous experiences. With the patient seated in the dental chair position them so that maximum visibility and accessibility is achievable.

Examine the oral cavity, checking the soft tissues, teeth and their position, height of the palate and width of the arches, so the correct size tray can be selected.

Choosing the correct size of tray allows for a more accurate impression and reduces the chances of re-takes. Trays should be wide enough to allow for a good thickness of alginate on the lingual/palatal and buccal surfaces. Trays should be long enough to cover over the tuberosity (maxilla) and retromolar pad (mandible).

Trying in the tray, prior to taking the impression, is recommended. Practise retracting the lip and cheek and, allowing for a smooth rotary insertion of the tray, seating it posteriorly before anteriorly.

Additionally, on the lower tray, ask the patient to raise their tongue, so the lingual flange seats easily and is not inhibited by the tongue.

Taking the impression

Water accurately measured is placed into the mixing bowl, add the appropriate number of scoops of powder (always

follow the manufactures instructions) and begin to mix until a smooth, creamy consistency is achieved. Load the tray, quickly and efficiently, the working time is short, approximately 30 seconds. Excess material is gathered together with the spatula and a small amount applied to the occlusal surfaces, and vestibules especially anteriorly. This technique prevents air bubbles in the finished impression. Insert the tray, retracting the cheek and lips, rotate the tray into position, making sure it is centred over the teeth.

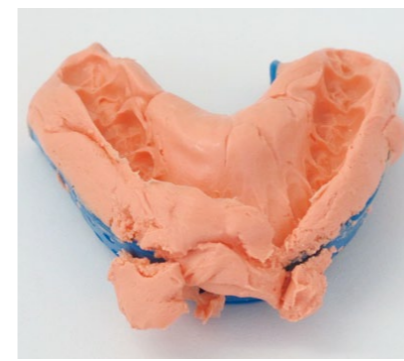
- Lower impression – seat the tray downwards, again instructing the patient to raise their tongue, keep the cheeks and lips retracted so the impression material reaches the vestibule

- Upper impression – seat the tray posteriorly, then anteriorly, allowing the alginate to move forward, preventing irritation of the soft palate.

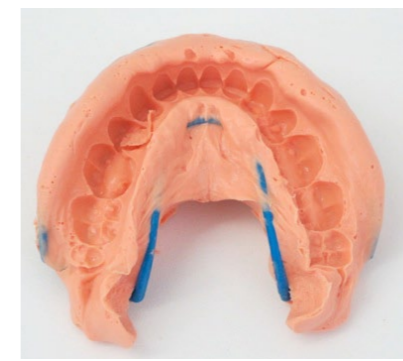
Equal pressure is applied bi-laterally, during the time the tray is seated. Reassurance is given to patients who are anxious or likely to gag. Instructing them to breathe through their nose or wiggle their toes causes a distraction.

As clinicians, having a calming nature, showing confidence and being efficient helps to reduce patient anxieties. Once the alginate has set, the tray is removed.

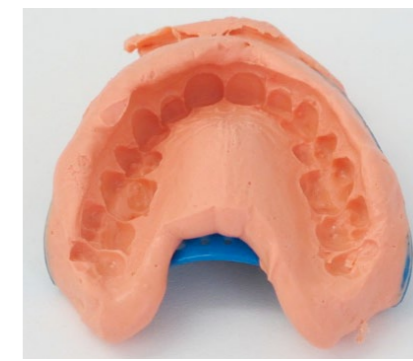
Retract the lips and cheeks to break the



Pour alginate, mix and load



Prevent air bubbles



An acceptable upper

seal, with a gentle but sudden jerk remove the tray. Do not rock the tray as this distorts the impression. Allow the patient to rinse and then remove any excess material that maybe on the patients lips, chin or face. Impressions are examined, ensuring that the detail is correct and no air bubbles present. Re-take if there are any distortions or the detail required is not accurate.

Disinfection

Follow the manufacturer's instructions for preparing the disinfectant solution and the length of time the impression is immersed. The disinfected impressions are rinsed in cold water and wrapped in damp paper towel or gauze, placed in a

sealed plastic bag. If the impressions are to be cast at the laboratory, a lab sheet must be written with all the correct patient details and clear instructions for the technician to follow. **DH&T**

References

- Watson, S. (2009) *Dental Impression - Definition of Dental Impression*. [On-line] Available <http://dentistry.about.com/od/termsanddefinitions/g/impression.htm> [Accessed 16th July, 2013]
- General Dental Council (2013) *Guidance on Direct Access*. [On-line] Available <http://www.gdc-uk.org/Dentalprofessionals/Standards/Documents/DirectAccessguidance.pdf> [Accessed 1st May, 2013]

No mean feat!

Impression taking is a skill that must be practised routinely. From my own experience, working as a hygienist and teaching the techniques as part of courses, excellent impressions are achieved when the:

- DH&T is confident and efficient in their approach
- Correct size tray is used
- Alginate is mixed to the correct consistency
- Tray is loaded neatly and evenly
- DH&T has good visibility and accessibility



Diane Rochford has been working in dentistry for more than 20 years; first, as a dental nurse. Before qualifying as a dental hygienist from Guy's Hospital, London in 1996, she was awarded the Hu-Friedly Scaling prize. Diane joined Dr Linda Greenwall's team in September 1996.

1. Diane has lectured on the hygiene programme at World Aesthetic Congress (WAC) in 2006 & 2011, to the London Region British Dental Hygienist Association in 2007; Croatia in 2009. Diane assists with teaching on Dr Greenwall's dental bleaching courses and is currently teaching her own courses specifically for dental hygienists and therapists on the subject. Diane has recently joined the editorial boards for DH&T and Private Dentistry. She is a gold member of the British Dental Bleaching Society, current member of BSDHT and BPS.

