

Filling The Gaps

Your sacred space is where you can find yourself again and again.

Joseph Campbell

How to Fill the Gaps

Healthy Dentistry

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I am sure that you are thinking that it is all very nice in theory to remove dead teeth rather than do a root canal treatment, but how do you fill the space that is left. Perhaps you are already missing teeth and are unsure of the various options that you may have. This question is asked of me daily. Most people will be aware that the remaining teeth may drift into the space left by the extracted tooth. This is true. The main criticism to removing dead teeth by those who advocate root canal treatment, is that by removing the tooth we create a bio-mechanical problem, whereby the Jaw (Temporo Mandibular) joint will slip into a backward position, which will then influence the first couple of vertebrae in the neck and thus the rest of the spine. I completely agree with the 'possibility' of this scenario. I therefore suggest that in most cases it is better to fill the gap. There are times when this is not a good idea.

My response to this criticism though is that it is a lot easier to correct a TMJ problem, than the host of diseases which may arise from retaining the root treated toxin factory in your body. My preference is a stiff neck rather than cancer. This is NOT an exaggeration! Below are some thoughts on how to fill the gap.

Implants:

I will start with this option as it is the most commonly prescribed method in modern western dentistry. They are considered the 'state-of-the-art' treatment. In fact, in Australia the dental boards frown on a dentist who does not recommend implants to their patients. I state at the beginning that I do NOT recommend implants for anyone.

The Pros;

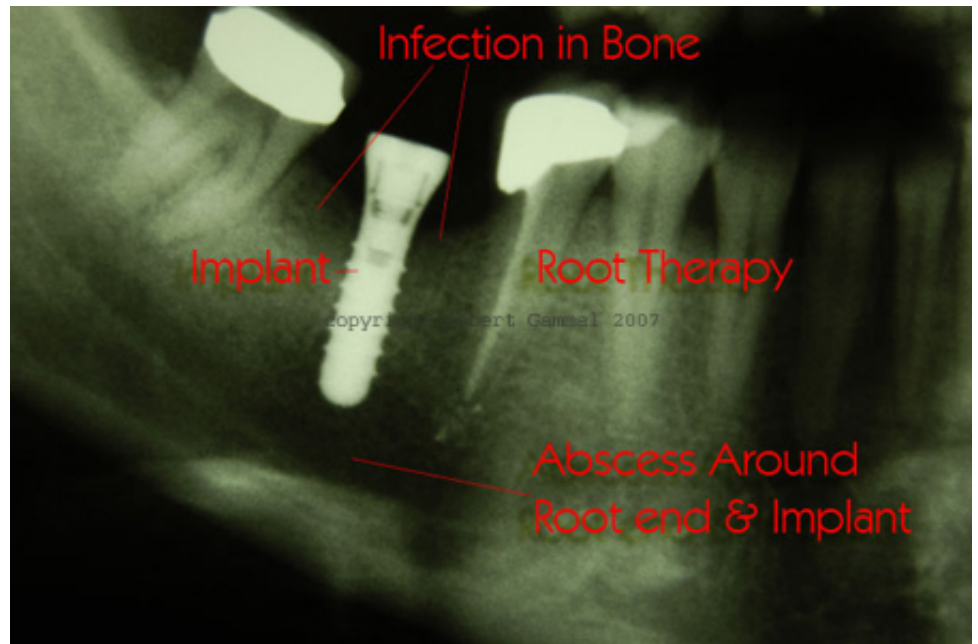
- 1-They do not interfere with the adjacent teeth.
- 2-They are solid

The Againsts:

They can make you sick or kill you! A short list of the effects of titanium on the body include:

- Damage to human bronchial cells*
- Stimulate bone resorption*
- Antibody Mediated immune responses*

Excessive corrosion of Titanium is caused by exposure to fluoride
 Generalized allergic reactions
 Amalgam and Titanium in the same mouth increases corrosion of the amalgam and thus the increased release of mercury
 Titanium and amalgam produce dramatic pH changes and a change in taste sensation
 Some are carcinogenic (it is possible that NiTiSMA particles are directly carcinogenic)
 High electrical currents are generated between titanium implants and other metals in the mouth
 Reduced immune function caused by damage to the spleen
 Titanium found in the root filling cement AH26 has an oestrogenic effect on breast cancer cells.



[For more information about implants](#)

Bridges

A bridge spans a gap. The dental equivalent of the pylons or supports for the bridge is a crown on one or both sides of the space. Traditionally it involves placing a crown on the tooth either side of the gap and joining them as one unit with the false tooth/teeth. There are many variants of bridgework and it is worth mentioning a couple of them;

- The least destructive is a bonded bridge, often called a Marylands bridge, whereby the false tooth is constructed with a couple of wings to the adjacent teeth on the inside of the mouth. These wings are bonded to the adjacent teeth in much the same way that white fillings are bonded to teeth.
- A Cantilevered bridge is constructed with a full crown on one end (usually the back tooth) and a small extension which rests on a filling in the tooth at the other side of the gap. This is a common way to construct a bridge in areas that carry more load than a Marylands Bridge could withstand.

There is no longer a need to make these restorations from metal. Porcelains now exist which are more than strong enough to be used in any dental situation. Zirconia porcelain can be used to make very long units of bridgework and are even being used in Europe for implants instead of titanium.



In fact there is no need to use metal in any area of dentistry

The Pros:

1. They are aesthetic.
2. They are the next closest thing to having your own tooth in terms of feel and function.
3. They are very long lasting.
4. They can be used to improve the strength of a heavily filled tooth
5. They can be used to not only replace the missing tooth but also to strengthen and correct any jaw joint disturbances.

The Againsts

1. They are expensive although their longevity usually makes it money well spent.
2. They require the removal of a lot of tooth structure on the teeth adjacent to the gap. If these teeth are unfilled or only slightly filled this would represent the removal of a lot of healthy tooth substance. In this situation I do NOT believe that a bridge is a valid way of filling the gap. On the other hand if the adjacent teeth are heavily filled, and would benefit from the strength of a crown, than a bridge would be the perfect solution. Often when a first molar is missing we find the situation where the second molar (behind the gap) is heavily filled and the second premolar (in front of the gap) is unfilled. These are the cases that may benefit from a cantilevered bridge, as previously mentioned.
3. Metal or metal with porcelain bridges would carry similar warnings as titanium in the implant section above.

Dentures

Mention the word 'denture' and most people conjure up visions of granny's teeth in the jar of water and a granny with a sunken in mouth.

If we can step past this psychological barrier for a moment than there is an option which most would not consider. Traditionally dentures have been constructed with either a variety of metals like chrome-cobalt, titanium or gold. Alternately they have been made from a very hard plastic called acrylic. This material is so inflexible that the retaining clasps were made from stainless steel wires. They always felt and looked bad.



Current technology has given us now a variety of injection molded plastics, such as Flexite and Valplast and others which can form fantastic denture bases. They are also amongst the most biocompatible materials on the market. New denture teeth are so good these days tat it is often possible to replace a front tooth which looks identical to the adjacent one. As the material is extremely light and strong it can be formed into truly minimal size and shape and thickness. It is also flexible so that the clasps that retain the denture against the other teeth are also made from the same material. As the material is pink they tend to disappear visually – compared to the bits of metal that often are visible when people smile. I commonly make little dentures (called unilateral) which replace just one tooth and clasp onto the teeth adjacent to the gap.



Usually there is NO adjustment to the other teeth. It is the most conservative way of filling the gap.

Yes of course dentures must be removed at night and special extra attention is needed for good oral hygiene. Extra time is needed to clean teeth and denture.

This is also one situation where cheap does not mean bad. This is the cheapest option to replace a tooth.

Leave the Gap

Many of my patients opt to leave the space alone. Missing only a few teeth may not interfere very much with chewing. It is important however to check regularly that the other teeth are not moving too much. The onset of headaches or neck and shoulder pain is usually a good indication that the bite is slipping and needs attention.

Certain situations like the last upper molar do not require replacement. My personal preference is to have a gap rather than dead teeth. It is a choice that only you can make.



References

- 1 Australian Dental Journal (Aust. Dent. J.) ISSN 0045-0421 002, vol. 47, no3, pp. 214-217 FRISKEN K. W. ; DANDIE G. W. ; LUGOWSKI S. ; JORDAN G. ;
- 2 Journal of the Indian Prosthodontic Association 2005 Vol 5 Iss 3 P126-131
- 3 Meachim G, Williams DF. Changes in nonosseous tissue adjacent to titanium implants. J Biomed Mater Res 1973;7:555-72.
- 4 Solar RJ, Pollack SR, Korostoff E. In vitro corrosion testing of titanium surgical implant alloys: an approach to understanding titanium release from implants. J Biomed Mater Res 1979;13:217-50.
- 5 Merrit K, Brown SA. In Compatibility of Biomedical Implants, Kovacs P., Istephanous NS. Editors, Proc.-Vol.94-15, The Electrochemical Society: Pennington NJ; 1994. p. 14.
- 6 Ferguson AB, Jr, Laing PG, Hodge ES. "The ionization of metal implants in living tissue". J Bone Jt Surg 1960;42:76-89.
- 7 In vitro corrosion of titanium. Strietzel R, Hosch A, Kalbfleisch H, Buch D. Biomaterials. 1998 Aug;19(16):1495-9.
- 8 White SN, Miklus VG, Potter Ks, Cho J, Ngan AYW,. Endodontics and implants, a catalogue of therapeutic contrasts. J Evid Based Dent Pract. 2006;6:101-109
- 9 White SN, Miklus VG, Potter Ks, Cho J, Ngan AYW,. Endodontics and implants, a catalogue of therapeutic contrasts. J Evid Based Dent Pract. 2006;6:101-109
- 10 Implant Failures Associated With Asymptomatic Endodontically Treated Teeth David L. Brisman, D.M.D.; Adam S. Brisman, D.M.D.; Mark S. Moses, D.D.S. JADA February 2001, page 191