

## Problem Solvers 39- Gaps in Your Smile?

Synonyms: diastema, diastemata, gaps, snaggle tooth, spaces between teeth, tooth gaps.

When you look in the mirror do you see a smile that is proud and confident smiling back at you? Many people are very comfortable with their smile and whether they have spaces between their teeth or a lot of gum tissue showing when they are smile, they are happy with who they are and what their smile represents. To others, however, they are extremely self-conscious about their smile and wish they could get rid of their “gaps.”

When people are growing their teeth erupt in a certain order. When you couple jaw growth with the timing of tooth eruption, there is sometimes more space than teeth to fill up your smile. This spacing is referred to in dentistry as a diastema.

How do we treat diastemas?

There are several options for eliminating spaces between teeth:

- **Orthodontics:** The most conservative treatment for spaces, assuming the shape and size of your teeth is acceptable, is braces to simply move the teeth together. Orthodontics has the advantage of working with your own teeth and there is no addition of veneers, crowns or added expense of “additive” dentistry.
- **Veneers:** The thin shells of porcelain, called “veneers,” are a way of adding to the size of your teeth and perhaps changing the color by cementing these porcelain pieces on to the enamel of your existing teeth. These veneers are a way to conservatively close spaces. New technologies have made it possible to remove very little tooth structure in order to place these thin coverings over your teeth. If more color change is required (you want much whiter teeth), then the veneers must be thicker in order to build in a variation of color and make them look natural. This requires a deeper preparation and more tooth must be shaved away. These veneers can chip, crack and break and they will need to be replaced from anywhere between 5-10 years depending upon how they are cared for and the biting habits of the patient. Some veneers could last 20 years and look great and others may need replacement at 6 or 7 years. The disadvantage of “additive” dentistry is that it must be made at a laboratory and the expense can range from \$900-\$2,000 per tooth for gorgeous veneers. Newer technologies exist with the use of CAD/CAM or computer assisted design and milling where these veneers can be made at some dental offices. The cosmetic problems with the use of these systems are that the results are only as good as the designer and the availability of certain colors of porcelain and zirconia blocks. So if the color of

- available milling materials doesn't match the desired color of the veneers, they must be custom stained at the office. This surface staining can wear off faster and the results may be compromised. So some offices use these same day veneers but the majority of dental offices will send impressions to a lab to have custom veneers made. It is not unusual for a dentist to take photographs to send to the laboratory ceramist so that custom shading can be performed to carefully blend in with your existing teeth. The disadvantage of these veneers is that they are "glass" and can chip, crack or break. Repair is difficult and often a chipped veneer requires removal of the entire veneer and replacement of one or all of the veneers to achieve the right color match.
- Composite Veneers: When patients want to close spaces and would like to do so in a more reversible fashion, then composite or "white" filling material can be used to close the spaces. These have the advantage of being less expensive than a porcelain veneer made at a laboratory but they will not last as long as porcelain coverings. On average these can cost from \$300-\$1000 per tooth and will last from 3-5 years. After they have been subjected to foods that stain, they may need polishing or replacement after a few years. The advantage of this type of addition is that they can be added to or repaired chairside much easier than porcelain veneers as new composite can stick to old composite better than it can stick to a chipped porcelain veneer.
  - Crowns: In instances where the spaces are quite large crowns may be required to fill the spaces. The reason for crowns is so that the crown can emerge properly from the gum in a 36-0 degree fashion and give all of the teeth the proper form and function. In other words, veneers are not always possible; sometimes the spaces and orientation of teeth require crowns. Another reason for crowns is that by closing spaces, you may need to remove more tooth structure on the back part of a tooth to add more tooth structure to the front side of the tooth. This gives the "illusion" of moving a tooth but in reality you are just adding more to one side and taking more from the other side. This is especially useful when someone's entire gap is between his or her two front teeth! If you just made the two front teeth bigger, the teeth would look like "Chiclets" chewing gum. So you need to close the front space by making all 4 or 6 front teeth a little bigger, instead of adding on to just the two front teeth. This is done by adding to the front teeth and taking away from the backs of these front teeth. Then you add more porcelain to the front of the lateral incisors or second teeth and taking some off of their backs. This is done sequentially until all the front teeth are pretty and have the proportions that they require for a gorgeous smile.
  - Extractions: Sometimes spaces exist due to severe gum disease. In this instance the teeth may need to be removed and implants or a bridge or a partial denture placed to reestablish an improved smile. When people notice the spaces are getting worse or their teeth are mobile, these are two signs that their spaces are part of a disease process and not just where their

healthy teeth ended up erupting. Implant bridges are the best option but may require bone grafting and soft tissue grafting, in order to reestablish a nice gum display and teeth that are symmetrical and pretty. In other instances, bridges can be made that have white teeth and pink porcelain to replace the missing bone and gum structure. In this instance if a person doesn't have a high smile line (shows a lot of gum upon full smiling), then a bridge of this nature is acceptable. Partial dentures are a temporary solution as they have clips that may loosen the remaining teeth and lead to an increase in tooth decay around the partial denture abutment teeth.

- Orthognathics: Sometimes there are jaw discrepancies in addition to tooth size problems. In that instance the patient may need jaw surgery to move the upper or lower jaw into a more ideal relationship before considering the other options listed from 1-4 above.

I have a gap in between my front teeth from putting a pencil up there all the time. Can I close my gap?

Yes assuming there hasn't been damage to the teeth, you may be able to have orthodontics or the options listed above to close your spaces.

I had two gold teeth put on my teeth to close my gap. Now I don't want gold, can I still close the gaps with white porcelain?

When teeth have been shaved down previously for a crown they will always need a crown. So if the space is small, two new porcelain crowns can be done to replace the gold. If the space is large, you may need 2-4 additional crowns to make your teeth the proper sizes where they don't look too big.

I had veneers put on my top 10 teeth to close my spaces. I am very unhappy at how big they look now! What can I do?

When changing someone's smile significantly, it can be very difficult to meet a patient's expectations. In my dental office, the temporaries serve as the blueprint to make sure that the final crowns or veneers will meet your needs. The problem with porcelain is that they cannot be cemented temporarily. So once you approve cementation, they cannot be changed except for minor reshaping. If the dentist met your needs in the temporaries, they may be able to recapture that look with minimal adjustment. If you are still unhappy, the veneers may need to be cut off and remade. Usually there will be fees for redoing this type of work as the patient must approve of it in order for it to be cemented. If the patient changes his or her mind, then the responsibility falls back on to the patient. Most dentists will work very closely with you to help you solve this problem.

My dentist bonded my front teeth and they look like sugar cubes! Help?

Teeth require a certain height to width ratio for them to fall into a ratio that is equated to beauty. The Height should be 80% of the width of a tooth approximately. In other words the "Golden Proportion" is used to help create the proper esthetic ratio for teeth. The ratio of 1.618 is the ratio that is used as a tool to help a dentist decide how big the front teeth will be. The lateral incisor would be considered X and the front tooth would be 1.618 times X and the canine or third tooth would be .618X. The amount of tooth you "see" would fit into this ratio but not exactly. So if your teeth are square, you have a 100% height to width ratio. In this instance we see that the other two front teeth need to be bigger so the front teeth can be made narrower or longer or both in order to fall into a better cosmetic proportion. See your dentist to do a diagnostic wax-up and discuss ways of changing the way your teeth look.

I had composite bonding done to fix my gaps. Now I have brown lines around all the bonding. What can be done to fix this? I just had it done 2 years ago and it was quite expensive.

In most instances, your dentist may be able to polish away the stains or resurface the veneers with some fresh composite resin. If the stain is deeper or the veneer is leaking than it may need to be stripped and redone from scratch. The longevity of a composite veneer is 3-5 years so after some period of time they may need replacement as they will not last forever and the length of time they last is directly related to how clean your teeth are and how often you go to the dentist for them to professionally clean your teeth and check your bite.

I had back crowns done and now the porcelain veneers don't match my crowns.

Your dentist has a very difficult time making thin porcelain shells match a larger porcelain piece such as a crown. Your dentist may need to make the veneers over again or make crowns in order to try and make you happy.

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