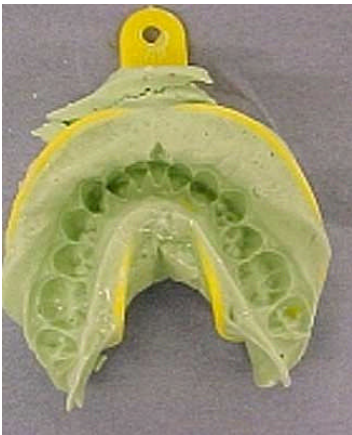


## Impression Taking: Pitfalls and Solutions

Often a simple step such as trying in the tray, underfilling, overfilling, failing to allow the material to sit for the required time, or even not mixing alginate impression materials properly prevents someone from taking an accurate impression. Minor discrepancies in technique can also significantly impact the accuracy of the final product.

Here are a few common pitfalls that occur when taking impressions:



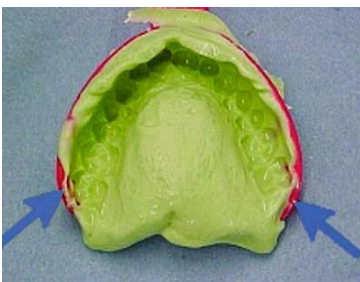
**Pitfall:** The impression is removed from the mouth and there are teeth missing. Not all the teeth have been captured in the impression.

**Solution:** Trying the tray in the mouth and looking to see if the tray is the correct size is the most common error. Fill tray properly with impression material. The tray should cover the areas needed for the impression and still allow for adequate clearance between the tray and the tissues. When finding the right tray, there are times when you may need to extend the posterior area of the tray with red rope wax so you capture the retromolar pad on the lower and the maxillary tuberosity. This is especially important when taking impressions for dentures. Failure to get the proper amount of impression material will prevent an accurate impression.



**Pitfall:** Removing the impression and all the teeth are present, but the gum tissue and bone has not been captured. Borders are not captured in the impression (missing half of the gum tissue).

**Solution:** There has not been enough impression material in the tray, the tray did not get seated properly, or the PVS, alginate, or alginate substitute set up too much before the tray was seated in the mouth.



**Pitfall:** Runs and pulls at the gumline of the impression.

**Solution:** Not enough impression material in tray, or not seated properly (the tray should be seated parallel to the long axis of the teeth). Look at the back of the throat to know when to stop seating (when you see material oozing to throat, stop and wipe). Allow the material to set to completion, and do not remove the impression until the timer goes off.



**Pitfall:** Air bubbles in impression after removing the tray.

**Solution:** Not enough impression material in tray, and keep tip of the material gun in the tray while loading material.



**Pitfall:** Unbalanced or crooked impressions.

**Solution:** Hold over bicuspid to keep even pressure and steady (do not hold the handle of tray while it is setting up). Don't have patient bite down on tray because this prevents even pressure on the tray.

**Pitfall:** Removing tray improperly.

**Solution:** Don't use handle, and break suction over premolar area and pull tray down. When removing the impression from the maxillary, you can use each of your index fingers and place them all the way back posterior on the masseter muscle to release the suction and pull down.

Alginates are less likely to tear when you remove the impression quickly. Avoid rocking or twisting when removing the impression. Instead, remove quickly with a snap.

If the alginate is still in a plastic state upon removal, impression detail will be lost. So be certain to keep the impression in the mouth for a full two minutes. Leave a test sample in your mixing bowl. When your sample starts to set, start timing your impression.

**Pitfall:** Improper mixing of alginate materials

**Solution:** Check the water-to-powder ratio. Too much powder in the mix causes the consistency to be grainy. This usually occurs because the alginate was not shaken up in the can before it was measured out. If there is too much water in the mix, the material will be too thin, causing the impression to tear upon removal.

The ideal water temperature is 70°F. If the water is too warm, it will decrease mixing time (speed up setting time) and prevent a smooth mix. If the water is too cold, the material will set too slowly.

Always add powder to water, not water to powder. This ensures that all of the powder is fully incorporated. Once incorporated, mix vigorously for one minute to achieve a creamy consistency, which helps the chemical reaction occur uniformly.